E-Learning benchmarking
Methodology and tools review

Report 1.3

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ENHANCING THE QUALITY OF DISTANCE LEARNING AT WESTERN BALKAN HIGHER INSTITUTIONS

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E-Learning benchmarking
Methodology and tools review

(Report 1.3)

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2011
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Benchmarking is “the process of comparing one’s business processes and performance metrics to industry bests and/or best practices from other industries. Dimensions typically measured are quality, time, and cost. Improvements from learning mean doing things better, faster, and cheaper. "Benchmarking involves management identifying the best firms in their industry, or any other industry where similar processes exist, and comparing the results and processes of those studied (the "targets") to one's own results and processes to learn how well the targets perform and, more importantly, how they do it.

As a management tool, benchmarking has been applied in many areas of business. However, it is only in 2005-06 that there has been immense growth in its application specifically to university use of educational technology, initially in New Zealand, then in Europe including the UK under the auspices of the Higher Education Academy and most recently spreading to the US.

Nowadays, it is understood that each university offering distance learning (DL) programs should adopt a benchmarking system as a part of its DL quality assurance (QA) procedures. Any such a benchmarking system assumes a specific benchmarking model/approach and a set of associated tools that support the benchmarking process. A benchmarking model/approach must cover three essential elements (and provide an associated sets of indicators) [UNIQUE, 2007]: a structural element – based on ‘enablers’; a practice element – based on work; and, a performance element – based on outcomes and impacts.

This document discusses international and EU benchmarking approaches, models, and tools developed so far and how they can be applied in the local contexts of Western Balkan higher education (HE) institutions. Special attention is given to benchmarking tools covering pedagogical, organizational and technical frameworks and their potential use in Western Balkan countries.

1. Benchmarking context

Although it is acknowledged that benchmarking has its origins in the business sector, the particularity of higher education is stressed in many publications on benchmarking in higher education. Some authors refer to classifications from general benchmarking literature; others try to develop descriptions specifically for higher education. One of the highly cited general classifications is that by [Camp, 1989] who identifies four kinds of benchmarking:

- Internal benchmarking
- Competitive benchmarking
- Functional/industry benchmarking
- Generic process/best in class’ benchmarking

The standard report on benchmarking in UK universities [Jackson, 2002] points out that many. The report describes various types of benchmarking:

- implicit (by-product of information gathering) or explicit (deliberate and systematic);
- conducted as an independent (without partners) or a collaborative (partnership) exercise;
- confined to a single organisation (internal exercise), or involves other similar or dissimilar organisations (external exercise);
• focused on the whole process (vertical benchmarking) or part of a process as it manifests itself across different functional units (horizontal benchmarking);
• focused on inputs, process or outputs (or a combination of these);
• based on quantitative (metric data) and / or qualitative (bureaucratic information).

[UNESCO – CEPES, 2007] uses similar descriptions for the following types of benchmarking in the higher education sector, referring to internal benchmarking (comparing similar programmes in different components of one higher education institution), external competitive benchmarking (comparing performance in key areas based on institutions viewed as competitors), functional benchmarking (comparing processes), trans-institutional benchmarking (across multiple institutions), implicit benchmarking (quasi-benchmarking looking at the production and publication of data/performance indicators which can be useful for meaningful cross-institutional comparative analysis; these are not voluntary like the other types but are the result of market pressures and coordinating agencies), generic benchmarking (looking at basic practice process or service) and process-based benchmarking (looking at processes by which results are achieved).

[ALSTETE, 1995] defines four types of benchmarking linked to the voluntary participation of institutions, i.e. internal benchmarking (with the comparison of performance of different departments), external competitive benchmarking (comparing performance in key areas based on information from institutions seen as competitors), external collaborative benchmarking comparisons, with a larger group of institutions who are not immediate competitors, external trans-industry (best-in-class) benchmarking (looking across industries in search of new and innovative practices). Alstete adds a fifth category, the so-called implicit benchmarking, which results from market pressures to provide data for government agencies and the like.

In ENQA report “Benchmarking in the Improvement of Higher Education” [ENQUA,2002] the European Network for Quality Assurance attempts an understanding of the principles of true benchmarking, providing concrete examples and conclusions on perspectives for European benchmarking within higher education. ENQA provides a list of 32 attributes given to benchmarking, the main ones being collaborative/competitive, qualitative/quantitative, internal /external, implicit/explicit, horizontal/vertical; outcome-oriented or experience-seeking, with various purposes (standards, benchmarks, best practices) and interests (to compare, to improve, to cooperate), depending on the owners of the benchmarking exercises. The list is rather arbitrary and does not express a systematic thinking about different approaches to benchmarking. Some items remain vague and it is left to the reader to imagine what is meant by some like ‘touristic’ benchmarking. ENQA concluded that “good instruments are needed for useful benchmarking exercises” and that “current benchmarking methodologies in Europe must be improved”.

In Europe, benchmarking approaches in the higher education sector have developed from the mid-nineties at the national level, either as an initiative launched by a national body, by one or a group of institutions or by an independent body. These usually only involve a small number of institutions and are on a voluntary basis. Transnational level exercises have so far been fairly limited. These benchmarking exercises have adopted a mixture of quantitative, qualitative and processes-oriented approaches. The degree to which these are structured depends on the experience and the purposes.

Although the key benefits of benchmarking are well-known, there is still a significant gap in the use of benchmarking practices in European HEIs. Indicators and benchmarks are needed by university leaders to make informed choices for strategic developments and support the competitiveness of HEIs on the international scene.
2. Terms and Definitions

Many of the terms and definitions in this section are adapted from [CEPES GLOSSARY, 2007]. In addition, other authoritative sources of information (such as the UK Quality Assurance Agency for Higher Education [QAA, 1997] and Quality Research International [QRI Glossary, 2011]) have been used in order to provide a balanced view of the terms and definitions presented.

**Benchmark.** A standard, a reference point, or a criterion against which the quality of something can be measured, judged, and evaluated, and against which outcomes of a specified activity can be measured. The term, benchmark, means a measure of best practice performance. In DL, benchmarks are typically used to obtain a comprehensive profile of current DL capability and provision across an educational institution. The existence of a DL benchmark is a necessary step in the overall process of DL benchmarking.

There are benchmarks for subject areas, institutions offering DL programmes, DL teaching performance, learning material, quality of service, ICT infrastructure, and the like.

**Benchmarking.** A standardized method for collecting and reporting critical operational data in a way that enables relevant comparisons among the performances of different organizations or programmes, usually with a view to establishing good practice, diagnosing problems in performance, and identifying areas of strength. Benchmarking gives the organization (or the programme) the external references and the best practices on which to base its evaluation and to design its working processes.

There are several types/levels of benchmarking:

- **Internal Benchmarking.** Benchmarking (comparisons of) performances of similar programmes in different components of one higher education institution. Internal benchmarking is usually conducted at large decentralized institutions with several departments (or units) conducting similar programmes.
- **(External) Competitive Benchmarking.** Benchmarking (comparisons of) performance in key areas, on specific measurable terms, based upon information from institution(s) that are viewed as competitors.
- **Functional (External Collaborative) Benchmarking.** Benchmarking that involves comparisons of processes, practices, and performances with similar institutions of a larger group of institutions in the same field that are not immediate competitors.
- **Trans-institutional Benchmarking.** Benchmarking that looks across multiple institutions in search of new and innovative practices.
- **Implicit Benchmarking.** A quasi benchmarking that looks at the production and publication of data and of performance indicators that could be useful for meaningful cross-institutional comparative analysis. It is not based on the voluntary and proactive participation of institutions (as in the cases of other types), but as the result of the pressure of markets, central funding, and/or coordinating agencies. Many of the current benchmarking activities taking place in Europe are of this nature.
- **Generic Benchmarking.** A comparison of institutions in terms of a basic practice process or service (e.g. communication lines, participation rate, and drop-out rate). It compares the basic level of an activity with a process in other institutions that has similar activity.
- **Process–Based Benchmarking.** Goes beyond the comparison of data-based scores and conventional performance indicators (statistical benchmarking) and looks at the processes by which results are achieved. It examines activities made up of tasks, steps which cross the boundaries between the conventional functions found in all institutions. It goes beyond the comparison of data and looks at the processes by which the results are achieved.

**Benchmarking indicators.** Measures that point out the true performance (“How well...?”) of the subject of benchmarking (adapted from [Leonard, 2001]). Benchmarking indicators show the cost of
producing the output (e.g., in DL, the cost of creating high-quality DL courses), error rate within the process and where most errors occur (e.g., what kinds of ICT problems are most reported in DL), where improvement opportunities exist (e.g., feedback from students), where improvement is needed (e.g., a specific DL service), and so on.

**Benchmarking tools.** Tools for assessment or review of DL programmes and the systems which support them. Also, useful development and/or improvement tools for incorporation in an institutional system of monitoring, evaluation and enhancement. Typically, benchmarking tools include various questionnaires, surveys, and other data collection and analysis tools adhering to a certain adopted benchmarking framework and/or standard, but also allow institutions to develop and to run their own DL benchmarking surveys.

**Benchmark information.** Explicit national statements of academic standards or outcomes for individual subjects. Some countries (e.g., the United Kingdom) develop benchmarks of this type with regard to a certain group of subjects as part of their QA process. See "subject benchmark statements" as well.

In case of DL, the providing institution is responsible for ensuring that programmes to be offered at a distance are designed so that the academic standards of the awards will be demonstrably comparable with those of awards delivered by the institution in other ways and consistent with any relevant benchmark information recognized within the country.

**Subject benchmark / Subject benchmark statements.** Subject benchmark statements [QAA Academic Standards, 2009] provide means for the academic community to describe the nature and characteristics of programmes in a specific subject and the general expectations about standards for the award of a qualification at a given level in a particular subject area. In other words, they set out expectations about standards of degrees in a range of subject areas. They describe what gives a discipline its coherence and identity, and define what can be expected of a graduate in terms of the abilities and skills needed to develop understanding or competence in the subject. They are reference points in a QA framework more than prescriptive statements about curricula.

Note, however, that subject benchmark statements do not represent a national curriculum in a subject area; they are rather intended to assist those involved in programme design, delivery and review. They allow for flexibility and innovation in programme design, within an overall conceptual framework established by an academic subject community. They may also be of interest to prospective students and employers, seeking information about the nature and standards of awards in a subject area.

