DESL

Developing Energy Efficient and Smart Lighting Education in Vietnam & Myanmar

Quality Assurance Plan

1. Introduction

This is a report on quality assurance plan for Erasmus + CBHE project *Developing Energy Efficient and Smart Lighting Education in Vietnam & Myanmar – DESL (Grant agreement number: 2019-1993/001-001)*. DESL is a higher education capacity building project to support Higher Education institutions from Vietnam and Myanmar to provide education that promotes sustainable socio-economic development. The project aims to assist Vietnam and Myanmar to reduce electricity consumption as well as greenhouse gas emissions through capacity building of human resources in the fields of energy efficient lighting systems. The project partner are universities from Finland, the Netherlands, Slovenia, Vietnam, and Myanmar.

Quality control is integral part of DESL project to make sure that project outputs are achieved according to plan and requirements and project management processes are appropriately followed. This Quality Assurance Plan describes the general approach to quality control and evaluation to be followed by the partners. The plan outlines methodology and procedures for evaluation of project activities and results.

2. Quality Strategy

Quality management is included in the everyday activity of the project with the underlying idea of continuous improvement, the Plan, Do, Check, Act cycle. This principle involves planning activities in accordance with agreed objectives and acting according to the plans. The aim is to continuously enhance and improve the quality and transparency of project activities. Key components of the quality management and achievement tracking system include the Initial Work Plan developed based on the approved work-plan, continuously updated activity schedule, and deliverables. Project monitoring is carried out in the following dimensions: Contractual (respect of agreed contractual procedures); Efficiency (whether project activities are carried out efficiently and effectively in financial terms); Effectiveness (whether project results contribute towards the achievement of the project objectives); and Outreach (types, number and quality of people that benefit from project activities).

3. Quality Assurance Roles and Responsibilities

Project Advisory Committee (AC): A Project Advisory Committee with the representatives from all partner intuitions has been setup for the high level decision making in the project matters. The Committee monitors the activities and support the universities in carrying out the activities. In addition to the meeting during kick-off meeting, four meetings are planned for the Advisory Committee during the life of the project. Members of Project Advisory Committee are listed in a table below.

Project Advisory Committee Member	Representing institution	Email
Prof. Evert J. van Loenen	TU/e	e.j.v.loenen@tue.nl
Prof. Grega Bizjak	UL	Grega.Bizjak@fe.uni-lj.si
Prof. Nguyen Danh Thao	HCMUT	ndthao@hcmut.edu.vn
Dr. Nguyen Ho Quang	TDMU	quangnh@tdmu.edu.vn
Dr. Ha Thuc Vien	VGU	vien.ht@vgu.edu.vn

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Dr. Ngo Minh Duc	EIU	duc.ngo@eiu.edu.vn
Dr. Myint Thein	YTU	ytu.rector@gmail.com
Prof. Dr. Ei Ei Htwe	MTU	eieihtwe.mdy2012@gmail.com
Ms Anita Bisi	AALTO	anita.bisi@aalto.fi

Quality Management Team (QMT): A quality management team (QMT) has been set up during the kick-off meeting chaired by the quality coordinator and represented by each partner institution. The QMT members are granted all rights and privilege to collect data periodically from all the WP leaders for quality assurance, control and monitoring. QMT can intervene in the project activities for any critical quality issue and impose mandatory modifications. QMT will also conduct internal monitoring checks on regular basis for quality control, progress monitoring and evaluation of project performance against deliverables. Members of Quality Management Team are listed in a table below.

	Quality Management Team	Partner	Email
Chairman	Prof. Grega Bizjak	UL	Grega.Bizjak@fe.uni-lj.si
Member	Prof. Phan Quoc Dung	HCMUT	pqdung@hcmut.edu.vn
Member	Dr. Marielle P.J. Aarts	TU/e	M.P.J.Aarts@tue.nl
Member	Dr. Soe Win	YTU	soewin.ep@ytu.edu.mm
Member	Dr. Wanna Swe	MTU	wunnaswe@mtu.edu.mm
Member	Dr. Le Ngoc Bich	EIU	bich.le@eiu.edu.vn
Member	M.Sc. Van Hoang Phuong	TDMU	phuongvh@tdmu.edu.vn
Member	Dr. Thai Truyen Dai Chan	VGU	chan.ttd@vgu.edu.vn
Member	Dr. Pramod Bhusal	AALTO	pramod.bhusal@aalto.fi

Project Management Team (MT): Project management team has been formed and is chaired by the project coordinator and represented by appointed project managers at each partner institution. This team is responsible for overall coordination, management and implementation of the project. Project coordinator, with the help of the team, will provide all the documents and information needed for the QMT for the quality evaluation. All the suggestions received from QMT for the improvement of project activities as well as outputs will be discussed in the MT and implemented accordingly. Members of Project Management Team are listed in a table below.

