QUALITY ASSURANCE PLAN

for the Project Education 4.0: Living Labs for the Students of the Future (LLSF)

Contract number 2021-1-RO01-KA220-HED-000032176

Project:	Education 4.0: Living Labs for the Students of the Future (LLSF)
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List of participants

Participant No *	Participant organisation name	Acronym	Country
1 (Coordinator)	University POLITEHNICA of Bucharest	UPB	RO
2	Universidade NOVA de Lisboa	NOVA	PT
3	Universita Politecnica delle Marche	UPM	IT
4	Universidad Nacional de Education a Distancia	UNED	ES
5	Tel Aviv University	TAU	IL

Revision history:

Rev	Date	Partner	Description	Name
1	25/March/2022	UPB	Final draft	Ciprian Dobre

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Contents

I. QUALITY MANAGEMENT PROCESS

This document forms a point of reference on the quality that will be governed during the Education 4.0: Living Labs for the Students of the Future (LLSF) project. The purpose of the Quality Management Plan (QMP) is to outline the following activities: define roles and responsibilities; provide guidelines to perform the Quality Assurance (QA), provide the standards and practices used in carrying out QA, Quality Control (QC), and quality improvement activities for the Project; provide the tools, techniques, and methodologies to support QM activities and reporting.

LLSF project team is committed on assuring high quality results. In order to achieve these high standards, the Management team has defined the roles and responsabilities for each partner and the processes to be followed, creating this QMP with realistic objectives achievable throughout the project lifecycle.

This Quality Assurance Plan will be distributed to all Project Partners and Experts:

- • UNIVERSITATEA POLITEHNICA DIN BUCURESTI
- • UNIVERSIDADE NOVA DE LISBOA
- • UNIVERSITA POLITECNICA DELLE MARCHE
- • TEL AVIV UNIVERSITY
- • UNIVERSIDAD NACIONAL DE EDUCACION A DISTANCIA

The Quality Assurance Plan will enable an efficient collaboration among the project partners and delivery of project results and outcomes.

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The QAP will be reviewed within the project execution by the Management Team. The review will be done periodically. The following items will be taken into consideration:project results;

- • processes and methodology for quality assurance;
- • project delivrables;
- • corrective and preventive actions.

The outcomes of these activities will be discussed during the partner meetings, and the results will be gathered in a reporting document.

To ensure every quality aspect required in the project, the Management Team will regularly monitor and control all activities and processes.

Official project delivrables should follow the same structure throughout the project, in order to be considered consistent and regular. A template for external delivrables has been shared among the partners, containing the logo and page layout suggested.

The review procedure is executed in parallel to the delivrable production process and applies to all project delivrables.

The Management Team will send periodical reminders about the upcoming activities and inform the partners on the project's development.

The QMP deals with issues related to the general performance and execution of the LLSF. An analysis of all partner's reports will take place, to determine areas for corrective actions. The Project Coordinator is responsible for implementing the corrective actions.

Methodology for Monitoring and Evaluation

QM applies to deliverables, documents, work products, processes, and procedures.

Partners will enhance the quality of each output through peer feedback. Moreover, each output will be evaluated by critical friends who are recruited by each partner based on their expertise (at least one per partner) to examine the produced results.

Criteria for evaluation will be quality, practical usefulness and potential impact. Feedback is given in written form and communicated to the entire partnership. Each IO leader is in charge of sufficiently adapting the final version of a product according to the comments received. Training activities are evaluated with participant evaluation questionnaires on organisation, structure, content and delivery (facilitators, didactic methods etc.) of the training and through a final assessment of the planned learning outcomes.

Evaluation of the partnership quality will be focused on the evaluation of the structure, content and delivery of the meetings, quality of the transnational cooperation, next working steps planning, decisions making, etc through questionnaires that will be circulated after each project meeting.

Quality Management Objectives

The Plan aims to achieve the following objectives:

- Define the quality management methodologies, roles and responsibilities, training and communication, control and improvement required throughout the life cycle of the Project.
- All rules and procedure of the Erasmus+ programme are in compliance.
- All rights and obligations defined in the Partnership Agreement are fulfilled.
- Ensure all project deliverables are drafted according to this plan.
- All project activities are realized in accordance with the workplan.