Good illustrations of subject benchmark statements can be found with the UK Quality Assurance Agency for Higher Education1 [4]. They describe dozens of subject areas, and typically cover issues such as the nature and scope of the subject area, the abilities and skills the students are expected to develop, the principles of course design in the subject area, the teaching, learning and assessment, as well as the threshold and typical levels of performance that the students who get a degree in that subject area will have achieved.

**Course Development Benchmarks.** Guidelines regarding the minimum standards that are used for course design, development, and delivery.

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1 See [http://www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp](http://www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp)
3. Models and methodologies

In recent years there has been immense growth in the application of benchmarking methodologies specifically to university use of educational technology, initially in New Zealand, then in Europe including the UK under the auspices of the Higher Education Academy and most recently spreading to the US. There are many benchmarking projects and initiatives developed under EU projects and worldwide, like: BENVIC, CHIRON, ELTI, ACODE, MASSIVE, MIT90s, PICK&MIX, OBHE, OpenECB, eMM, E-xcellence+, SEVAQ+ and others.

ACODE

ACODE is a benchmarking scheme under development by the Australasian Council on Open, Distance and e-Learning. Development of this started in 2004 as a pilot project. It is a criterion-based system where criteria (divided into eight main benchmark areas) are scored on a 1-5 scale with the help of scoring statements (74 indicators in total). It takes a relatively wide view of e-Learning, ensuring linkage with general learning and teaching, with IT and with staff development processes.

ACODE Benchmarks

ACODE has funded the development of benchmarks for the use of technology in learning and teaching. The purpose of the benchmarks is to support continuous quality improvement in e-learning. The approach reflects an enterprise perspective, integrating the key issue of pedagogy with institutional dimensions such as planning, staff development and infrastructure provision. The benchmarks have been developed for use at the enterprise level or by the organisational areas responsible for the provision of leadership and services in this area. They have been piloted in universities and independently reviewed.

Each benchmark area is discrete and can be used alone or in combination with others. Benchmarks can be used for self assessment purposes (in one or several areas), or as part of a collaborative benchmarking exercise.

The benchmarks cover the following eight separate topic areas have been internationally reviewed. (http://www.acode.edu.au/resources/ACODE_benchmarks.pdf)

- Institution policy and governance for technology supported learning and teaching (8 indicators);
- Planning for, and quality improvement of the integration of technologies for learning and teaching (8 indicators);
- Information technology infrastructure to support learning and teaching (9 indicators);
- Pedagogical application of information and communication technology. Pedagogical application should be:
  1. aligned to institution strategy;
  2. informed by good practice and research;
  3. supported adequately;
  4. deployed and promoted effectively; and
  5. evaluated from a number of perspectives.
  (13 indicators: 2 aligned 3 informed, 3 supported, 2 deployed, 3 evaluated);
- Professional/staff development for the effective use of technologies for learning and teaching (8 indicators);
- Staff support for the use of technologies for learning and teaching (9 indicators);
ACODE funded a trial to further develop this framework (ACODE Benchmark Project - Stage 2), where a framework and toolkit was developed (http://www.acode.edu.au/resources/acodebmguideline0607.pdf). Two topics were trialled using them in the two stages of the project to date: 'Professional/Staff Development for the effective use of technologies for teaching and learning' and 'LMS support for staff.' Seven institutions participated (identified through ACODE): Monash University, RMIT University, University of Melbourne, University of Queensland, University of Southern Queensland, University of Tasmania, Victoria University of Technology.

MIT90s

MIT90s framework has been used by the University of Strathclyde (one of the 12 institutions in the Higher Education Academy Benchmarking Pilot) to assist in the structuring of its approach to benchmarking e-Learning. The latest version (2.0) of the Pick & Mix methodology uses the MIT90s framework for tagging its criteria in the Pick&Mix 2.0 release.

Model for structuring analyses of e-learning, including benchmarking, but that it does not contain or automatically generate specific benchmarking criteria. The MIT90s framework was developed by Michael S Scott Morton as part of the work of the "MIT90s" initiative which flourished at MIT in the early 1990s. The work is cited under various names: it is correctly entitled The Corporation of the 1990s: Information Technology and Organizational Transformation.

The MIT90s framework has been central to a number of JISC and related studies on adoption and maturity, and this initiative developed several companion pieces of work of which two are from Venkatraman: transformation levels and strategic alignment. The Venkatraman thesis (Venkatraman, N. and Henderson, J. C. "Strategic alignment: Leveraging information technology for transforming organizations", IBM Systems Journal Vol. 32, No. 1, 1993) is that business use of IT passes through five levels, differing in both the degree of business transformation and in the range (and amount) of potential benefits. The levels are:

- Localised exploitation
- Internal integration
- Business process redesign
- Business network redesign
- Business scope redefinition

Levels 1 and 2 are called evolutionary levels – levels 3, 4, and 5 are called revolutionary levels.

This notion of levels has been applied to educational systems, it has to be noted that this is one of the first situations where a 5-point scale has been used in a situation similar to benchmarking. Such 5-point scales are now used by many (but not all) benchmarking methodologies - ELTI and Pick&Mix are the scale-based ones. The MIT90s framework could have wider relevance to e-benchmarking frameworks. In particular, the latest version (2.0) of the Pick & Mix methodology uses the MIT90s framework for tagging its criteria in the Pick&Mix 2.0 release.
Creation of criteria

The MIT90s strategic framework does not generate benchmarking criteria automatically. There are various ways of creating criteria, including using other frameworks to provide a kind of cross-correlation. One productive source of other frameworks is the frameworks used by other benchmarking schemes. The paper Pick&Mix mapping into MIT90s#, gives some idea of how this works.

This recommends looking to the Criterion Bank# to systems such as Pick&Mix and E-xcellence which are reasonably stable - and for those interested in IT, the ACODE system is recommended as well. The categories of ELTI are also interesting to consider, and finally, OBHE has criteria that they can be scored (considering the issue of how to turn a set of criteria scores into a coherent narrative). Finally, those interested in moving down from the institutional to a department or even more pedagogic level may find some value in the CHIRON approach - although a recent Concordance Report# on this counsels caution.

Aspects of MIT90s continue since it is an accepted grouping approach for Pick&Mix criteria and is likely to figure at least implicitly in the change management aspects of a number of Benchmarking and Pathfinder sites.

OBHE

OBHE is benchmarking methodology run by the Observatory on Borderless Higher Education. The OBHE methodology is a collaborative benchmarking methodology where a group of institutions get together and jointly agree relevant areas of interest (in this case, within the e-Learning space) and in a later phase, look for good practices. The Observatory is a joint initiative of ACU, the Association of Commonwealth Universities and Universities UK, the association of all UK universities. It offers a wide range of services of which benchmarking is one. Within the benchmarking offering is a range of sub-offerings, of which one is deployed for the clients of Higher Education Academy in UK. OBHE was used by five institutions in the Pilot Phase and was used by 21 institutions in Phase 1. It is now being used by 11 institutions in Phase 2.

The OBHE categories are eight in number, as follows:

- E-learning strategy development,
- Collaboration and partnerships,
- Management and leadership of e-learning
- Resources for learning and value for money
- E-learning delivery
- E-learning and students
- E-learning and staff
- Communications, evaluation and review

The ACU/OBHE methodology is established on a set of ‘core values’. They are:

- Plurality of Missions: The goals and missions of institutions vary widely. Each may put different emphasis on aspects such as teaching, research and community service. The diverse composition of student populations, as well as the wide range of different academic specialisations, make direct comparisons between institutions complicated. However, where appropriate processes are selected for benchmarking, these differences will not be crucial.
- Non-Prescriptive: The benchmarking exercise does not seek to prescribe how an institution should adopt e-learning. Similarly, there is no ideal organisation structure or method of operation against which the participants’ responses are evaluated. The intention is to focus on
the appropriateness of methods used in each case and the basis for their selection (i.e. fitness for purpose). In particular, innovation and creativity are encouraged and the focus is primarily on the results achieved (i.e. effectiveness).

- **Leadership:** Any organisation is dependent on its people to set its direction and create the environment in which it can achieve its goals. In universities, power and influence can be widely dispersed, creating a very important set of internal stakeholders. Their personal involvement in key activities, and in communication and obtaining commitment to the objectives of the institution is vital.

- **Continuous Improvement:** To achieve the highest levels of performance it is important that the institution has a commitment to continuous improvement. This reflects both incremental or gradual changes that should be a key element of day-to-day work of all staff and the significant ‘step change’ improvements that radically alter the way work is done. The institution must provide the mechanisms to achieve both.

- **Fact Based Management:** It is implicit in the philosophy of the Pilot that institutional decisions, plans and strategies should be based largely on facts and objective data. Given this, it is important that the results of key e-learning activities are measured and used as the basis for performance review and improvement. Such measures and indicators provide management information on a timely basis and in a usable format.

There were six stages involved in the approach:

- A detailed institutional briefing so that the representatives of all the HEIs participating were clear about what was intended and why. Although the basic methodology has to be accepted by all participants, there was opportunity to adapt some elements of data collection, providing all HEIs agreed.

- The basis of our approach was an initial institutional self-review, using questions prepared by the ACU/OBHE team. Each participating HEI received an Institutional Review Document (IRD), incorporating guidance notes for completing the questions. This was intended to be a rigorous analysis, and each HEI had at least three days of consultant time available (as well as a two day workshop) to support its self-review process, to be used as it wishes (subject to discussion with the consultancy team). Evaluations from previous benchmarking programmes show that this stage itself is potentially a valuable change management tool, as it causes an HEI to reflect on the fitness for purpose of its strategies, policies and practices and to answer searching questions.

- Each HEI then prepared its response to the self-review, which was reviewed by the consultancy team. Each HEI was also asked to prepare a brief ‘environmental scan’ of the major factors which it is currently facing in using e-learning. The environmental scans and self-review reports were used to produce working papers for a subsequent workshop. Prior to the workshop, an initial draft report including a set of overall good practice statements was produced by the consultancy team derived from the institutional responses, which then formed the basis for the discussion.