Project Management Team	Representing institution	Email
Pramod Bhusal	AALTO	pramod.bhusal@aalto.fi
Evert J. van Loenen	TU/e	e.j.v.loenen@tue.nl
Matej Bernard Kobav	UL	matej.kobav@fe.uni-lj.si
Nguyen Thi Thuy Duong	HCMUT	ntduong@hcmut.edu.vn
Dr. Doan Xuan Toan	TDMU	toandx@tdmu.edu.vn
Kieu Manh Kha	EIU	kha.kieu@eiu.edu.vn
La Vinh Trung	VGU	trung.lv@vgu.edu.vn
Phyoe Wai Htun	MTU	mtu.irsection@gmail.com
Myo Myint Han	YTU	iroytu.mm@gmail.com

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Project managers: Project manager at each partner institution report to the project coordinator with the aim of ensuring that the deliverables produced and activities carried out at their institutions fulfil the objective of the project and meet the quality requirements.

Work package leaders: Each work package has a leader who is responsible for the detailed planning and monitoring progress and quality of the tasks and activities in his/her work package. The monitoring of project progress and quality of outputs in each WP will ensure the high quality of project outcomes and will guarantee the compliance of project results with project objectives. Work package leaders are listed in a table below.

WP	WP Leader	Representing institution	Email
WP1 Need Assessment…	Dr. Chan Thai	VGU	chan.ttd@vgu.edu.vn
WP2 Development of course….	Dr. Juliette van Duijnhoven	TU/e	J.v.Duijnhoven1@tue.nl
WP3 Quality Assurance….	Prof. dr. Grega Bizjak	UL	Grega.Bizjak@fe.uni-lj.si
WP4 Dissemination, prom…..	Dr. Okka	YTU	okkamon@gmail.com
WP5 Project Management….	Dr. Pramod Bhusal	AALTO	pramod.bhusal@aalto.fi

Project members: Project members at each university who carry out the project activities are responsible to follow the quality plan and report to their project manager and/or to Work Package leader.

4. Quality Assurance Activities

DESL project will pay special attention to working on the quality assurance of the project through:
(i) the evaluation of the partnership activities and
(ii) the evaluation of the project outputs.

i) Quality assurance of the partnership activities

Advisory Committee Meetings: DESL Advisory committee (AC) is responsible for the high-level decision making in the project matters and consists of representatives of all the cooperating Universities. AC meetings are organized four times during the project life. These meetings are the opportunity to take all important decisions, to monitor and assess the quality of the activities and outputs undertaken in the previous months and to ensure that the improvements or new leading actions will be implemented in the upcoming months. In each meeting, WP leaders report about the past activities, problem faced (if any), outputs achieved, and future outlook. In each meeting, project QMT provides briefing on the quality monitoring and quality evaluations. Discussion is held about the past activities and recommendation is made regarding the future work. AC will monitor the activities of all partners and help to manage if any problems arise.

Internal Monitoring: Quality Management Team and Project Management Team both work together for the quality assurance of output and project progress monitoring. Internal monitoring checks will be organised by the QMT on a regular basis. Each project meeting, workshop, training and other events will be evaluated using the online feedback form. The results of the feedback will be used to improve the quality of next event both on the organization as well as on the content.

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Project coordinator manages the financial management of the project. The partners are asked to provide to the coordinator copies of all management and financial documents in every 4 months. Also monitoring of the project is carried out at each institution by University management both on the financial side and technical side.

External Monitoring: An external expert/firm will be subcontracted to evaluate the project activities and outputs at the mid-term of the project. A quality workshop will be organized to discuss the results of the external evaluation and to take necessary actions (if any). EACEA also monitors the implementation of projects through monitoring visits to the partners and coordinator according to their schedule. EACEA will also evaluate mid-term project report submitted by the project which will document the work done, degree of fulfilment of objectives, problem encountered and solved and outlook for the future. Final completion report will be provided to the Agency at the end of the project. In addition, Aalto University will subcontract the external audit agency for the preparation of report on the financial statements and underlying accounts in accordance with the guidelines of EACEA.

ii) Quality assurance of the project outputs

Internal quality check: All the reports, deliverables, output produced in each work package will be sent to QMT and the consortium for reading and to get feed-back from partners. Based on the feedback improvement is made and the outputs are finalized. Project outputs are also presented and discussed in the AC meetings, which will evaluate them and suggest improvement.

