E-LIQAL – THE E-LEARNING INSTITUTIONAL QUALITY ASSURANCE LABEL

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Abstract

Cross Border Education (CBE) and especially Distance Learning Education (DLE) mainly delivered through e-learning, is becoming a strategic direction of the European Higher Education Area (EHEA) reforms. Its importance is recently gaining more and more recognition by both the policy makers as well as the various providers of Higher Education. The vision and mission of Universities have recently changed to address CBE and DLE and associated new modes of teaching and learning, utilizing Information Communication Technologies. This paper introduces e-LIQAL, the e-Learning Institutional Quality Assurance Label. e-LIQAL provides a model that evaluates the extent to which Higher Education Institutions provide quality e-learning education. The model draws from the experience of University of Nicosia offering e-learning DLE to more than 5,500 students and from the University's expertise in receiving quality assurance evaluations and accreditations by both National and International Quality Assurance Agencies. Furthermore, the model draws from the European Framework for Quality in e-Learning (EFQUEL) and the European Association of Distance Teaching Universities (EADTU) E-xcellence models for quality in e-learning education. The University of Nicosia was awarded both the UNIQUe and the E-xcellence labels awarded by EFQUEL and EADTU respectively. The e-LIQAL model provides for the evaluation of 100 Quality Indicators, grouped in 4 thematic areas supporting excellence in e-learning, namely (a) Institutional Strategy and Organization, (b) DLE Skills Framework, Training and Rewards, (c) Curriculum Design and Offering and (d) Resources, Services and Support. We are also in the process of building a prototype tool in Excel to automate the evaluation of the process and results that will later lead to a fully-fledged web-based tool. Finally, we are currently introducing Key Performance Indicators (KPIs) for each Quality Indicator.

Keywords: Distance Learning Education, e-learning, Quality Assurance.

1 INTRODUCTION

Higher Education Institutions in Europe, increasingly acknowledge the provision of Cross Border Education (CBE), Distance Learning Education (DLE) and in general, the utilization of Information Communication Technologies (ICT) in teaching and learning, as a main pillar of their vision, mission and strategy. In order to achieve the strategic aims of the Higher Education Modernization Agenda [1], the commitment of institutions to adopting new modes of delivery based on ICT innovations is of paramount importance. With this strategic aim in mind, the report "New modes of learning and teaching in higher education" [2] has been prepared by a group of prominent academicians, following a request by the European Commission (EC). This report comprehensively addresses CBE, DLE, e-learning and new ICT-based teaching and learning modes of delivery, and suggests various ways, in which the EC, its member states and Higher Education institutions can promote, support and enhance both the provision of CBE, DLE and e-learning, but at the same time the quality of the learning provided.

This paper introduces e-LIQAL, the e-Learning Institutional Quality Assurance Label. e-LIQAL provides a model that evaluates the extent to which Higher Education Institutions provide quality e-learning education. The model draws from the experience of University of Nicosia offering e-learning DLE to more than 5,500 students and from the University’s expertise in receiving quality assurance evaluations and accreditations by both National and International Quality Assurance Agencies. More specifically, the model draws from the evaluations carried out by (a) the European Framework for Quality in e-Learning (EFQUEL), (b) the European Association of Distance Teaching Universities (EADTU), and (c) The Cyprus Quality Assurance and Accreditation Agency (DIPAE). The University of Nicosia was awarded both the UNIQUe and the E-xcellence labels awarded by EFQUEL and EADTU respectively, and has had its distance learning programmes accredited by DIPAE.

The work in this paper builds and extends the work in [3], which provided an initial framework for the commitment of EU member states and institutions to e-learning. The rest of the paper is organised as
follows: Section 2 provides an overview of related work and models and a very brief comparative analysis of their assessment systems. Section 3 introduces the quality assurance model of e-LIQAL, Section 4 explains the e-LIQAL assessment system and the label’s classification and briefly compares it with the other models’ systems discussed in Section 2. Finally, Conclusions, summarises the work presented herein and addresses our current and future work.

2 BACKGROUND WORK

Before designing the e-LIQAL model and label, we evaluated various existing assessment models and labels. It is important to point out that our evaluation was not merely based on literature review but on the experience we had in applying for evaluation and award of specific labels that we discuss herein. Our application entailed a self-assessment exercise based on the model’s criteria, the submission of a lengthy and detailed self-evaluation report and the face-to-face and/or on-line visit of relevant external evaluation/accreditation committees. We herein discuss three such models, namely the UNIQUe Label [4], the E-xcellence label [5] and the e-learning criteria by DIPAE [6].