- A workshop was held with the consulting team and three representatives from each of the five participating HEIs. Workshop participants were drawn from relevant senior strategic and line management positions. At the workshop, the consultants’ analysis of the institutional reports was discussed, overall good practices reviewed, and the key high level management issues considered.

- Following the workshop, a final report was prepared by the consultancy team, containing the agreed elements of good practice,

- Finally, following the workshop, participants were invited to conduct a self-assessment exercise, to compare their own practices with the statements of good practice. This enabled each HEI to identify where and how improvements might be made. The self assessments are
then exchanged between the participating HEIs. In the past it has been found that this often triggers institutions to visit each other and learn from experiences found elsewhere.

Open ECBCheck

Open ECBCheck is accreditation and quality improvement scheme for e-Learning programmes and institutions in international Capacity Building. It supports capacity building organisations to measure how successful their e-Learning programmes are and enables continuous improvement though peer collaboration and benchlearning. During the (re) certification process the applying organisation is provided with a ToolKit (online digital benchmark tool based on Excel) that is the foundation for the institution to perform an extensive self-assessment based on a catalogue of quality criteria.

Open ECBCheck forms a participative quality environment which allows its members to benefit in a variety of ways by having access to tools and guidelines for their own practice on the one hand, and being able to obtain a community based label on the other hand.

Three stages to quality are suggested:

- Members of the Open ECBCheck professional community document their commitment to quality by joining
- The Open ECBCheck professional community provides access to and allows sharing of guidelines, tools as well as experiences for quality development for its members
- On basis of a detailed self-assessment process, members can enter into mutual peer-review partnerships to improve the quality of their e-learning offers.

Open ECBCheck is developed from the community of organisations through an innovative and participative process which has been initiated by InWent – Capacity Building International, Germany and the European Foundation for Quality in E-Learning (EFQUEL). Over 20 organisations have meanwhile showed their interest in joining the Open ECBCheck community.

The conceptualised Open ECBCheck label makes use of five central methods for quality evaluation and validation that all have distinct characteristics and potential advantages and disadvantages. These methods, that are benchmarking, benchlearning, peer-review, self-assessment as well as qualitative weighting and summation, need to be discussed briefly as a foundation for the further development of Open ECBCheck.

Excellence in E-Learning in Capacity Building

A comprehensive version of the quality criteria, including detailed explanation and guiding question, as well as all relevant methodological information can be downloaded at www.ecb-check.org. As well as the Open ECBCheck Toolset for self assessment of institutions which are running programmes and courses if form of excel table.

List of quality criteria and their possible evaluation score:

- Minimum criteria: "YES" if criterion is met. It not met leave the field blank
Excellence Criteria: 0 = not met, 1 = partly met, 2 = met adequately, 3 = met excellently

Part A: Information About & Organization of the Programme

A.1 General Description, Objectives and Programme Organization (5 criteria)
A.2 Technical and organizational requirements (2 criteria)

Part B: Target Audience Orientation

B.1 The programme/course takes into account the learning needs of the target audience.
B.2 The stakeholders (learners, teachers, tutors, etc.) are involved in the programme design through an open communication process.
B.3 Learners have access to counselling services and advice both prior to the start of the programme and during its implementation.
B.4 The programme enshrines processes to bridge learning deficits of low achievers.
B.5 Evaluation results from earlier programmes are used for continuous improvement.
B.6 The institution offers explicit management of complaints and appeals to learners.

Part C: Quality of the Content

C.1 The contents are aligned with the learning objectives and are presented in a clear and logic sequence.
C.2 Audio, video, hypertext, images, graphics are some of the media utilized to present and/or represent contents.
C.3 The contents are provided in a flexible manner, allowing for different learning paths.
C.4 Contents are presented with a gender sensitive perspective and take into account cultural diversity.

Part D: Programme/ Course Design

D.1 Learning Design and Methodology (6 criteria)
D.2 Motivation/ Participation (1 criteria)
D.3 Learning Materials (5 criteria)
D.4 eTutoring (4 criteria)
D.5 Collaborative Learning (3 criteria)
D.6 Assignments & Learning Progress (5 criteria)
D.7 Assessment & Tests (1 criteria)

Part E: Media Design

E.1 Accessibility standards have been applied.
E.2 Usability standards are met.
E.3 The navigation design (through the mandatory learning materials) allows learners to know about their progress and position in relation to the overall contents.
E.4 Screens, table of content, and learning materials, including additional resources are printable.

Part F: Technology

F.1 The downloadable learning materials have common formats and acceptable size and do not compromise the speed for loading the pages.
F.2 The virtual learning environment runs on an adequate server, which guarantees its stability.
F.3 The virtual learning environment is accessible through different browsers and operating systems.
F.4 The technology chosen is adequate to support the learning strategies utilized, specifically with reference to the local available technological infrastructure.

Part G: Evaluation & Review

G.1 The achievement of the learning objectives is systematically and regularly checked throughout the programme.
G.2 A systematic evaluation takes place at the end of the programme to evaluate its quality and overall coherence.
G.3 Learning materials are periodically reviewed based on the results of evaluations to ensure the programme meets its objectives.

E-Learning Maturity Model (eMM) benchmarking

E-learning Maturity Model (eMM) is a quality improvement framework based on the ideas of the Capability Maturity Model (CMM) and ISO/IEC 15504 - SPICE (Software Process Improvement and Capability dEtermination) methodologies. The underlying idea that guides the development of the eMM is that the ability of an institution to be effective in any particular area of work is dependent on their capability to engage in high quality processes that are reproducible and able to be extended and sustained as demand grows.

A key aspect of the eMM is that it does not rank institutions, but rather acknowledges the reality that all institutions will have aspects of strength and weakness that can be learnt from and improved. Any benchmarking approach that presumes particular e-learning technologies or pedagogies is unlikely to meaningfully assess a range of institutions within a single country, let alone allow for useful international collaboration and comparison, particularly over an extended period of time.

The eMM provides a set of thirty-five processes, divided into five process areas, that define a key aspect of the overall ability of institutions to perform well in the delivery of e-learning. Each process is selected on the basis of its necessity in the development and maintenance of capability in e-learning. All of the processes have been created after a rigorous and extensive programme of research, testing and feedback conducted internationally. Capability in each process is described by a set of practices organised by dimension.

Key Concepts of the eMM

Capability describes the ability of an institution to ensure that e-learning design, development and deployment is meeting the needs of the students, staff and institution. Critically, capability includes the ability of an institution to sustain e-learning delivery and the support of learning and teaching as demand grows and staff change.

Dimensions of capability

A key development that arose from the application and analysis of the first version of the eMM is that the concept of levels reused from the CMM and SPICE was unhelpful in describing the capability of an individual process. The use of levels incorrectly implies a hierarchical model of process improvement where capability is assessed and built in a layered and progressive manner. The concept underlying the eMM’s use of dimensions is holistic capability. Capability at the higher dimensions that is not supported by capability at the lower dimensions will not deliver the desired outcomes; capability at the lower dimensions that is not supported by capability in the higher dimensions will be ad-hoc,
unsustainable and unresponsive to changing organizational and learner needs. Rather than the model measuring progressive levels, it describes the capability of a process from the synergistic perspectives of Delivery, Planning, Definition, Management and Optimisation.

- **Delivery** is concerned with the creation and provision of process outcomes. Assessments of this dimension are aimed at determining the extent to which the process is seen to operate within the institution.
- **Planning** assesses the use of predefined objectives and plans in conducting the work of the process. The use of predefined plans potentially makes processes more able to be managed effectively and reproduced if successful.
- **Definition** covers the use of institutionally defined and documented standards, guidelines, templates and policies during the process implementation. An institution operating effectively within this dimension has clearly defined how a given process should be performed. This does not mean that the staff of the institution follows this guidance.
- **Management** is concerned with how the institution manages the process implementation and ensures the quality of the outcomes. Capability within this dimension reflects the measurement and control of process outcomes.
- **Optimisation** captures the extent an institution is using formal approaches to improve the activities of the process.

Capability of this dimension reflects a culture of continuous improvement. An organization that has developed capability on all dimensions for all processes will be more capable than one that has not. It is possible to conduct multiple eMM assessments within a single institution, thus gaining insights about disciplinary, structural or other organizationally important divisions of the institution.

**Processes**

The eMM divides the capability of institutions to sustain and deliver e-learning into five major categories or process areas that indicate clusters of strongly related processes. It should be noted however that all of the processes are interrelated to some degree, particularly through shared practices and the perspectives of the five dimensions. Applying the recommendations from the evaluation of the first version of the eMM resulted in a reduced set of thirty four processes that were then subjected to further review through a series of workshops conducted in Australia and the UK. This identified a potential set of three hundred and fifty four possible items. From the three sources of information: version one of the eMM; the workshop findings; and the literature review; were then aligned and this has resulted in the processes listed below which constitute eMM version 2.2.