The tools used for achieving these objectives will assure the quality of the project and ensure the delivrables can be realized.

II. QUALITY CONTROL

The LLSF QC process involves the following steps:

- Verifying, validating, and monitoring activities to ensure the requirements for quality and scope of work are being fulfilled
- Inspecting deliverables and documentation and comparing these items to a standard of quality defined by the stakeholders of the project

Within the framework of the LLSF project, the quality of the delivrabels and the intime delivery, the main project outcomes, will be assured as follows: The Management Team will monitor continuously the fulfillment of the objectives-results-indicators assumed, in close correlation with the activity schedule, efficient management of financial, material and human resources, and preparation of specific monitoring reports of the project.

Roles and Responsibilities

Role	Responsibility
Management Team	- Communicate quality (risks and issues) to the team - Communicate with project staff regularly to direct project activities and stay current on project quality status - Develop and maintain project management plans - Monitor milestones, activities, timelines, resources, budgets and critical path - Review project delivrables
Implementation Team	- Identify and escalate any critical prject issues to the PM

	- Implement the QA technical processes, procedures and standards for the quality of the delivrables - Communicate project status, quality (risks and issues) to the Management Team
Technical Team	- Identify and escalate any critical prject issues to the PM - Establish technical processes, procedures and defined quality standards - Communicate project status, quality (risks and issues) to the Management Team
Dissemination Team	- Ensure quality standards for all publications - Ensuring publication acknowledgement - Prior notice of publication to the Management Team
Quality Control Team	- Identify and escalate any critical project issues to the Management Team - Identify quality standards - Provide QA inputs for developing project delivrables and ensuring that quality targets are defined for each delivrable and activity - Provide oversight of processes and provide evaluation reports related to standards compliance - Implement QA techniques to ensure the quality of the delivrables to be produced by the project - Implement QC techniques to control the quality of the delivrables
Sustainability Team	- Assuring improvement and innovation throughout the project - long term aims to improve the overall performance of the project

III. QUALITY ASSURANCE Delivrables

The quality assurance activitiesregardint the LLSF project's delivrables, include the following:

• Compliance verification with the partnership's policies, rules and regulations;
• Delivrables reviews and approvals;

- Timesheets set-up and review;
- Monthly activities reports (summarising the major tasks undertaken and showing the number of days worked, during the previous calendar month).
- Project Review Meetings;
- Students' satisfaction questionnaires.

Deliverables and publications

The LLSF project will produce the following delivrables:

1. Internet of Things and Data Engineering Training Methodological Toolkit (eLearning smart digital labs)
2. Joint Design of Training Programme on IoT and Data Engineering
3. Distributed eLearning Training Platform for Internet of Things and Data Engineering (Inter-connnected Living Labs)
4. Development of the inter-coupled smart labs with automated catalogue (dashboard)
5. Project management handbook
6. Quality Evaluation and Assurance Plan
7. Dissemination and Communication Strategy
8. Questionaire on the satisfaction levels of students and trainers involved in the project
9. works published in international conferences and journals; articles in the local and national press (online and paper), online publications in relevant web pages, blogs etc.

Deliverable review

The most formal process for quality assurance, which will be applied to every deliverable in the project is an internal review of the deliverables, performed by the partners.

Minimal criteria to be considered within each deliverable are the following:

- Completeness: Information provided by deliverables must be complete, reliable and corresponding with reality. This means that all background information used in the report should be appropriately supported by references and the work been done consistently and clearly explained, in order to avoid misinterpretation.
- Accuracy: Information used in the deliverable should be focused on key issues and be written in a way that takes into consideration the scope of the specific research work and its targeted audience.
- Relevance: All information used should be provided to the depth needed for the purpose of the reports and the project.

- Uniformity: Appearance and structure. Although different partners within the framework of the LLSF project will author deliverable reports, it is important that reports are prepared with a uniform appearance and structure. This will lead to providing a common appearance, as they originated under a common initiative.
- Language: Correct spelling and grammar.
- Punctuality: Timely completion of project deliverables.