Stakeholder surveys/feedback: To improve the quality of the outputs and to make sure that the project results fulfil the need of the target groups, stakeholder feedback is important and is well thought during the design of the project activities. For example, in WP2, Task2.6 feedback sessions will be organized with beneficiary stakeholders, students and lecturers to get the feedback of the designed courses and the results will be used to improve the course both in terms of content and teaching methods. Similarly, need assessment to be conducted in WP1 will involve survey and feedback from the various stakeholder groups in both partner countries. Moreover, feedback will be asked from the participants of teacher training and lab training for the evaluation of these events.

Quality check of designed courses: Quality control body of partner institutions in Myanmar and Vietnam will review the designed courses and teaching methods according to the university quality control procedures. This will make sure that the courses designed and run under their regular curriculum meet the necessary quality criteria.

iii) Quality Evaluation of tangible project results

DESL project will evaluate both tangible outputs and intangible outcomes of the project. Table below summarized the main Work Package deliverables, main responsible organization, type of deliverables, responsible evaluators, and Deadline. Project coordinator is responsible for updating this table as result of changes in the actual project work. Project progress bar will be used and continuously updated to track the progress of the project activities and status of deliverables.

DOC – Documents/reports/plans/guidelines/specifications

DESL
Co-funded by the
Erasmus+ Programme
of the European Union

DIS – Dissemination materials
CON – Course material/Learning material/Laboratory material
EQP – Equipment
EVE – Trainings/Events/Seminars
SER – Service/Product
AC – Advisory Committee
QMT – Quality Management Team
MT – Project Management Team
WL- Work package Leader

....

Deliverable	Deadline	Type	Responsible	Evaluator
D1.1 Needs assessment preparation workshop in Myanmar: Document with need assessment objectives, activities, procedures, expected deliverable and time frame	M1	DOC, EVE	AALTO	MT, QMT, AC
D1.2 Awareness raising seminars and stakeholder workshop in Vietnam and Myanmar: List of mobilized stakeholders in the Country, analysis of the smart lighting sector, analysis of the education in smart lighting, in the country, list of interests of various interest groups, presentation slides for the awareness of stakeholders on energy efficient and smart lighting	M4	CON, DOC, EVE	VGU (Vietnam), MTU (Myanmar)	MT, QMT, AC
D1.4 Needs assessment report: Need analysis report with detailed overview of the issues and gaps of smart lighting and recommendation to respond the needs via capacity building	M6	DOC	VGU (Vietnam), MTU (Myanmar)	MT, QMT, AC
D2.1 Conceptual Workshop in the Netherlands: Content of the existing courses and upgrade plan, list of new courses to be developed, detailed structure of courses and lecture modules	M7	DOC, EVE	TU/e	MT, QMT, AC
D2.2 Content development for new courses: Compilation of detailed course content, course lectures, exercise materials, active learning materials, report and guidelines on teaching methods to be used	M16	CON, DOC	TU/e	MT, QMT, AC

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

D2.3 Establishment of laboratory facility: Lighting lab established at partner Universities	M15	SER, EQP	HCMUT, TDMU, EIU, VGU, MTU, YTU	MT, QMT, AC
D2.4 Measurement and test guidelines: Guidelines on measurement methodologies, test setup, equipment calibration	M15	CON, DOC	UL	MT, QMT, AC
D2.5 Training of staff on use of laboratory equipment: Training is given at Aalto University on measurement techniques, standards, procedures etc. Training is also given on how to analyse and interpret the measured data. Example lab exercises for students will also be demonstrated	M14	CON, DOC, EVE	AALTO	MT, QMT, AC
D2.6 Teacher training and course testing: Teacher training organized in Vietnam and Myanmar for partner country teachers, feedback reports from teachers on teaching material and methodology, feedback workshop in Vietnam and in Myanmar, workshop report	M19	CON, DOC, EVE	TU/e	MT, QMT, AC
D2.7 Course enhancement, finalization and start of teaching: Based on the feedback from course testing and teacher training as well as from the feedback workshop organized in both countries, courses are reviewed and refined. The finalized courses are started to teach at partner institutions in Vietnam and in Myanmar as part of their regular curriculum.	M22-M36	SER	HCMUT, TDMU, EIU, VGU, MTU, YTU	MT, QMT, AC
D3.1 Quality Assurance Plan: Quality assurance plan to be created, quality management team set up	M2	DOC	AALTO	MT, QMT, AC
D3.2-3 Quality reports on activities and deliverables: Compilation of documents with evaluation of events, activities, and feedback on deliverables	M18, M36	DOC	UL	MT, QMT, AC
D3.4 External evaluation and audit reports, quality workshop: External evaluation report on project quality, project quality workshop to discuss the report, audit report	M18, M36	DOC, EVE	UL	MT, QMT, AC