- **Learning**: Processes that directly impact on pedagogical aspects of e-learning (10 processes);
  - L1. Learning objectives guide the design and implementation of courses
  - L2. Students are provided with mechanisms for interaction with teaching staff and other students
  - L3. Students are provided with e-learning skill development
  - L4. Students are provided with expected staff response times to student communications
  - L5. Students receive feedback on their performance within courses
  - L6. Students are provided with support in developing research and information literacy skills
  - L7. Learning designs and activities actively engage students
  - L8. Assessment is designed to progressively build student competence
  - L9. Student work is subject to specified timetables and deadlines
  - L10. Courses are designed to support diverse learning styles and learner capabilities

- **Development**: Processes surrounding the creation and maintenance of e-learning resources (7 processes);
● D1. Teaching staff are provided with design and development support when engaging in e-learning
● D2. Course development, design and delivery are guided by e-learning procedures and standards
● D3. An explicit plan links e-learning technology, pedagogy and content used in courses
● D4. Courses are designed to support disabled students
● D5. All elements of the physical e-learning infrastructure are reliable, robust and sufficient
● D6. All elements of the physical e-learning infrastructure are integrated using defined standards
● D7. E-learning resources are designed and managed to maximise reuse

● Support: Processes surrounding the support and operational management of e-learning (6 processes);
  1. S1. Students are provided with technical assistance when engaging in e-learning
  2. S2. Students are provided with library facilities when engaging in e-learning
  3. S3. Student enquiries, questions and complaints are collected and managed formally
  4. S4. Students are provided with personal and learning support services when engaging in e-learning
  5. S5. Teaching staff are provided with e-learning pedagogical support and professional development
  6. S6. Teaching staff are provided with technical support in using digital information created by students

● Evaluation: Processes surrounding the evaluation and quality control of e-learning through its entire lifecycle (3 processes);
  ● E1. Students are able to provide regular feedback on the quality and effectiveness of their e-learning experience
  ● E2. Teaching staff are able to provide regular feedback on quality and effectiveness of their e-learning experience
  ● E3. Regular reviews of the e-learning aspects of courses are conducted

● Organisation: Processes associated with institutional planning and management (9 processes);
  ● O1. Formal criteria guide the allocation of resources for e-learning design, development and delivery
  ● O2. Institutional learning and teaching policy and strategy explicitly address e-learning
  ● O3. E-learning technology decisions are guided by an explicit plan
  ● O4. Digital information use is guided by an institutional information integrity plan
  ● O5. E-learning initiatives are guided by explicit development plans
  ● O6. Students are provided with information on e-learning technologies prior to starting courses
  ● O7. Students are provided with information on e-learning pedagogies prior to starting courses
  ● O8. Students are provided with administration information prior to starting courses
  ● O9. E-learning initiatives are guided by institutional strategies and operational plans

Practices

Each process in the eMM is broken down within each dimension into practices that define how the process outcomes might be achieved by institutions (nearly one thousand). These practices are either essential for the process to be successfully achieved or just useful in supporting the outcomes of the particular process. The practices are intended to capture the key essences of the different dimensions of the processes as a series of items that can be assessed easily in a given institutional context.
Capability assessment criteria

Each practice is rated for performance during an assessment from not adequate to fully adequate either by an external assessor or a self-assessor by reference to the practice statement. The ratings at each dimension are done on the basis of the evidence collected from the institution and are a combination of whether or not the practice is performed, how well it appears to be functioning, and how prevalent it appears to be. This provides a useful future-proofing mechanism as performance that is currently fully adequate may not be so in the future as technologies evolve and experience in e-learning grows. Once each practice has been assessed, the results are averaged as a rating for the given dimension of the process.

Modifying the eMM to reflect local concerns

It is entirely possible to extend or modify the eMM to reflect issues of particular concern to a given sector or context, such as legislative requirements, e-learning practices required by accreditation bodies, or contextual factors arising from local experience or culture. Normally this should be done at the level of the practices as this would then still allow for comparison at the summary process level.

E-xcellence

E-xcellence is a web-based instrument focusing on e-learning in higher education; it is a quality benchmarking assessment tool that covers the pedagogical, organisational and technical frameworks with special attention on accessibility, flexibility and interactiveness. E-xcellence is a product of a two-year project, undertaken under the auspices of EADTU and involving a pool of experts from 12 European institutions with a stake in e-learning developments. The objective of the E-xcellence project was to provide a supplementary instrument which may be used with these QA processes to allow the consideration of e-learning developments as a specific feature. In a first stage (2005-2007), the E-xcellence instrument has been developed. In the second stage (2008-2009), E-xcellence was updated with the involvement of some 50 universities and 10 assessment and accreditation agencies in intensive local seminars (national level).

E-xcellence was not envisaged as a benchmarking methodology but as a quality monitoring tool, but at about a year into the project there was a shift in emphasis and benchmarking is now one of the aims envisaged for E-xcellence. In fact there are three orientations of the methodology:

- Assessment tool (at both institutional and programme level) (i.e. benchmarking)
- Quality improvement tool (internal quality care system)
- Accreditation tool for accreditation

An important aspect of E-xcellence is that it offers a European-wide set of benchmarks, independent of particular institutional or national systems, and with guidance to educational improvement. The the basis of the E-xcellence benchmarking process is to use an instrument that is built on dialogue and by stimulating dialogue in a collaborative process to create an environment of learning from numerous best practices that can differ from country to country and give valuable input for dialogue.

E-xcellence+

The E-xcellence project under the E-learning Programme 2004, leads to recommendations on opportunities of improved e-learning performance and therefore helps to improve the quality, attractiveness and accessibility of the opportunities for lifelong learning available within member-states.
The goal of the E-xcellence+ project was to valorise this instrument at the local, national and European level for the higher education and adult education sectors, and to broaden the implementation and receive feedback for enhancing the instrument.

With E-xcellence+, EADTU started in 2008 on valorising the developed QA tools. E-xcellence+ promotes the use of E-xcellence European wide and envisages increased performance and innovation in e-learning by promoting e-learning specific benchmarking. The project supports processes of improving e-learning performance by self-assessment, on-site assessment and accreditation by integration of the instrument in the institutional and national policy frameworks. The sustainability of the instrument is further to be guaranteed by:

- Regular updating of the instrument and manual and yearly publication of revised version.
- Adding good practice exemplars to the manual from the partner organisations and connected European organisations in the field of e-learning.
- Expanding a European network of experts.
- Connection with other European organisations in the field of e-learning.

The E-xcellence+ consortium consists of expert representatives from open universities, traditional universities and assessment and accreditation bodies in higher education and adult education already covering 13 countries and reaching out to the rest of Europe.

- EADTU (The Netherlands)
- Open Universiteit Nederland (The Netherlands)
- Open University (United Kingdom)
- OULU-University (Finland)
- International Telematic University UNINETTUNO (Italy)
- NVAO (Belgium/The Netherlands)
- Estonian Information Technology Foundation (Estonia)
- Högskoleverket / NSHU (Sweden)
- UNED, (Spain)
- KU Leuven (Belgium)
- Czech Association of Distance Teaching Universities (Czech Republic)
- University of Hradec Králové (Czech Republic)
- Slovak University of Technology in Bratislava (Slovakia)
- MESI, (Russia)
- Fernstudien Schweiz (Switzerland)
- Hungarian e-University Network (Hungary)

**E-xcellence Tools**

The E-xcellence instrument consists of a manual and assessors notes to assess the institution on its eLearning performance. The manual is based on 32 benchmarks directly related to eLearning specific quality criteria. These form the basis for self assessment exercise. Quickscan is a web based tool which enables easier guidance and decision making which chapters (benchmarks) are of interest for the institution, which can be applied in three ways:

- The quick scan as a quick orientation (basic option)
- The quick scan with a review at a distance (extended option)
- The quick scan with an on-site assessment - Full assessment (most comprehensive option)

**The quick scan as a quick orientation (Basic option)**
The quick scan is developed to give a first orientation on the strengths of eLearning performance and fields of improvement in one institution. These fields of improvement need further attention and will be the basis for working with the manual and assessors notes.

The on-line questionnaire needs to be filled out by different disciplines in an organisation coming from management, course designers, tutors and students. It is recommended to build a small team of people that correspond with these disciplines. The team also has the task to find out which benchmarks are relevant or less important for their institution. The result of doing the Quick Scan must be an agreed overview of benchmarks that fit the institution as well as a number of benchmarks that ask for an action line in the roadmap of improvement. Each statement has to be considered and judged how this aspect of e-learning is realised in the course or programme of the particular institution or faculty. The instrument offers the opportunity to make comments on the specific issues by indicating: Not Adequate, Partially Adequate, Largely Adequate or Fully Adequate.

The quick scan with a review at a distance (extended option)

The starting point is the using of basic quick scan. To prove the answers that were filled out in the scan are based on solid facts, reference material and a roadmap of improvement are required. All documents can be uploaded. The reviewers look into the evidence at a distance and deliver a report on overall performance and recommendations for improvement.

This assessment will enable to determine the performance of the evaluated e-learning programmes and to pinpoint the requirements for further enhancement. With the instrument, the institution can map the e-learning efforts on the different sections.

For receiving the E-xcellence Associations Label the institution are required to integrate the relevant benchmarks in its internal QA-system. This to guarantee a continuous and repeated use of the E-xcellence benchmarks.

The quick scan with an on-site assessment (most comprehensive option - Full assessment)

This option is similar like the previous one except that E-learning experts (reviewers) will visit the university and do an on-site assessment. Officials from the institution will meet up with the reviewers, and in face-to-face communication they will receive recommendations and advice for improvement.

This on-site assessment will enable to determine the performance of the e-learning programmes and to pinpoint the requirements for further enhancement in real contact with the officials of the organisation.

Outstanding expertise

The E-xcellence instrument works with e-learning experts in a review team. The reviewers are experienced core group members of the E-xcellence team, all representing outstanding expertise in the field of e-learning and quality control as well as many years of work at universities in e-learning development.

Quickscan tool

The instrument is based on the E-xcellence manual which contains the benchmark statements, along with the criteria and indicators:

- Strategic Management
- Curriculum design
- Course Design
● Course delivery
● Staff Support
● Student Support

The instrument is supplemented by a full on-line manual. This is all available under the "creative commons license" at www.eadtu.nl/e-xcellenceqs. There are two forms of the quickscan tool, on-line and off-line questionnaire. Each question could be evaluated with four scale scores (Not Adequate, Partially Adequate, Largely Adequate, Fully Adequate).

Strategic management

The institution should have defined policies and management processes that are used to establish strategic institutional objectives, including those for the development of e-learning.

The institutional strategic plan should identify the roles that e-learning will play in the overall development of the institution and set the context for production of the plans of academic departments, administrative and operational divisions.

The institutional plan should outline options for the use of e-learning in teaching that may define a spectrum of "blends" of e-learning and more established pedagogic mechanisms.

Faculty and departmental plans should aim to best match the student requirements of their particular market sector (national/international focus) in presenting e-learning/blended learning options.

The institutional strategic plan should ensure that plans of academic departments are consistent with each other. Student mobility between departments should not be restricted by major differences in policy or implementation with respect to e-learning.

Strategy

1. The e-learning strategy should be embedded within the teaching and learning strategy of the institution.

2. The institution should have e-learning policies and a strategy for development of e-learning that are widely understood and integrated into the overall strategies for institutional development and quality improvement. Policies should clearly state the user groups and include all levels of implementation, infrastructure and staff development.

3. Investigating and monitoring emergent technologies and developments in the field of e-learning and anticipation for integration in the learning environment.

