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Empowering Sustainable Development of VET in Kenya by integrating Work Based Learning and upskilling ICT-Competences of Teachers and Students by using Solar Energy and Low Energy Devices

Deliverable

D1.3: Quality Control and Monitoring Plan (QCMP)

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Partners

- 1 – Universitaet Bremen, Germany
- 3 – San Jose Maristak, Spain
- 4 – Warnborough College, Ireland
- 5 – Rongo University, Kenya
- 6 – Kiabuya Mixed Secondary School, Kenya
- 7 – Miramba Mixed Secondary School, Kenya
- 8 – St. Joseph Olando Mixed Secondary School, Kenya



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1 Introduction

The "Quality Control and Monitoring Plan" (QCMP) for the DEVISE4KE Project, referred to hereafter as QCMP, is a key deliverable within Work Package 1, titled "Project Management." This plan outlines the procedures for planning and executing project tasks to ensure adherence to the highest quality standards. It lays out fundamental principles, requirements, and processes necessary for implementing a strong quality assurance and control system, aimed at facilitating effective and accountable project management in alignment with the established work plan, activities, and objectives.

It outlines the systematic approach to ensuring excellence in the implementation of ICT and renewable energy infrastructure in Vocational Education and Training (VET) schools across rural Kenya. The project represents a strategic initiative to bridge the digital divide while promoting sustainable energy solutions in educational institutions.

The QCMP will formalize the methodology employed by project partners to uphold the quality of project activities, outputs, and overall management. It will cover both deliverables and activities, ensuring that quality is embedded in every facet of the project. The plan will specify the roles of involved personnel, their responsibilities, and the schedule and frequency of monitoring activities, thereby providing a thorough overview of the project's quality assurance mechanisms.

This document will emphasize quality assurance, monitoring, and evaluation across various aspects of project management, such as communication, dissemination strategies, working meetings, and Steering Committee (SC) meetings. A variety of monitoring tools—including meetings, expert workshops, evaluation sheets, questionnaires, and feedback forms—will be utilized, tailored to the specific needs of each Work Package (WP) and stakeholder.

The QCMP begins with an introduction summarizing the DEVISE4KE project in Chapter 2, followed by a detailed timeline in Chapter 3 that outlines each work package, their durations, and milestones throughout the project's lifecycle.

Chapter 4 focuses on project reporting, detailing both ongoing and periodic reporting methods to be employed during the project's duration.

The core of this document is found in Chapter 5, which addresses Quality Management. This section outlines the evaluation methods, quality responsibilities, and introduces two essential committees: the Steering Committee and the Advisory Board. These committees will oversee the quality of project processes and outcomes, as well as monitor relevant indicators.

Chapter 6 covers financial management and project budgeting, including reporting and payment schedules.

Chapter 7 discusses risk management, identifying critical risks and proposing mitigation strategies. The QCMP will also monitor the progress of work package activities, offering a comprehensive overview for project partners and the Steering Committee, complemented by quality assurance protocols. All partners, leveraging their experience, share the responsibility for ensuring the highest quality outcomes throughout the project's execution and the resulting outputs.

The Quality Control and Monitoring Plan (QCMP) ensures consistent quality across all project activities through several key mechanisms:

- **Standardized Processes and Procedures**

The Quality Control and Monitoring Plan (QCMP) for the DEVISE4KE Project establishes standardized processes and procedures that guide all project activities aimed at enhancing digital education and innovation. By implementing these consistent methodologies, the likelihood of errors is minimized, ensuring uniform quality across all tasks and deliverables related to knowledge exchange and capacity building.

- **Quality Assurance and Control Measures**

Regular assessments of project activities, outputs, and outcomes against predefined quality criteria are integral to the QCMP. This includes implementing quality assurance (QA) and quality control (QC) measures to monitor compliance with established standards, ensuring that all aspects of the DEVISE4KE Project meet the required quality levels in promoting effective digital learning environments.

- **Defined Roles and Responsibilities**

The QCMP clarifies the roles and responsibilities of all team members involved in quality management within the DEVISE4KE Project. This ensures that everyone understands their part in maintaining quality, leading to more effective oversight and accountability throughout the project lifecycle, particularly in the context of collaboration among educational institutions and stakeholders.

- **Continuous Monitoring and Evaluation**

The QCMP incorporates mechanisms for continuous monitoring and evaluation of project activities. This includes regular project reviews, inspections, and feedback loops that allow for the identification and correction of any deviations from quality standards, ensuring that the project remains aligned with its goals of enhancing educational practices.

- **Stakeholder Involvement**

Involving stakeholders, including educators, students, and institutional partners, at key stages of the DEVISE4KE Project helps ensure that their expectations are met, which is crucial for maintaining quality. Their feedback is integrated into the project processes, enhancing the overall quality of deliverables and ensuring relevance to the needs of the educational community.

- **Training and Resources**

The QCMP emphasizes the importance of providing adequate training and resources to project team members. This equips them with the necessary skills and tools to effectively implement digital education initiatives, thereby maintaining consistent quality across all activities related to the DEVISE4KE Project.