2.1 The UNIQUe Label

The UNIQUe Certification for Quality in E-learning and Excellence in Use of ICT in Higher Education [4] was managed by EFQUEL and was co-developed by the MENON Network, EFMD, and EuroPace. The quality label aimed at certifying universities that excelled in the use of Information and Communication Technologies (ICT) in order to enhance the educational provision and learning support.

Designed to be used complimentary to the European Standards and Guidelines for Quality Assurance in Higher Education (ESG 2015), the UNIQUe criteria break down into three (3) main thematic areas namely, (a) Learning/ Institutional Context, (b) Learning Resources and (c) Learning Processes. Each of these areas, provide for three (3) or four (4) criteria, each criterion including four (4) up to eleven (11) sub-criteria.

The first thematic area, Learning / Institutional context, provides three main criteria, namely (a) Strategy and e-Learning, (b) Commitment to Innovation, and (c) Openness to the Community. Each criterion provides a number of sub-criteria.

a) The nine (9) sub-criteria in the Strategy and e-Learning criterion, aim to examine the institutional approach to e-learning/TEL, the quality assurance mechanisms in place, how new research results on pedagogy are incorporated into the learning and management experience, the mechanisms and procedures for supporting the effective coordination between departments and the participation of external and internal stakeholders in defining the institutional ICT strategy.

b) The Commitment to Innovation criterion provides five (5) sub-criteria that examine in depth what factors are taken into consideration when deciding the course delivery methods, how policies ensure constant updating of courses and curricula, the procedures for creating and promoting online content and how advancements in the field of technology and new pedagogical approaches are properly disseminated to staff.

c) The Openness to the Community criterion, provides seven (7) sub-criteria that analyse how knowledge gained within the institutional context is shared with peers within but most importantly outside the University, how the needs of the society and labour market are analysed and reviewed and if these needs are reflected in the various e-learning and distance learning policies. Furthermore, the criterion examines how technology is reflected in the institution’s Corporate Social Responsibility (CSR) policy, how ICT is used for cross-border collaboration and exchange of knowledge and if qualifications offered, especially ICT related offerings are mapped to the National Qualification Framework or equivalent.

The Learning Resources thematic area, examines the resources based on four criteria/perspectives, namely (a) Learning, (b) Students, (c) Staff and (d) Technology and Equipment. Each criterion provides six (6), eleven (11), six (6) and seven (7) sub-criteria respectively.

a) The Learning criterion/perspective, focuses on the application and standards of technology-based procedures, in other words, how ICT is used for archiving purposes and enhancement of library offerings through electronic databases, in what way learning resources are made available and how various students’ usage metrics are collected and processed. The allocation of budget for the further development of technology-enhanced learning is also examined.
b) The Students criterion/perspective, focuses on students and more specifically on how technological infrastructure supports various functions such as electronic processing of admissions, course registrations and delivery of course information like timetables and announcements. The monitoring and evaluation of students’ progress, the availability of learner support services and guidance are also examined, along with parameters such as the provision of universal access and how tuition fees for e-learning and blended learning courses are compared with the existing fees for local, face to face students.

c) The Staff criterion/perspective, examines what standards and guidelines are in place for designing and reviewing courses, the methodological, organizational and technical support provided for developing e-learning resources, and the peer interactivity and collaboration tools available. Also, institutions are asked to describe the possibilities and incentives in place for further qualification and development of staff and training provided to them, particularly for upgrading their ICT skills.

d) The Technology and Equipment criterion/perspective focuses on technology and equipment, the usability and testing of available technical learning resources and the instructional strategy for disabled students, rural areas, socio-economic disadvantage. The encryption methods and production quality standards along with dissemination of best practises are also examined.