Management

4. The resourcing of developments in e-learning activities should take into account special requirements over and above the normal requirements for curricula. These will include items such as equipment purchase, software implementation, recruitment of staff, training and research needs, and technology developments.

5. The institution should have an e-learning system integrated with the management information system (registration, administrative system and VLE) which is reliable, secure and effective for the operation of the e-learning systems adopted.

6. When e-learning involves collaborative provision, the roles and responsibilities of each partner (internal and external) should be clearly defined through operational agreements and these responsibilities should be communicated to all participants.
Curriculum design

An important aspect of the quality of e-learning concerns the design of the curriculum. E-learning curricula offer considerable opportunities but are accompanied by risk. It is assumed that curriculum design is broadly constrained by European and national expectations on the knowledge, skills and professional outcomes-based curriculum elements.

This section addresses the particular challenges of curriculum design presented by e-learning.

Key factors concern: flexibility in time and pace of study, programme modularity, building the academic community, and integration of knowledge and skills development.

The challenge that institutions face is that of designing curricula that combine the flexibility in time and place of study offered by e-learning without compromising standards of knowledge and skills development or the sense of academic community associated with campus-based provision that will continue to be regarded as the benchmark against which other provision is measured.

Curriculum design should address the needs of the target audience for e-learning programmes that, in the context of growing emphasis on lifelong learning, may differ significantly in prior experience, interest and motivation from the traditional young adult entrant to conventional universities.

7. E-learning components should conform to qualification frameworks, codes of practice, subject benchmarks and other institutional or national quality requirements

8. Curricula should be designed in such a way as to allow personalisation and a flexible path for the learner consistent with the satisfactory achievement of learning outcomes and integration with other (non-e) learning activities. Use of formative and summative assessment needs to be appropriate to the curriculum design.

9. Curriculum design should ensure that appropriate provision is made for the acquisition of general educational objectives and the integration of knowledge and skills specifically related to e-working across the programme of study. The contribution of e-learning components to the development of educational objectives needs to be made clear.

10. Curricula should be designed in such a way as to require broad participation in an academic community. As well as student-student and student-tutor interactions this should include, where appropriate, interaction with external professionals and/or involvement in research and professional activities.

Course Design

The course design process should demonstrate a rational progression from establishing the need for the course within the overall curriculum, through the design of a conceptual framework to the detailed development and production of course materials.

Each course should include a clear statement of the learning outcomes to be achieved on successful completion. These outcomes will be specified in terms of knowledge, skills, vocational/professional competencies, personal development, etc. and will usually be a combination of these.

The development of each course should provide a clear documented course specification which sets out the relationship between learning outcomes and their assessment.

Though aspects of detailed development and implementation of the e-learning course might be subcontracted to an outside agency (e.g., a consortium partner, a commercial e-learning developer) the delegation of such tasks should be conducted under full oversight of the parent institution.
Where the design of the e-learning course has been contracted out, the responsibility for its performance remains with the awarding institution. Under these circumstances, arrangements for its evaluation, modification and enhancement are important aspects of the programme plan.

11. Each course should include a clear statement of learning outcomes in respect of both knowledge and skills. In a blended-learning context there should be an explicit rationale for the use of each component in the blend.

12. Learning outcomes, not the availability of technology, should determine the means used to deliver course content and there needs to be reasoned coherence between learning outcomes, the strategy for use of e-learning, the scope of the learning materials and the assessment methods used.

13. Course design, development and evaluation should involve individuals or teams with expertise in both academic and technical aspects.

14. Within e-learning components, learning materials should be designed with an adequate level of interactivity to enable active student engagement and to enable them to test their knowledge, understanding and skills at regular intervals. Where self-study materials are meant to be free-standing, they should be designed in such a way as to allow learners on-going feedback on their progress through self-assessment tests.

15. Course materials should conform to explicit guidelines concerning layout and presentation and be as consistent as possible across a programme.

16. Courses, including their intended learning outcomes, should be regularly reviewed, updated and improved using feedback from stakeholders as appropriate.

17. Courses should provide both formative and summative assessment components. Summative assessment needs to be explicit, fair, valid and reliable (see section 2.5.2). Appropriate measures need to be in place to prevent impersonation and/or plagiarism, especially where assessments are conducted on-line.

Course Delivery
This section covers the technical aspects of course delivery, the interface through which students receive their course materials and communicate with fellow learners and staff. Pedagogical aspects of course delivery are included in the Course Design and Student Support sections of the manual.

The systems represent a very significant investment of financial and human resource for acquisition and implementation and the selection of a particular system may influence teaching developments for many years.

Effective course delivery requires collaboration between academic and operational divisions of the institution. Technical infrastructure should serve the requirements of the academic community, both students and staff.

Policies on the implementation of a virtual learning environment to manage delivery processes should be driven by educational requirements and performance monitoring should embrace the impact on learning as well as the operational statistics.

18. The technical infrastructure maintaining the e-learning system should be fit for purpose and support both academic and administrative functions. Its technical specification should be based on a survey of stakeholder requirements and involve realistic estimates of system usage and development.
19. The **reliability and security** of the delivery system should have been rigorously **tested** beforehand and appropriate measures should be in place for system recovery in the event of failure or breakdown.

20. Appropriate provision needs to be made for **system maintenance**, monitoring and review of performance against the standards set and against improvements as these become available.

21. The **VLE** should be **appropriate for the pedagogical models adopted** and for the requirements of all users. It should be integrated with the institution's registration and administrative system as far as possible.

22. The information and services should be provided to all users in a **logical, consistent and reliable** way.

23. All users should be confident that the systems for communication and provision of information are **secure, reliable** and, where appropriate, **private**.

24. Institutional **materials and information** accessible through the VLE should be **regularly monitored, reviewed and updated**. The responsibility for this should be clearly defined and those responsible provided with appropriate and secure access to the system to enable revision and updating to occur.

**Staff Support**

E-Learning institutions should provide their staff with the necessary facilities and support for delivering academic teaching of high quality. The fact that this is carried out using digital media places extra responsibilities on the institution. In this category the most important criteria are brought together and address the needs of both full time and associate staff who may be employed in a number of teaching and administrative roles. The objective of all support services is to enable all members of academic and administrative staff to contribute fully to e-learning development and service delivery without demanding that they become ICT or media specialists in their own right.

25. All staff concerned with academic, media development and administrative roles need to be able to adequately support the development and delivery of e-learning components. The institution should ensure that appropriate training and support is provided for these staff and that this training is enhanced in the light of new system and pedagogical developments.

26. Pedagogic research and innovation should be regarded as high status activities within institutions with a commitment to high quality e-learning. There should be mechanisms within these institutions for the dissemination of good practices based on pedagogical experiences and research in support of e-learning (including institutional pilot projects or good practice developed elsewhere and/or through consortia), and for the training or mentoring of new staff in such practice. Career development incentives should promote the use of e-learning.

27. The institution should ensure that issues of staff workload and any other implications of staff participation in e-learning activities are taken proper account of in the management of courses or programmes.

28. Institutions should ensure that adequate support and resources are available to academic staff including part-time tutors/mentors. These should include:

- support for the development of teaching skills (including support for e-learning skills, collaborative working on-line and contributing to on-line communities which are key skills in an e-learning context)
- access to help desk, administrative support and advisory services
opportunities to provide and receive formal feedback on their experience on the course
procedures to handle and resolve any difficulties or disputes which may arise
legal advice (such as copyright and intellectual property rights)

Student Support

Student support services are an essential component of e-learning provision. Their design should cover the pedagogic, resource and technical aspects that impact on the on-line learner. It is presupposed that on-line activity will form the core of the e-learner's experience hence support services should be designed to be accessed in the first instance via the student's homepage or other entry route to the institution's on-line learning system.

As students are likely to be working to flexible schedules, support services should operate, wherever possible, in a way that acknowledges this.

Technical support areas may be required to offer services on a 24x7 basis. In other domains 24x7 may be the target for automated services with human contact/follow up operating to stated performance targets.

Students should have a service map and clear specifications of the services available at all levels.

29. Students should be provided with a clear picture of what will be involved in using e-learning resources and the expectations that will be placed on them. This should include information on technical (system and VLE) requirements, requirements concerning background knowledge and skills, the nature of the programme, the variety of learning methods to be used, the nature and extent of support provided assessment requirements, etc.

30. Students should be provided with guidelines stating their rights, roles and responsibilities, those of their institution, a full description of their course or programme, and information on the ways in which they will be assessed including e-learning components.

31. Students should have access to learning resources and learner support systems. The e-learning system should provide:

- access to library resources
- support for the development of key skills (including support for e-learning skills, collaborative working on-line and contributing to on-line communities which are key skills in an e-learning context)
- advice and counseling over choice of courses and progression through the programme
- an identified academic contact, tutor and/or mentor who will provide constructive feedback on academic performance and progression
- access to help desk, administrative support and advisory services
- opportunities to provide and receive formal feedback on their experience on the course
- procedures to handle and resolve any difficulties or disputes which may arise
- alumni access

32. Students should be provided with clear and up-to-date information on the range of support services available and how these may be accessed.

33. The expectations on students for their participation in the on-line community of learners are made clear both in general terms and in relation to specific parts of their course or programme.
BENVIC

BENVIC was developed under an EU project, also called BENVIC (Benchmarking of Virtual Campuses) in the period 1999-2000. The consortium was led by the Open University of Catalonia (UOC) and had a strong set of partners (including UCL in the UK). The Benvic (Benchmarking of virtual campus) project aimed at:

- develop, test and establish an educational approach to evaluation of “virtual campuses” experiences throughout Europe, particularly those involved in the Socrates ODL Programme;
- promote a collaborative network able to implement evaluation through comparison and benchmarking;
- develop a competence map related to the design and implementation of “virtual campuses”;
- promote the new knowledge and approach made available by the project to the European Academic Community.

The BENVIC project's activity was the “Benchmarking of Virtual Campuses”, and aimed to offer systems for evaluating “Virtual Learning Platforms” to decision makers that allowed them to improve their developments as well as become better acquainted with other platforms. Moreover, the final purpose of this evaluation approach was the establishment of quality criteria.