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

D3.5 Approved courses at each partner institution: Accreditation document preparation, discussion, experience sharing	M15	DOC, SER, EVE	HCMUT, TDMU, EIU, VGU, MTU, YTU	MT, QMT, AC
D4.1 Project website and brochure: Interactive website, tracking project progress, posting actions, reports, deliverables and feedbacks collection on the website continuously throughout the project duration	M3-M36	SER	TU/e	MT, QMT, AC
D4.2 Content in local and social media: Project news, events and outcomes will be published via mass media and social media.	M3-M36	SER	HCMUT (Vietnam), MTU (Myanmar)	MT, QMT, AC
D4.3 Student project/thesis demo: Student project/thesis demo organized 4 times during the project period and continued beyond the project	M18, M24, M30, M36	DOC, EVE	AALTO	MT, QMT, AC
D4.5 Dissemination seminar: Dissemination seminar organized by TDMU to spread the knowledge and experience from the project to academics in other HEIs in the region, private sectors, local communities, public administration and other interested stakeholders	M35	DOC, EVE	TDMU	MT, QMT, AC
D5.1 Project progress and final report: Progress and final completion reports describing the project process, activities, outcomes, and lesson learned	M18, M36	DOC	AALTO	MT, QMT, AC
D5.2 Project inception reports: Inception report with procedures, work plan, check lists and forms	M1	DOC	AALTO	MT, QMT, AC
D5.3 Kick off meeting: Kick-off meeting with all partner institutions for improved understanding of the cooperation and starting the tasks effectively	M1	DOC, EVE	YTU	MT, QMT, AC

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Annex 1   Activities under WP 3 as indicated in the project application

Work package type and ref.nr	QUALITY PLAN	3
Title	Quality assurance and monitoring	
Related assumptions and risks	It has been assumed that the partner universities will fully implement the quality procedures and follow the rules. The key risks are lack of quality culture, treatment of quality procedures as an unnecessary administrative burden.	
Description	In this task, the basic elements of project quality assurance such as quality of the process, quality of outcomes and adequate risk management will be ensured. Adequate communication between partners with regular evaluation of communication tools (periodic review of project's webpage etc.) will be performed to ensure the quality of the process. All the risk factors identified in WPs will be carefully monitored and adequate measures will be taken. The Quality Coordinator will supervise the risk monitoring system. In order to ensure the quality of outcomes, an external expert will be invited to evaluate the project activities and outputs according to the European standards after the project mid-term. The results of the evaluation will be discussed at the project quality workshop to be organized in Slovenia. The quality of the developed courses will be verified through accreditation process at each university and made part of the existing curriculum.	
Tasks	Task 3.1 Quality Assurance Plan A detailed quality assurance plan will be created at the start of the project. A draft plan will be created and discussed during kick-off meeting and finalized based on the feedback received. This plan will define roles and responsibilities of quality control mechanisms, detailed description of quality activities and tools to be used for quality assurance. Quality evaluation will be in line with the project logical framework matrix by considering indicator of progress, source of information on the indicators and related assumptions and risks. A quality management team (QMT) will be set up during the kick-off meeting chaired by the quality coordinator and represented by each partner institution. Task 3.2 Quality Management of project activities The project activities such as project workshop, seminar, survey, interview, financial management, training, etc. will be continuously monitored, assessed and documented. All the events will be evaluated by asking feedback questionnaires with the participants. The WP leader will be responsible to maintain the report and provide it for the evaluation (internal and external). Task 3.3 Quality Management of project deliverables The project deliverables identified in each WP will be continuously monitored, assessed and documented. The WP leader will be responsible to maintain the report and provide it for the evaluation (internal and external). Task 3.4 External evaluation and quality workshop An external expert will be sub-contracted to evaluate the project activities and outputs at the mid-term of the project. A quality workshop will be organized in Slovenia where the results of the external evaluation will be discussed and necessary actions will be taken. An	