UNIQUE’s last main thematic area, namely Learning Processes, is divided into three (3) criteria, namely (a) Quality of the Offer, (b) Assessment of Learning and (c) Human Resource Development.

a) The Quality of the Offer criterion, consists of eight (8) sub-criteria aiming at examining the flexibility and adaptiveness of the delivery models, the accuracy and updating procedures of the learning material, the consistency and clarity of learning opportunities and how technology is used to enhance interactivity between students and staff. Furthermore, institutions are asked to describe the indicators used to determine the success of the learning processes, how the optimal learning environment is promoted and if the acquisition of soft, transversal and transferable skills and competencies is incorporated in each course learning outcomes and curricula in general.

b) The Assessment of Learning criterion examines the standards in place for continuous assessment and student self-assessment, the methods used to ensure the security and confidentiality of the assessment procedure and the audit procedures in place for ensuring fairness and transparency. The criterion also focuses on the methods used to detect plagiarism and other malpractices as well as the grievance procedures and peer evaluation methods.

c) The last criterion, Human Resource Development, is limited to just four (4) sub-criteria and aims at examining teaching staff performance review and needs analysis, the staff training taking place for supporting them when moving from conventional teaching to on-line teaching, the incentives available for acquisition of ICT competences and requirements from staff in terms of participation in conferences, publications, research as part of the peer-learning and review process.

A UNIQUEe certification is awarded if there is substantial compliance with each criterion. Each sub-criterion of the criterion, is assessed as follows: Not compliant (Value = 0), Partially compliant (Value = 5), Compliant (Value = 10), and Full and best practice (Value = 15). Substantial compliance in a criterion is achieved if the score of the criterion is 80% of the value resulting by multiplying the number of its sub-criteria with 10 (Compliant value). However, in addition to the minimum score achieved in each criterion, ten (10) specific sub-criteria must be Compliant (Value = 10).

2.2 The E-xcellence Label

The E-xcellence Associates in Quality Label [5], is managed by the European Association of Distance Teaching Universities (EADTU) and focuses on Online, Open and Flexible (OOF) Education at programme, faculty and institutional level. The E-xcellence Quick Scan, a guided self-assessment document used either as a stand-alone exercise for the institutions or submitted for external review by e-learning experts, comprises of six (6) areas in the fields of (a) Strategic Management, (b) Curriculum Design, (c) Course Design, (d) Course Delivery, (e) Staff Support, and (f) Student Support. Its completion requires input from several stakeholders such as management, students, tutors and course designers. Each of the above-mentioned areas comprises of several benchmarks ranging from four (4) to nine (9), with a total number of thirty-five (35).
a) The first area of the Quick Scan, focuses on Strategic Management and consists of five (5) benchmarks focusing on the institutional e-learning strategy, the legal and ethical frameworks of e-learning policies, the monitoring of emergent technologies and developments and their integration into the learning environment. Strategic Management also examines if equipment purchase, software implementation, recruitment and staff workload, training and research needs, are considered during resourcing of developments in e-learning. Furthermore, it examines whether institutional policies ensure systems compatibility with related MIS and if roles and responsibilities in activities and resources such as virtual mobility of students, institutional partnerships, development of Open Educational Resources (OERs) and Massive Open Online Courses (MOOCs) are clearly defined and controlled by operational agreements.

b) The Curriculum Design area four (4) benchmarks, examine the degree to which e-learning curricula offer personalization and flexibility for the learners, the assessment methods used to ensure the achievement of learning outcomes and the acquisition of transferable educational skills.

c) The Course design area nine (9) benchmarks focus on the processes for designing and offering a course in terms of coherence between learning outcomes, teaching and learning activities, materials and assessment methods. Furthermore, the benchmarks examine the involvement of individuals or teams of experts at the designing stage of a course, the selection and use of OER and other third-party material and their integration with the course material and also the student-to-content, student-to-student and student-to-teacher interactivity levels, the assessment mechanisms, the consistency of courses in terms of layout and presentation and the updating and reviewing procedures of course materials.

d) The Delivery of the Course six (6) benchmarks analyse the technical infrastructure of the institution, the reliability and privacy levels of communication and storage systems and the provision for system maintenance, monitoring and review of performance. The last three benchmarks are concerned with the selection process of online tools, whether they fulfil the requirements of all stakeholders, the training provision for all interested parties and the monitoring and renewal mechanisms for institutional material and information available via the VLE.

e) The Staff Support six (6) benchmarks focus on the adequateness of staff in supporting the development and delivery of e-learning, the training and support provided at the institutional level, the promotion of educational research and innovation and the mechanisms in place for the dissemination of good practice. In addition, they examine issues such as staff workload, staff participation in e-learning activities and provision of support and recourses to all stakeholders.

f) The Student Support five (5) benchmarks examine the extent to which, institutions provide their students with clear and up-to-date information and guidelines stating their rights, roles, responsibilities and the provision of hardware, accessibility and expected participation in online, collaborative activities. In addition, they benchmark the integration of social media in the VLE for the creation and support of student communities along with the provision of support services and access to learning recourses and skills development are also benchmarked.