Having set up a general framework for benchmarking (case studies, basic principles of benchmarking, state of the art in the evaluation of open and flexible learning programmes, methodology and approach etc.) in the first phase of the project, the Consortium has worked for the last 12 months of project in the definition of a list of indicators and the evaluation of its usability by inviting different institutions to participate.
The different areas of activity of a Higher Education institution can be benchmarked through a set of indicators. From the identified indicators and processes a map of competence was constructed to gather the basic criteria to be taken into account in any evaluation of virtual learning environments.

**Evaluation methodology**

In order to validate documents and as a first test of the system described above - not only the indicators list but also the whole process and the working methodology the Consortium has adopted – new institutions were invited to the BENVIC club. They would test the system and results would be analysed, as a base for decision-making.

The evaluation methodology is based on new members testing the system. Evaluation have been made at three levels:

1) **Case study level**

Interested members visit the BENVIC website where they are asked to fill in a short profile questionnaire. In order to give a more detailed profile of the institution, the university completes a case study grid. At the same time, this document constitutes a refined profile of the institution. This case study, which will be made available to other institutions having joined the benchmarking club, will help universities and other higher education institutions to compare themselves with each other. It will be easier to situate the institution, thus facilitating further comparisons.

2) **Indicators level**

In entering this phase, the organisation assesses its own performance with respect to various elements of the virtual campus, such as learning services and resources, teaching staff and technical resources. The indicators are rated: not implemented at all – partially implemented – fully implemented on a 0-2 scale. These indicators will allow the institution to see where it should place itself in the development of its virtual campus.

The same list of indicators allows the institution to be compared. In fact, it is not up to the BENVIC management to compare the different universities. The comparison is made by the institutions themselves using the list of indicators of what represents - in a best case scenario - the ideal virtual campus. In order to foster the mutual learning aspect of the BENVIC exercise, the project management offers to provide the institutions/universities with the names of best performers. If an institution wants to improve its performance in a specific field, it is welcome to get in touch with the project management who will provide the institution with the name of the best performer in that field.

3) **Map of competences level**

Having done the comparison with the list of indicators and, if possible, with other institutions, the institution can then write an improvement and learning plan. By this point the institution should know exactly what areas of the virtual campus need improving. The competence map should help to draw a coherent improvement plan. As soon as an improved system is in place, the institution can re-start the benchmarking exercise by going back to the previous phases:

- profiling the institution by describing their own case study is appropriate when the institution considers that the changes implemented had considerable effects on the profile of the institution. The organisation fills in this grid in order to find out how improvements had an effect on its general profile;
- answering the list of indicators another time should lead to different ratings being reached, and thus clearly demonstrate the improvements the institutions have attained and show the areas where there is still room for improvement.
The BENVIC Benchmarking Indicators

The BENVIC benchmarking approach combines three types of indicator: structural, practice and performance indicators.

**Structural indicators** assess what are sometimes termed ‘enablers’. Enablers are essentially the resources available to the virtual campus to enable it to carry out its mission and objectives. They include: institutional and human competences; technology platforms and tools; governance and management structure.

**Practice indicators** evaluate the ways in which the virtual campus utilises its resources. They assess the work practices and processes of the virtual campus. They focus on: the business strategy of the organisation; its targeting and access policies; its pedagogic approach.

**Performance indicators** assess the results of the interaction between work practices and enablers. They focus on outcomes and impacts, such as: learning outcomes; cost-benefits; technical effectiveness.

There are in total 72 structural and practice indicators.

The BENVIC indicators are used to:

● provide a template to enable individual campuses to identify what they should measure and how to measure it, in order to assess their strengths and weaknesses and plan for improvement;
● provide a basis to capture data on the organisational structure and practices of virtual campuses;
● establish procedural and operational norms – benchmarks – as a result of analysing these data;
● monitor and track how virtual campuses are evolving and what are the implications of these changes.

**Project website**: [http://www.benvic.odl.org/](http://www.benvic.odl.org/) (it has not been updated since 4 February 2002)

**Diagnostic template/questions**: [http://www.benvic.odl.org/indexpr.html](http://www.benvic.odl.org/indexpr.html)

**MASSIVE**

MASSIVE is an EU-funded project coordinated by the University of Granada in the period of 2005-2007. MASSIVE project was aimed at designing a model of mutual support services for European traditional universities to successfully implement the virtual component of teaching. Within the MASSIVE project, a peer review model/service was designed and tested.

The starting point of MASSIVE were the results coming from previous projects: not only to analyse them but to sustain the good practices generated so as to include them in the final model of support services that is to be designed in the 6 areas proposed by the project consortium. Thus, MASSIVE intended to promote, through a peer review evaluation approach, a mutual support model for service provision among specialised teams of University staff [MASSIVE, 2005]. The project focused on the following specific objectives:

● Defining the conceptual model of virtualisation
● Identifying and classifying good practices in the organisation of support services to the University community regarding University virtual components
● Exploring and comparing the elements for transferability
● Validating the approaches to develop the support services
● Guaranteeing the wide dissemination of the practices and use of the model
The review focuses primarily on reviewing the results of previous projects carried out within this domain and applying these to the development of the MASSIVE model. In this case three key projects were covered:

- IVETTE: Implementation of virtual environments in Training and Education (TSER programme)
- BENVIC: Benchmarking of Virtual Campuses (Socrates Programme)
- Restructuring the Universities and New Technologies for Teaching and Learning (CRE)

Within the MASSIVE project, six relevant service areas have been identified and described as the basis for building an interactive model of university support service (particularly critical and needed in the EU higher education institutions). These areas (aspects) are:

1. University strategies in the integration of ICT in teaching & learning
2. Evolution of university libraries in their support of e-learning
3. Management of IPR of digital learning materials
4. Support for teaching staff in their use of e-learning
5. Support for students for e-learning
6. Design of online courses.

The purpose of the peer review visits is to explore, with colleagues in participating universities which have agreed to participate, the developments in up to six aspects of the use of e-learning within the university. The Peer Review takes place in three stages:

- A Preparatory stage (one month before the visit) – this entails gathering background information about an institution, and its current and future planned use of e-learning. An important part of this information gathering is the ‘Positioning Questionnaire’, which have to be completed by someone in the University who is well informed about these issues, and sent back to the MASSIVE team prior to the site visit. Relevant documents that help us build a picture of how your University approaches e-learning are requested. These also sent to the MASSIVE team prior to the site visit.
- A Site Visit (2 working days) – which involves a collaborative dialogue between the MASSIVE peer reviewers and a range of representatives of the University. The visit provides an opportunity for the reviewers to gather more information, through interviews and observation, and for both reviewers and ‘host institution’ to explore key issues relevant to e-learning strategies.
- An Analysis and Reporting stage (one month after the visit) – on the basis of the data gathered from the preceding stages, this final part of the Review process will focus on the production of recommendations arrived at through collaborative reflection between the MASSIVE team and the hosting institution.

The heart of the MASSIVE methodology is the questions asked during the data-collecting information and investigation stage. The value and usefulness of the information collected are directly determined by the nature of the questions asked. A list of questions for each service area is developed and each list may be modified depending on the individual researcher and the individual situation. The same can be said about the service area indicators [MASSIVE Methodology, 2005].

A key outcome of MASSIVE is to promote a peer review evaluation approach, based on models widely tested in the university partners. Via Peer Review Visits, those in charge of the best support services practices will help each university to refine and improve their support services for e-learning. At this point the project becomes very similar to a benchmarking project.

Project website: http://cevug.ugr.es/massive/index.html
Outputs: http://cevug.ugr.es/massive/outputs.html
CHIRON

CHIRON - Referring Innovative Technologies and Solutions for Ubiquitous Learning is an EU-funded project (Leonardo da Vinci Programme – Runtime: 2004-2006) whose aim was to develop reference material presenting and analysing research outcomes, experiments and best practice solutions for new forms of e-learning, based on integration of broadband web, digital TV- and mobile technologies for ubiquitous applications in the sector of non-formal and informal life-long learning. They tend to use the phrase "u-learning" rather than "e-learning", where "u" denotes "ubiquity".

On the basis of extensive surveys of pedagogical concepts, models, standards and organisational forms appropriate for ubiquitous learning use of the emerging technologies 11 criteria, divided into a total of 216 indicators have been developed. The criteria are as follows:

- Goals and Objectives of the course (12 indicators)
- Institutional Support (14 indicators)
- Course Development (50 indicators)
- Course Structure (12 indicators)
- Course Content (25 indicators)
- Teaching/Learning (19 indicators)
- Student Support (18 indicators)
- Faculty Support (4 indicators)
- Evaluation and Assessment (24 indicators)
- Accessibility (26 indicators)
- Language (12 indicators)

Most of the indicators are best described as specific and rather detailed e-learning standards and guidelines (for example on house style, usability, etc). The ones more oriented to benchmarking are drawn from a range of sources, including mostly from the Quality on the Line # criteria developed in the late 1990s by the Institute for Higher Education Policy# in the US.


ELTI

The ELTI (Embedding Learning Technologies Institutionally) audit was originally developed as part of a JISC# project (2001 - 2003) and was designed to inform the process of embedding learning technologies, assist in developing appropriate institutional structures, culture and expertise and to encourage cross boundary collaboration and groupings. The original study investigated the roles, skills and activities of learning technology staff in the UK and the impact of learning technologies institutions. ELTI was funded as a follow up project in order to make this methodology available more widely. These audit materials and methodology can help institutions examining e-learning strategies and organisational structures to support the use of ICT in teaching, learning and research. The original audit tools and accompanying notes and guidance have been revised and enhanced to make them useful to the whole HE community.

From the study and models developed as part of the study, 12 key institutional factors were identified in 3 areas as follows:

**Culture:**
1. Profile of Learning and Teaching
2. Profile of Learning Technology
3. Reward and recognition
4. Research and development

**Infrastructure:**
1. ICT infrastructure
2. Learning Technology support
3. Learning Technology funding
4. Administrative infrastructure

**Knowledge:**
1. Staff ICT/pedagogy skills
2. Student ICT/learning skills
3. Digital learning resources
4. Networks and collaborations

Up to ten indicators are agreed, to reflect institutional context, for each factor. Indicators are expressed as positive statements, which can be assessed according to a 1-5 scale but can also include qualitative statements. [ELTI, 2006].