The project members working on a deliverable/outcome are expected to integrate relevant feedback by reviewers in the further development of the deliverables.

Indicators

Quantitative Indicators - Key Performance Indicators (KPIs)
- Number of students to enroll later in PhD programmes, and/or enrolled by industrials (6)
- Number of students participating in the pilot Master (200)
- Number of co-authored journal articles (quality of the programme) (4)
- Number of common research programs generated (5)
- Number of interested institutions and stakeholders to register, as a result of the impact of the Programme on experts (5)
- Number of professionals and stakeholders reached through dissemination activities (at least 500)

Qualitative indicators:
- IO1 appropriateness of methods used; quality and depth of needs analysis;
- IO2 clarity of structure; readability and usability;
- IO3 comprehensiveness and clarity of guidelines; readability and usability; transferability of guidelines; Transferability of intellectual outputs (transparent documentation and transferability to other HE institutions and countries as well as to other contexts);
- LTTA and Multiplier Event: level of the fulfillment of participants expectations; quality of the logistics and practical organization;
- Dissemination: structure and visual appeal of the website; interactiveness of blog; easiness in reaching relevant information;
- Impact: 80% satisfaction levels of students involved in the project (questionnaire); 80% satisfaction levels of trainers involved in the project (questionnaire); level of the fulfillment of participants expectations; clarity and efficiency of decisions making.

Metrics

Criterion Name	Frequency	Tolerance
Project physical meetings	Once	One month
Project online meetings	Once	One month
Monthly timesheets reviewed and approved	Monthly	No tolerance.
Methodological Toolkit for Training on smart labs	Once	No tolerance.
Dashboard for interconnected tools	Once	No tolerance.
6 PhD students enrolled	Once	No tolerance
Coauthored journal articles	Monthly	One month
Report of collected data through questionnaire	Once	One week
Set of identified disciplines	Once	No tolerance
Set of classes adapted to the online teaching	Once	One month
Guidelines for the development of training materials	Once	One month
Set of materials for at least 4 disciplines	Once	One month
8 training sessions done through STSM	Monthly	One month
2 training workshops organised	Once	One month
2 trainers trained from each partner	Once	No tolerance
Final workshop	Once	one month
200 students participating in the pilot Master	Once	No tolerance
Train the Trainers Education Week	Once	One week
Students Winter School	Once	One week

Student Training Week	Once	One week
Website	Once	One month
Blog/Facebook page	Once	One month
Satisfaction questionaire	Once	One month

IV. QUALITY ASSURANCE Project

Communication management

To support a smooth collaboration and communication between the partners, several communication tools, strategies and agreements are installed:

- Shared Webspace – Dropbox, Google Drive
- E-mail for daily communication

Official project deliverables should follow the same structure throughout the project, in order to be considered consistent and regular. A template for external deliverables has been shared among the partners, containing the logo and page layout suggested.

- Face-to-face meetings
- Videoconference
- Conflict resolution

Internal quality assurance

IQA will monitor the teaching, learning, and assessment activities in the project, will observe trainer performance, providing constructive feedback.

The following actions should be completed as part of IQA:

- ensuring quality standards throughout the learner journey
- ensuring accuracy and consistency of assessments
- identifying issues and trends that develop
- maintain appropriate records of quality assurance
- ensure conflicts of interest are identified and addressed

- conduct interviews to monitor and analyse the quality of the processes and delivrables
- impart feedback resulting from monitoring activities and ensure all actions are addresses by the quality assurance indicators
- Ensure all procedures and policies within a provider are adhered to and maintained by staff
- issue a questionaire to gather learners' feedback to ensure the management of the quality of the pilot programme

Acknowledging EU funding

EU funding should be acknowledged in all publications and official project documents. Acknowledgements with proper wording about EU funding are already included in the project document templates for Deliverables and for PowerPoint presentations, usually on the cover page or on the last page. The wording is:

"This project has received funding from the European Union's ERASMUS+ research and innovation programme under Grant Agreement no. 2021-1-RO01-KA220-HED-000032176."

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