Each benchmark is assessed in a 5-point scale: Excellent in all aspects, Adequate with some examples of excellent performance, Adequate, Not adequate in some aspects, Not adequate in majority of aspects. The grade achieved in each benchmark is utilized in the qualitative assessment for the award of the label. Thus, unlike the UNIQUe assessment model, the E-xcellence model does not provide a strict quantitative and algorithmic numeric assessment formula.

2.3 The Cyprus Agency of Quality Assurance and Accreditation in Higher Education Indicators

The Cyprus Agency of Quality Assurance and Accreditation in Higher Education (DIPAE) evaluates and accredits Distance Learning (DL)/e-learning programmes, based on sixteen (19) DL indicators [6]. We list below those indicators, as grouped by the authors of the paper, in four (4) thematic areas, namely (a) Teaching Personnel, Students, (c) Programme Delivery, and (d) Learning Resources.

a) The Teaching Personnel thematic area focuses on the process and conditions for the recruitment of academic/teaching personnel, the Training, guidance and support, access to the necessary electronic sources of information, the percentage of Doctoral degree holders, the
teaching load of DL courses vs. teaching load of non-DL courses, and finally the processes for student feedback with regards teaching work.

b) The Students thematic area focuses on the performance monitoring mechanisms, the mentoring by the teaching personnel through established procedures, the communication between the teaching personnel and students, the assessment consistency and compliance with predefined procedures, the information and training with regards to the educational infrastructure, and finally access to the necessary electronic sources of information.

c) The Programme Delivery thematic area focuses on the class size and types of assessment and final exams.

d) The Learning Resources thematic area focuses on the teaching materials (books, manuals, scientific journals, databases) and compliance with e-learning requirements, the continuous update of the material, the accessibility of learning infrastructure, the procedures for systematic control and improvement of supportive services, and finally the electronic Library services.

Each of the above indicators is assessed on a numerical scale (1-5) as follows: 1 (Applicable to a minimum degree), 2 (Applicable to a non-satisfactory degree), 3 (Applicable to a satisfactory degree), 4 (Applicable to a very satisfactory degree), 5 (Constitutes a good practice).

A positive evaluation leading to a programme accreditation takes into consideration the assessment of these indicators in conjunction with qualitative evaluation. Thus, the assessment system used by DIPAE is closer to the one used for the E-Xcellence label. We point out however that DIPAE’s system is for programme (not institutional) evaluation and thus any thorough comparison with UNIQUe and E-Xcellence is not really applicable.

3 THE QUALITY ASSURANCE MODEL FOR E-LIQAL

The e-LIQAL model provides for the evaluation of 100 Quality Indicators, grouped in four (4) Thematic Areas (TA), namely (a) Institutional Strategy and Organization, (b) DLE Skills Framework, Training and Rewards, (c) Curriculum Design and Offering and (d) Resources, Services and Support. Each TA comprises of twenty five (25) QIs, each QI measured in a scale 0 – 4. The QIs in each TA are grouped into Sub-Thematic Areas (STA), each STA comprising of five (5) QIs. More specifically the 4 TAs are:

1. Institutional Strategy and Organization: e-LIQAL assess the extent to which an e-learning provider has a strategy in place, organizational structures and the resources for strategic and sustainable development and offering of e-learning education.

2. DLE Skills Framework, Training and Rewards: e-LIQAL assess the extent to which an institution has the framework for the skills and competencies needed in a DLE environment and the extent to which training, support and rewards promote this environment.

3. Curriculum Design and Offering: e-LIQAL assess the extent to which programmes and courses are developed based on a sound pedagogical model and using learning methodologies suitable for e-learning and the supporting educational activities for enriching the learning experience.

4. Resources, Services and Support: e-LIQAL assess the extent to which the institution provides the resources and infrastructure, the software and tools, the mechanisms and the procedures ensuring a quality e-learning platform, as well as the services and the required support.

We provide below the model with regards the TAs, the STAs and the associated QIs.