**The audit process**

A learning technology audit is designed to collect information that is useful to the institution about the 12 key factors in learning technology development. The process of auditing is at least as useful as the information collected. There are four sections to the audit:

1. Institutional Factors
2. Roles
3. Skills
4. Policy and Planning

For each section the audit tools allows to describe institution, staff roles, skills and activities in a number of ways.

The aim of **Institutional Factors Tool** is to help institution to identify strengths and weaknesses in relation to the development, embedding, support and use of learning technology. The outcomes can be used to help formulate an action plan for balanced development. The factors audited are subdivided into three sections: Culture, Infrastructure and Expertise. Each factor is assessed via a number of key indicators in the form of positive statements (which may be seen as indications of ‘institutional good practice’).

**Roles audit tool** is designed to help mapping and describing the people at institution involved in the development, use and support of learning technology. It can also help to identify key roles and activities which may be missing from your institutional profile.

**Skills audit tool** is designed to help mapping the learning technology skills required by people in different roles. It can be used to develop job descriptions for new or existing posts, or as a training needs analysis for individuals and roles. It can also act as a general needs analysis for learning technology skills, either across a whole institution or in a smaller context, such as a department, faculty or project.

**Policy and Planning audit tool** is designed to help mapping the planning and decision-making structures which impact on the use of learning technology at the institution. It can be used to identify gaps in the decision-making process, tackle bottlenecks and conflicts of interest, or to target key individuals and committees.
Carrying out an audit

To carry out the audit there is ELTI workshop pack which contains the Audit Tools, the Audit Notes and the Facilitator’s Guide. The pack provides a comprehensive set of supporting documentation. The document ELTI Audit Tools is the most directly relevant to what is commonly accepted as benchmarking, especially section 1 on so-called “Institutional Factors”.

ELTI Facilitator’s Guide
http://www.jisc.ac.uk/media/documents/programmes/jos/workshop_pack_facilitator_v5.pdf

ELTI Audit Tools
http://www.jisc.ac.uk/media/documents/programmes/jos/workshop_pack_audit_tools_v5.pdf

ELTI Audit Notes
http://www.jisc.ac.uk/media/documents/programmes/jos/workshop_pack_notes_v5.pdf

Pick&Mix

Pick&Mix was based on a systematic review in 2005 [BACSICH Benchmarking, 2008] of approaches to benchmarking e-learning, looking for commonalities of approach. It has been used in all three phases of the Higher Education Academy/JISC Benchmarking Exercise 2005-2008, and by all four Welsh universities in the Gwella benchmarking programme in 2008-2009. Five different methodologies were proposed for the Benchmarking Exercise: ELTI, eMM, MIT90s, OBHE and Pick&Mix. Only OBHE and Pick&Mix were used in all three main phases of Benchmarking – and only Pick&Mix is being used in the Gwella phase. Of the five methodologies, Pick&Mix is the one closest in concept to E-xcellence. It is being used (spring 2009) by universities in UK and Australia for benchmarking and re-benchmarking. One of the features of Pick&Mix is that it works in an “open educational methodology resources” mode in that key documents and updates to them are rapidly placed in the public domain using the Creative Commons copyright/IPR regime.

One of the virtues of Pick & Mix (which gave rise to its name) is that it does not impose methodological restrictions and has incorporated (and will continue to incorporate, in line with need) criteria from other methodologies of quality, best practice, adoption and benchmarking [Pick&Mix, 2005]. Methodologies Bacsich has reviewed and already drawn on include US work (the 24 “Quality on the Line” benchmarks and the APQC indicators), Australian studies including recent work from ACODE (the Australian analogue of HELF), UK work by NLN and Becta (ILT Self-Assessment Tool and The Matrix), and the New Zealand e-Learning Maturity Model.

Pick & Mix is a methodology for benchmarking e-learning with the following features [HEI Benchmarking Report, 2006]:

- a set of criteria split into 20 core criteria (which each institution must consider) and supplementary criteria (from which each institution should select around five to consider); in addition, an institution may use local criteria developed in the same style
- guidelines, based on HEI experience, as to the total number of criteria (core plus supplementary plus local) that an HEI should consider
- criteria which are a mix of ‘process’ criteria and ‘metric’ output criteria; covering student-facing and staff-facing issues as well as strategy, structure and IT topics
- criteria described (as far as possible) using concepts, structures, processes and vocabulary familiar to those in UK HEIs
- each criterion is scored on a levels 1-5 scale with an additional level 6 to signify excellence: level 1 is always sector-minimum and level 5 is reachable sector best practice in any given time period (level 6 is supposed to be out of planned reach for the majority of HEIs)
● each score associated with a scoring statement to describe in more detail the practices associated with that level in each specific HEI

● new criteria which can be developed to reflect changing agendas (such as plagiarism, widening participation, space planning) or taken from other criterion-based methodologies (ELTI, eMM, BENVIC, CHIRON, E-xcellence, etc) where appropriate: each such criterion can either be specific to an HEI (local criteria) or suggested for inclusion as a new supplementary criterion

● inbuilt sector knowledge and comparability based on the use of transparent evidenced public criteria norm-referenced across the sector which is not to downplay the role of HEIs and consultants in jointly investigating and assessing each criterion

● careful consideration given to minimise the number of core criteria so that each is clearly correlated with success in e-learning

● no inbuilt project management or engagement methodology so that Pick&Mix can be run within a project management methodology comfortable to the HEIs involved and of appropriate weight

● use of criteria, couched in familiar terms and clearly correlated with success, coupled with familiar and lightweight project management, so as to lead to a "low footprint" style of benchmarking suitable for a range of HEIs, and departments within institutions as well as institution-wide approaches augmentable with deeper studies

● an "open content" method of distribution where each final release plus its supporting documents is available under a Creative Commons license.

The Pick&Mix methodology is documented in the public domain. All major updates to documentation are linked from the methodology entries on the HE Academy wiki and notified to enquirers via the HE Academy benchmarking blog. Further information on Pick&Mix including a range of presentations and papers, and material on related methodologies, within the "critical success factors" tradition of benchmarking can be found on the Matic Media website at http://www.matic-media.co.uk/benchmarking.htm. The current version of Pick&Mix is **Pick&Mix version 2.6 beta 3** has 53 criteria.

**Pick&Mix version 2.6 beta3:**

http://www.matic-media.co.uk/benchmarking/PnM-2pt6-beta3-full.xlsx

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**SEVAQ+**

SEVAQ+ is a European-wide initiative for the Self-evaluation of quality in technology-enhanced learning, based on an innovative combination of the Kirkpatrick evaluation model for learning and the EFQM excellence model. SEVAQ+ aims to engage in wide-reaching dissemination and exploitation of the results of a Leonardo da Vinci pilot project (2005-2007): the SEVAQ tool and concept for the Self-Evaluation of Quality in eLearning [SEVAQ+, 2009]. SEVAQ+ is designed to be used by a range of learning organisations – professional training centres, in-company training departments or universities – to evaluate the quality of any teaching and learning supported by technology, whether it concerns totally online distance courses or blended learning. SEVAQ+ enables to engage in analysis of feedback from the major stakeholders involved in technology-enhanced learning systems and:

- pinpoint areas for improvement,
- track progress from one semester or year to the next,
- benchmark teaching and training against other institutions.

The SEVAQ+ tool can be used by: teachers and trainers to design questionnaires to gather feedback on what learners really think of their learning experience, training managers to get the full picture by designing questionnaires for the different stakeholders involved. Also organisations can use the
results of SEVAQ+ to benchmark against others using SEVAQ+ and learners get the chance to give their point of view and contribute to improving the quality of learning.

SEVAQ+ follows a logical structure inspired by the EFQM quality framework, combined with the Kirkpatrick evaluation model. To design a questionnaire, one can choose which Criteria and Sub criteria to focus on (achievement of learning goals, efficiency of the technical support, effectiveness of the pedagogical approaches, quality of the learning resources,…). These criteria are organised within an overall framework of Resources, Processes and Results. The SEVAQ+ tool then proposes a series of statements: one can choose those which best reflect the reality of the context that is going to be evaluate.

Project website: http://www.sevaq.eu/
Online tool: http://www.sevaq-plus.preau.ccip.fr/
4. EU Benchmarking Initiatives in HE

ESMU

Established in 2000, the ESMU benchmarking programme (www.esmu.be) aims at measuring and promoting good practices in university management. The programme works on an annual basis and focuses on management processes such as internal quality assurance, student services, e-learning strategies, and research management. Quantitative indicators are gathered but above questionnaires focus on qualitative data gathering related to management processes.

In the course of the benchmarking programme, participating higher education institutions produce self-evaluation reports and ESMU experts evaluate higher education institutions’ reports against a set of good practices. Participating higher education institutions meet in workshops to discuss and exchange good practices.

The approach is based on the Malcolm Baldridge National Quality Award approach (US), which also underlies the EFQM Excellence model (see above)

Benchmarking in European Higher Education

Benchmarking in European Higher Education is a project funded by the European Commission to improve benchmarking in higher education. It is designed to help modernise higher education management and to promote the attractiveness of European Higher Education. It supports HEIs and policy makers to better realise the Lisbon goals and the Bologna Process.

Current project partners are:

- European Centre for Strategic Management of Universities (ESMU)
- Centre for Higher Education Development (CHE)
- International Centre for Higher Education Management (ICHEM), University of Bath
- Institute of Education (IoE), University of London

Key activities

In the current and second project phase (2008-2010) of the project, results from the first phase are taken further with:

- Four benchmarking groups of HEIs for wide exchange, advice and best practices in workshops. These groups focus on governance, university-enterprise cooperation, curriculum reforms and lifelong learning;
- An online collaborative learning community (in a restricted area of the website);
- Benchmarking tools (questionnaires, reports, handbooks of good practices);
- A series of dissemination events.

The first phase of the project (2006-2008) aimed to better understand the concepts and practices of benchmarking with a view to improving and increasing their uses in higher education.

An analysis of collaborative benchmarking in higher education, either initiated by a single Higher Education Institution, by a European association, or a university network was carried out with extensive desk research, based on 14 criteria by which these could be characterised.
The project organised a Symposium in November 2007 to present and test preliminary project findings with representatives from HEIs. Three specialised practical workshops were organised in the spring of 2008 on benchmarking research, internationalisation and internal quality.