	external auditor will audit the project at the end of the project. Task 3.5 Accreditation/approval of the developed course Each participating University from Vietnam and Myanmar will prepare all necessary for the accreditation/approval process of the coursed to be developed in the project at each institution. At the beginning of the project, all the partners will make a report with approval/process, procedures with time-line for the approval. The approval process will be followed regularly until the courses are approved in the curriculum.		
Estimated Start Date (dd-mm-yyyy)	15-11-2019	Estimated End Date (dd-mm-yyyy)	14-11-2022
Lead Organisation	Aalto (Finland)		
Participating Organisation	TU/e (Netherlands), UL (Slovenia), HCMUT (Vietnam), TDMU (Vietnam), VGU (Vietnam), EIU (Vietnam), YTU (Myanmar), MTU (Myanmar).		
Costs *Please explain the necessary costs for this WP: What travels are necessary? If equipment is requested, explain why it is required. If subcontracting is necessary, explain why the task cannot be performed by the partner.*	Work package 3 costs are the staff costs, travel and stay costs to carry out the quality assurance activities as well as subcontracting cost for the external quality control review of the project. All the costs except the subcontracting costs on WP3 are unit costs.		

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Annex 2 Project meetings and workshops online evaluation form (example and to be modified according to the exact meeting)

Erasmus+ CBHE project "DESL" kick-off meeting and workshop

Dear Colleagues,

Thank you for participating the Erasmus+ CBHE project "DESL" kick-off meeting and need assessment preparation workshop. Please take a few minutes to fill in this questionnaire to contribute in the improvement of the future events/activities (your answers will be anonymous).

1. Please rate your satisfaction regarding the general organization in the following areas:

	Bad	Poor	Fair	Good	Excellent
Planning and communication about the date in good time	☐	☐	☐	☐	☐
Support received in planning of your trip	☐	☐	☐	☐	☐
Arrangement (Venue, facilities, etc)	☐	☐	☐	☐	☐
Duration and time-table of activities in both days	☐	☐	☐	☐	☐
Content of the agenda and materials provided	☐	☐	☐	☐	☐

2. Please rate your overall satisfaction on the kick-off meeting regarding the following

	Bad	Poor	Fair	Good	Excellent
Presentation of partner organizations	☐	☐	☐	☐	☐
Presentation on the overview of the project	☐	☐	☐	☐	☐
Selection of Project Advisory Committee, Project Management Team, and Quality Management Team	☐	☐	☐	☐	☐
Discussion on project organization, management and partnership agreement	☐	☐	☐	☐	☐
Presentation on financial management and reporting	☐	☐	☐	☐	☐
Presentation of Work Packages and discussion on upcoming activities	☐	☐	☐	☐	☐

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

	Bad	Poor	Fair	Good	Excellent
Opportunity to discuss and express your opinion and response of the questions	☐	☐	☐	☐	☐

3. Please rate your overall satisfaction on the Need Assessment Preparation Workshop regarding the following

	Bad	Poor	Fair	Good	Excellent
Detail discussion on Need Assessment activities	☐	☐	☐	☐	☐
Group work on course review	☐	☐	☐	☐	☐
Group work on Lab Development Plan	☐	☐	☐	☐	☐
Task distribution on upcoming activities	☐	☐	☐	☐	☐

4. Any comments and suggestions:

☐

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Annex 3   Project events online evaluation form (example and to be modified
according to exact event)

Awareness Raising Seminar on Efficient and Smart Lighting

Dear Participant,
Thank you for attending this seminar held in Ho Chi Minh City, Vietnam. In our effort to improve an organization and
the impact of these events we invite you to complete the following questionnaire. Your valuable opinions will be used
for the improvement of the following events. We thank you in advance for your valuable contribution!

1. Please rate your satisfaction regarding the general organization in the following areas:

	Bad	Poor	Fair	Good	Excellent
Overall quality regarding the organisation of the seminar	☐	☐	☐	☐	☐
Quality of information provided	☐	☐	☐	☐	☐
Venue location	☐	☐	☐	☐	☐
Duration and time-table	☐	☐	☐	☐	☐
Relevanace of seminar to your field of expertize/interest	☐	☐	☐	☐	☐

2. Overall satisfaction of the presentations

	Bad	Poor	Fair	Good	Excellent
Your satisfaction on overall quality of presentations	☐	☐	☐	☐	☐

3. Content and Presentations

Please indicate which presentations were particularly good

Please indicate which presentations were not useful to you

Please indicate which other topics should have been included

4. Any other comments/suggestions

Submit

DESL

Co-funded by the
Erasmus+ Programme
of the European Union

Annex 4   Project meetings and events attendance list (example)

DESL

Developing Energy Efficient and Smart Lighting Education in Vietnam & Myanmar

Kick-off Meeting Attendance List

Date: January 16, 2020

Place: Yangon Technological University, Insein Township, Yangon, Myanmar

	Name	Institution	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			