1. Institutional Strategy and Organization

1.1. Strategy

1. There is a clearly defined institutional Distance Learning Education (DLE) Strategy.

2. The DLE strategy is publicly available, communicated and widely understood by all stakeholders.

3. The strategy provides for the development and offering of DL programmes/courses.

4. While defining its overall mission and specifically its policies related to DLE, the institution considers the socio-economic needs of the target group and the society.
5 Analysis and review of the potential needs of the community and labour market for DLE are conducted in regular intervals.

1.2. Organizational Structure

6 There exists a clear owner for the implementation of the DLE strategy.
7 There is a Committee at institutional level responsible for developing and implementing the DLE institutional and national strategy.
8 There is institutional funding available for the functioning of the Committee and the underlying organizational structure.
9 Internal stakeholders experienced in DLE participate in the institution’s decision-making organizational structure bodies, committees and high rank posts.
10 The institution engages and utilizes external DLE experts.

1.3. Funding, Applied and Basic Research

11 There is sufficient internal funding available for the implementation of the DLE strategy.
12 European funds are targeted for the development and implementation of the institutional DLE strategy.
13 The funding allocation considers various requirements such as equipment and software purchase, and recruitment, training and development of staff.
14 The Research Strategy of the University places DLE applied and basic research in DLE as one of its top priorities.
15 There is internal funding for applied and basic research in DLE.

1.4. Pedagogical Model and Innovation

16 The institutional framework fosters, promotes and rewards pedagogical models that foster new learning methods and innovation.
17 There is a procedure for implementation and integration of new technologies and pedagogies in the field of DLE.
18 There are mechanisms in place for continuous monitoring of new technologies and educational developments in the field of DLE.
19 There are procedures and mechanisms in place, for the dissemination of good practice and knowledge gained by faculty and staff through participation in DL projects and related conferences.
20 The institutions’ regulations provide for award schemes and prizes for teaching staff introducing innovative teaching and learning IT-based methods and practices.

1.5. Quality Assurance

21 There is a Quality Assurance Framework (QAF) at institutional level to ensure the quality of DLE.
22 The QAF specifically provides for high interactivity of the learning material and the learning process.
23 Student – Faculty number ratio in each course is adequate, allowing faculty members to provide the necessary support, safeguarding at the same time the quality of the programme.
24 Quality assurance procedures ensure the participation of all stakeholders (faculty, staff and students).
25 The effectiveness of teaching staff, learning material, support mechanisms and services is regularly assessed based on specific criteria and feedback received by all stakeholders (faculty, staff students).

2. DLE Skills and Student and Staff Training, Development and Rewards

2.1. ICT and DLE Skills Framework

26 An institutional Competence Skills Framework exists to support the teachers and students.
27 The framework consists of both pedagogical methods in teaching and learning and ICT skills.

28 The framework is regularly updated based on the ever-changing pedagogical models and ICT innovations in teaching and learning.

29 Staff are required to fully comply with the ICT and DLE skills framework and this is reflected in their performance review.

30 The institution has in place a training plan for the development and enhancement of ICT and DLE related skills.

2.2. DLE Unit

31 A Specialized DLE/IT Unit/Department exists to provide support for the implementation of the DLE strategy.

32 The DLE Unit is headed by experts in DLE and specifically in DLE pedagogical models and supported technologies.

33 The DLE Unit carries out both applied and basic research in DLE.

34 The DLE communicates efficiently and supports effectively the Schools and Departments in their DLE activities.

35 The DLE unit provides procedures, guidelines, practices and training for the instructional design, creation and distribution of online content to be used in DLE.

2.3. Teaching Staff Training and Development

36 Teaching staff is continuously informed about pedagogical models and ICT-based teaching and learning.

37 Teaching staff is provided with opportunities to develop and practise skills for enhancing learning using technology through on-going external and internal trainings/seminars.

38 DLE Unit’s specialists work closely and help teaching staff in developing DLE programmes/courses.

39 Teaching staff identifies DLE training needs and reports them in the annual/biennial self-evaluation reports.

40 Teaching staff and DLE Unit staff is funded to participate in specialized conferences and training abroad.

2.4. Teaching Staff Rewards

41 The hiring process provides for requirements that newly-hired teaching staff is committed to DLE and possesses and/or willing to possess DLE skills and competencies.