The following is available from the Benchmarking in European Higher Education website:

- An online tool with examples, advice and an online bibliography
- A practical handbook with a review of the literature and a step by step approach to benchmarking
- A report of extensive desk research carried out on benchmarking in higher education
- Guidelines for good practices for effective benchmarking
- An ongoing platform to promote exchange and good practices for benchmarking in higher education

**ECIU**

The benchmarking initiative of the European Consortium of Innovative Universities, ECIU (http://eciu.web.ua.pt) was established in different phases: the first phase began in 2004 with the project Administration of innovative universities; the second in 2005 with the project International Mobility of Students; and the third phase started in 2006 with the Difuse Project: Driving Innovation from Universities to Scientific Enterprises (www.difuse-project.org).

A professional consultant is in charge of the coordination of the International Mobility of Students, whereas the coordination of the other parts is carried out by the consortium itself. The benchmarking programme currently comprises four universities in phase I, four universities in phase II, and seven universities in phase III. The universities have similar missions and characteristics, and are spread geographically across Europe.

The benchmarking exercises used a mixture of quantitative and qualitative methods and peer reviews. Questionnaires were used for the Administration and Mobility projects. Regarding the administration benchmarking project, a series of qualitative indicators and quantitative questions were analysed. In the Student Mobility Project no qualitative indicators were used. The task of the peers consisted in answering questionnaires, from which the Steering Committee chose best practices.

In particular in the benchmarking exercise on administration overall, ECIU used Burton Clark’s book on entrepreneurial universities (1998) as a starting point and benchmarks against which to identify how some ECIU universities were performing in developing administrative processes to support fully their mission of being innovative universities.

**The Aarhus Benchmarking Network**

In 2006, Aarhus University initiated a benchmarking exercise (www.au.dk/benchmarking), inviting the four universities of Kiel, Bergen, Gothenburg and Turku to join. All are multi-faculty higher education institutions, with a broad range of science and teaching, and all are located in the second largest town in their country.

The benchmarking exercise was launched for an initial three-year period focusing on research management, management of international Master’s programmes and PhD studies. Aarhus coordinates the initiative.

Annually, the universities’ Rectors meet. In addition, the partners organise two to three face-to-face meetings every year and engage in intermediate communication by email and by telephone.
<table>
<thead>
<tr>
<th>No.</th>
<th>Name (ABBREVIATION)</th>
<th>MIT90s</th>
<th>OBHE</th>
<th>BENVIC</th>
<th>ELTI</th>
<th>CHIRON</th>
<th>ACODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initiative (Project)</td>
<td>University of Strathclyde, Observatory on Borderless Higher Education</td>
<td>Open University of Catalonia</td>
<td>Developed under the JISC project (<a href="http://www.jisc.ac.uk/">http://www.jisc.ac.uk/</a>)</td>
<td>Leonardo da Vinci Programme coordinated by ESCOM (<a href="http://www.semioweb.msh-paris.fr/chiron/">http://www.semioweb.msh-paris.fr/chiron/</a>)</td>
<td>Australasian Council on Open, Distance and e-Learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main characteristics</td>
<td>Strategic framework for managing IT Business transformation levels</td>
<td>Methodology where a group of institutions get together and jointly agree relevant areas of interest and in a later phase, look for good practices.</td>
<td>Educational approach to evaluation of &quot;virtual campuses&quot; experiences throughout Europe. General framework for benchmarking of open and flexible learning programmes.</td>
<td>A learning technology audit designed to collect information that is useful to the institution about the 12 key factors in learning technology development.</td>
<td>Discrete benchmarks that can be used alone or in combination with others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No. of Benchmark areas (criteria)</td>
<td>cross-correlation with other frameworks</td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Total No. of indicators</td>
<td>variable</td>
<td>variable No. of statements</td>
<td>102</td>
<td>Up to ten indicators are agreed for 12 key institutional factors (around 120)</td>
<td>216</td>
<td>74</td>
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<tr>
<td></td>
<td>Implicit/explicit</td>
<td>explicit</td>
<td>explicit</td>
<td>explicit</td>
<td>Implicit</td>
<td>Explicit</td>
<td>explicit</td>
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<td></td>
<td>Internal or external exercise</td>
<td>internal</td>
<td>internal and external</td>
<td>internal</td>
<td>internal</td>
<td>internal</td>
<td>internal and external</td>
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<tr>
<td></td>
<td>Process focus (vertical/horizontal)</td>
<td>vertical and horizontal</td>
<td>vertical and horizontal</td>
<td>vertical and horizontal</td>
<td>vertical and horizontal</td>
<td>vertical and horizontal</td>
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</tr>
<tr>
<td></td>
<td>Focused on inputs, process, outputs or combination of these</td>
<td>combination</td>
<td>Process</td>
<td>Outputs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metric (quantitative or qualitative)</td>
<td>Quantitative</td>
<td>Qualitative</td>
<td>Quantitative and qualitative</td>
<td>Quantitative and qualitative</td>
<td>Qualitative</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td>Scoring system</td>
<td>Statements of Good practices</td>
<td>0-2 scale (0 Not implemented at all; 1 Partially implemented; 2 Fully implemented)</td>
<td>1-5 (1 Not true; 2 Emergent, 3 Partially true, 4 Largely true; 5 True)</td>
<td>Statements of Good practices</td>
<td>1-5 (Level 5 indicates best practices)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tools</td>
<td>none</td>
<td>none</td>
<td>Questionnaire for positioning virtual campus List of indicators</td>
<td>ELTI workshop pack which contains the Audit Tools, the Audit Notes and the Facilitator’s Guide</td>
<td>none</td>
<td>Toolkit (Phase 2)</td>
</tr>
<tr>
<td></td>
<td>For adoption level (1-6) // explanation at the end //</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Name (ABBREVIATION)</td>
<td>Initiative (Project)</td>
<td>Time period</td>
<td>Main characteristics</td>
<td>No. of Benchmark areas (criteria)</td>
<td>Total No. of indicators</td>
<td>Implicit/explicit</td>
</tr>
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<tr>
<td>7</td>
<td>MASSIVE</td>
<td>University of Granada</td>
<td>2005-2007</td>
<td>MASSIVE project was aimed at designing a model of mutual support services for EU traditional universities to successfully implement the virtual component of teaching. Within the MASSIVE project, a peer review model/service was designed and tested.</td>
<td>Six relevant service areas Defined by total number of criteria (core plus supplementary plus local) that an HEI should consider.</td>
<td>53 – 20 core 5 supplementary (optional)</td>
<td>each process with 5 dimensions and variable no. of practices (around 1000)</td>
</tr>
<tr>
<td>8</td>
<td>PICK&amp;MIX</td>
<td>Methodology developed by prof. Paul Bacsich</td>
<td>2005 - present</td>
<td>Pick &amp; Mix does not impose methodological restrictions and has incorporated (and will continue to incorporate, in line with need) criteria from other methodologies of quality, best practice, adoption and benchmarking.</td>
<td>Defined by total number of criteria (core plus supplementary plus local) that an HEI should consider.</td>
<td>5 process areas, 34 processes</td>
<td>52</td>
</tr>
<tr>
<td>9</td>
<td>eMM</td>
<td>trialled in the Higher Education Academy Benchmarking Pilot, by the University of Manchester</td>
<td>2005-2008 Phase 1</td>
<td>E-Learning Maturity Model (eMM) provides a means by which institutions can assess and compare their capability to sustainably develop, deploy and support e-learning.</td>
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<td></td>
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</tr>
<tr>
<td>10</td>
<td>OpenECB</td>
<td>InWent – Capacity Building International, Germany and (EFQUEL)</td>
<td>2008-2010</td>
<td>Accreditation and quality improvement scheme for e-Learning programmes and institutions in international Capacity Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>E-xcellence+</td>
<td>European Association of Distance Teaching Universities</td>
<td>2008-present</td>
<td>Web based quality benchmarking assessment tool that covers the pedagogical, organisational and technical frameworks with special attention on accessibility, flexibility and interactivity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>SEVAQ+</td>
<td>SEVAQ+ is a European-wide initiative for the Self-evaluation of quality in technology-enhanced learning under EACEA (<a href="http://eacea.ec.europa.eu/index_en.php">http://eacea.ec.europa.eu/index_en.php</a>)</td>
<td>2009 - present</td>
<td>SEVAQ+ is designed to be used by a range of learning organisations to evaluate the quality of any teaching and learning supported by technology, whether it concerns totally online distance courses or blended learning.</td>
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</tbody>
</table>

For adoption level (1 - 6)
Adoption level
(From Paul Baisch: “Evaluating impact of e-learning: benchmarking”)

In his classic book “Diffusion of Innovations” (Rogers 1995), Everett Rogers described how innovations propagate throughout institutions or societies. He described five categories: innovators, early adopters, early majority, late majority, and laggards. He also described the typical bell-shaped curve giving the number of people in each category. There is a good review of Rogers’ theories in (Orr 2003).

We can turn the Rogers work into a benchmarking criterion by measuring what stage an institution is at in terms of adoption of e-learning. This then gives the following scale:

1. innovators only
2. early adopters taking it up
3. early adopters adopted it, early majority taking it up
4. early majority adopted it, late majority taking it up
5. all taken it up except laggards, who are now taking it up (or leaving or retiring).
6. first wave embedded, second wave of innovation under way (e.g. m-learning after e-learning).
Conclusions

There is a number of benchmarking approaches, models, and tools developed in EU and elsewhere that can be applied in the local contexts of Western Balkan higher education (HE) institutions. These approaches/models/tools come from various developers and usually use slightly different terminologies and practices. Still, generalizing from them, one can easily get a big picture and find many actually common issues addressed by most of them.

The DL building blocks typically covered by benchmarking include:

- institution policy and governance
- information technology infrastructure to support learning and teaching
- support for the use of technologies for learning and teaching
- planning and quality improvement related to technologies for learning and teaching
- pedagogical issues
- professional/staff development
- target audience orientation
- management and leadership of DL
- resources for learning and value for money
- quality of the content
- media design
- information about & organization of the programme
- programme/course design
- learning services

It is possible to combine issues from several approaches and tailor them to fit the needs of a specific HE institution. In addition, it is also possible to use tailored versions of tools developed for use within a specific approach/methodology, such as QuickScan and SEVAQ+.
References