42 Incentives for both faculty and staff are in place for promoting the acquisition of DLE skills and competencies.

43 The institutions’ regulations consider the DLE/IT/e-learning certificates of faculty members as important for their evaluation/promotion/ranking.

44 Issues of staff workload, and any other implications of staff participation in DLE activities, are taken into account when managing courses or programmes.

45 DLE teaching time release is provided to teaching staff to develop DLE programmes/courses.

2.5. Student Training

46 The institution offers suitable services and support to ensure students have or can acquire the ICT skills necessary to successfully complete a DL programme of study and/or utilize technology to improve their learning experience.

47 Induction DLE training acquaint new students with e-learning pedagogical methodologies and platforms.

48 Further e-learning training so as to develop and practise e-learning skills is provided to the students at the beginning of their studies.

49 Training videos and e-learning material is available in the e-learning platform.
Personalized support services are available to students at every stage of their learning experience offering training, personalized support and any other type of assistance.

3. Curriculum Design and Offering

3.1. Programme Design

There is a specific process in place for the instructional design and approval of each DLE course. Learning material is archived and easily retrieved with reference to the student use. The course design procedure ensures the participation of teams who have the necessary knowledge and skills in both the academic and technical requirements of the course. DL course curricula are designed to offer flexibility and personalization to students. Course design stakeholders (i.e. faculty members and instructors), have the necessary knowledge and skills to utilize e-learning materials and Open Educational Resources that will help students achieve the course learning outcomes and integrate them into the learning materials.

3.2. Course Design and Delivery

There exists a learning study guide both at the programme and at the course level. Curriculum and learning materials ensure peer interactivity (student – student, student – faculty, student), group work and collaborative learning. Educational resources are available for self-assessment and self-evaluation of students. Learning resources and teaching materials such as books, scientific journals, databases, are suitable for DLE methodology. Learning materials are re-used, regularly monitored, reviewed, and updated at regular intervals based on a clearly defined policy.

3.3. Information Provision

All registered students, are provided with clear, up-to-date information about their DL programme requirements (e.g. admission requirements, learning outcomes) and the range of generic services available. Students are provided with detailed and written information on each course available such as technical requirements, organisational specifications and pedagogical specifications. Information on Software and Hardware requirements along with various IT recommendations on improving the DL learning experience is also available at the University’s website. The privacy and confidentiality of user’s personal data and activity in the system is ensured. Intellectual property Regulations are clearly written and communicated to all.

3.4. Academic Advising

Satisfactory mechanisms are in place for student performance monitoring that lead to development of personalized learning paths. Students have the opportunity to request academic support during their studies so as to improve their performance. Experienced tutors provide students with the personal attention and academic assistance they need to do well academically. Students have access to learning resources including online library access, academic skills development and an academic advisor. Academic advisors/officers/counsellors are available to assist students in pre-registration and registration and counsels them with regard to the student’s schedule and degree requirements.

3.5. Extra Curricula Activities

Students have access to extra-curricular activities, which can be conducted on-line. Social networks are used to provide extra curriculum on-line activities.
73 On-line club and societies are available for students to join.
74 The university maintains a social network account specifically for on-line students.
75 The university maintains a social network account for each DLE programme of study.

4. Resources, Services and Support

4.1. Library

76 Students have online remote access to the institutions’ Library services and online resources on a 24-hour basis, 7 days a week regardless of geographical location and time zones.
77 The library’s resources include extensive lists of electronic databases, e-books, e-journals and learning material.
78 The library interface provides easy to use access and training material with regards electronic library use.
79 All learning resources are easily searchable and downloaded.
80 The library collaborates with other libraries locally and abroad to offer inter-library e-resources loan services.

4.2. Software and ICT Tools

81 Technical specification of the IT infrastructure supporting DLE is up-to-date, adequate and fit for purpose supporting both academic and administrative operations.
82 Software systems are compatible and integrated into existing software infrastructure such as LMS and administration.
83 The learning platform is running uninterrupted on a 24/7 basis with appropriate backup and recovery mechanisms in place.
84 Appropriate software and mechanisms are in place to ensure academic integrity and prevent plagiarism.
85 Systems and platforms used in the delivery of DLE, provide a variety of online tools, appropriate for the educational models used and for the programme/courses requirements.

4.3. Data Gathering to Improve the Learning Process

86 Student evaluations on the learning experience are collected and used for review/improvement purposes.
87 There is a specific DLE student evaluation questionnaire that evaluates the course and teaching staff on a semester basis.
88 There is a general DLE evaluation questionnaire evaluating the DLE human and physical infrastructure, the available resources, the systems and the services provided.
89 Data and Metrics on students’ activity in learning resources are collected, analysed and made available for quality and review purposes.
90 Student analytics are utilized in enhancing the student learning experience and providing personalized and flexible learning paths.

4.4. On-line Administrative Support

91 Administrative support is fully provided on-line through the student intranet, taking into account different time zones all over the world.
92 All academic student processes from enrolment to registration, payment of fees, issuing of letters and certificates, student petitions and applications throughout graduation and alumni services are available on-line.
93 All information to students is available through their on-line platform.
94 Lecturers conduct all course delivery from posting course outline to assessment and submission of marks through the on-line platform.
95 The e-learning platform is integrated with the student information system of the university.
4.5. Accessibility

96 Policies and procedures are in place to ensure equity of access, participation and completion for disadvantaged students/groups.

97 Special/Reduced fees (if any) are available for DLE students in need.

98 Personalized Learning methods/tools are used to provide a flexible approach to DLE students.

99 Flexible pedagogic and learning delivery models are adopted for students with special needs.

100 WWW accessibility standards are provided both by the DLE platform but also by the learning material.

4 E-LIQAL ASSESSMENT AND LABEL CLASSIFICATION

This section briefly explains the assessment model employed, leading to the award of the certificate. The e-LIQAL label is awarded if all Thematic Areas (TAs) are satisfied and a minimum average score of 60% is achieved. The assessment system employed is explained below, by demonstrating how QIs are assessed and how TAs are satisfied. We first point out that a scale 0-4 is used to assess the degree to which a QI is satisfied: 0 (not at all), 1 (below average), 2 (average), 3 (above average), 4 (very well). Thus, the final score of all QIs is in the range of 0 to 400.

The e-LIQAM label is awarded if all TAs are satisfied. A TA is satisfied if all the five (5) Sub-Thematic Areas (STAs) are satisfied. A STA is satisfied if at least three (3) out of the five (5) QIs have a score of at least two (2). The minimum score for the award of the e-LIQAL is two hundred and forty (240), (but as pointed out before, in addition to the minimum score all STAs must be satisfied).

e-LIQAL is awarded with the following three classifications: Pass, Merit, Distinction. We outline below the algorithm for the label's classification, which is based on the overall final score.

Let STAQI be the number of satisfied QIs in an STA and let SMTA be the total score of all QIs:

- e-LIQAL is awarded with Distinction iff:
  
  (for each STA, STAQI >= 3) and (SMTA >=360 and SMTA <= 400) - (90% - 100%)

- e-LIQAL is awarded with Merit iff:
  
  (for each STA, STAQI >= 3) and (SMTA >= 300 and SMTA < 360) - (75% - 89.99%)

- e-LIQAL is awarded without classification iff:
  
  (for each STA, STAQI >= 3) and (SMTA >= 240 and SMTA < 300) - (60% - 74.99%)

5 CONCLUSIONS

This paper has presented the e-LIQAL, the e-Learning Quality Assurance Label that can be awarded to institutions of Higher Education that provide quality e-learning DLE. The e-LIQAL model provides for the evaluation of 100 Quality Indicators (QIs), grouped in 4 thematic areas supporting excellence in e-learning, namely (a) Institutional Strategy and Organization, (b) DLE Skills Framework, Training and Rewards, (c) Curriculum Design and Offering and (d) Resources, Services and Support.

Comparing the e-LIQAL model against the other models presented in this paper, we can clearly claim that e-LIQAL provides a superior quantitative evaluation, mainly because of the use of a very large number of QIs, which are evenly grouped in the four (4) thematic areas. The assessment algorithm provided is also more detailed, especially when compared to the algorithm/formulae used in the other models. Finally, e-LIQAL is the only model, which provides for label classification (pass, merit, distinction).

We are currently in the process of building a prototype tool in Excel to automate the assessment process and the label classification. We will pilot use the tool and enhance the underlying model based on the feedback used. The enhanced model will then be automated in a fully-fledged web-based tool. Finally, we will be introducing Key Performance Indicators (KPIs) for each QI so as to assist institutions in self-addressing the QIs in a more efficient manner and the evaluators in providing a substantiated assessment.
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