- **Risk Management**

The QCMP includes a risk management component that identifies potential risks to quality and outlines strategies for mitigation. By proactively addressing risks, the DEVISE4KE Project can maintain quality standards, even in the face of challenges related to the rapidly evolving digital landscape.

- **External Evaluation**

Incorporating external evaluations and feedback from quality experts provides an additional layer of oversight. This helps ensure that the DEVISE4KE Project adheres to high-quality standards and allows for independent assessments of project quality, reinforcing its commitment to excellence in digital education.

2 Project Summary

The digitalization plan for schools in Kenya is ongoing since years. However, due to power outages, missing ICT equipment, not existing ICT skills and innovative teaching methods an innovative digital development of VET-schools is still a problem. Especially at rural regions most of the plans to improve the situation do not come through.

In order to meet this challenges in Homa Bay County, a rural region with about 150000 inhabitants, a strong project consortium existing of Ministry of Education, Universities, local bodies, NGO and VET-school has formed. The objectives of this project are on different levels.

The central didactical element within this project are Learning and Work Tasks (LWT) as a pillar for Work-based-learning in VET-schools. Especially in countries where VET is rather school based, LWT support including industry needs in the curriculum and strengthen transversal, ICT and professional competences of students. Apart from that LWT are developed in a way that interested parties can also use them for their development and can be designed digitally or on paper.

Apart from this, the project consortium is well aware, that there needs to be teacher training in order to provide innovative and efective ICT classes for students. Therefore LTTA (Learning Teaching Training Activity) will be developed as courses for participating schools, university, NGO and ministry. But the training goes beyond that, as Rongo University will apply for accreditation of these courses and continue offering it to schools in Kenia.

As a starting point, a learning and work task (LWT) for installing photovoltaic systems will be developed, tested and evaluated. This way 3 VET schools and one university can be equipped and will have a reliable energy supply. Apart from that, all Kenyan partners will be multipliers as LWT make them understand the process of installing photovoltaic and make them develop transversal competences, which a manual for installation wouldn't allow.

First of all, as a starting point, a learning and work task (LWT) for installing photovoltaic systems will be developed, tested and evaluated. This way 3 VET schools and one university can be equipped and this way will be able to have a reliable energy supply. Apart from that, these partners will be multipliers as LWT make them understand the process of installing photovoltaic, developing transversal competencies and not just read a manual. This LWT will be the first output for interested parties.

Objectives:

- Provide VET-schools with photovoltaics in order to guarantee green energy supply for the digital development of schools
- To help schools integrate work-based learning by integrating learning and work tasks (LWT), which are oriented in real work processes
- Preparing schools, university and other Kenyan partners for being multipliers for further VET schools and other interested parties

- Providing schools with low energy devices for digital learning/teaching like Raspberry Pi, tablets, portable beamer, cellphones, server and which can be fed by the energy generated by the photovoltaic systems
- Providing VET schools with an independent learning environment which can be used for digital teaching even though there is no internet connection possible
- Innovative Learning Teaching Training Activities for Teachers and University Staff
- Strengthen the local network of NGOs, ministries, schools, universities and industry
- Get the accreditation of some of the developed teacher training modules from the Kenyan Ministry of Education

The project is subdivided into 5 working packages:

- WP1: Project Management
- WP2: Strategy for Digital Transformation and Work-based Learning in VET-Schools in Homa Bay
- WP3: Installation of Photovoltaic Equipment at VET schools for Sustainable Energy Supply
- WP4: Digital Teaching and Learning at VET-schools in Kenya
- WP5: Implementing low energy devices for digital teaching and corresponding electrical installations at VET-schools in Kenya
- WP6: Impact, Dissemination and Communication

This structured approach ensures a comprehensive and systematic execution of the project's goals.

3 Project Time Table and Work Packages

This chapter on "Project Timetable and Work Packages" lays the foundational structure for the operational planning and execution phases of the project. It serves as a blueprint for the project's lifecycle, detailing the chronological order of activities, their respective timelines, and the allocation of tasks into coherent work packages, which together ensure the achievement of the project's objectives within the stipulated timeframe and budget.

The importance of a meticulously planned project timetable cannot be overstated (Figure 1). It not only provides a clear roadmap for project execution but also facilitates the efficient management of resources, including time, finances, and human capital. By outlining the specific start and end dates of each activity, it enables project coordinators and partners to monitor progress, anticipate potential bottlenecks, and make timely adjustments to keep the project on track. This proactive approach to project management is crucial for mitigating risks, optimizing performance, and ensuring the timely delivery of expected outputs and results.

The integration of the project timetable with work packages forms the backbone of the Quality Control and Management Plan. This integration ensures that quality standards are not only defined but are also consistently applied and monitored throughout the project's lifecycle. It emphasizes the commitment to excellence, stakeholder satisfaction, and the attainment of sustainable impacts beyond the lifespan of the project. The project time table will be updated during the lifetime of the project in consultation with the project partners and, if necessary, with EACEA, it can be found in the annex as well (Figure 1).

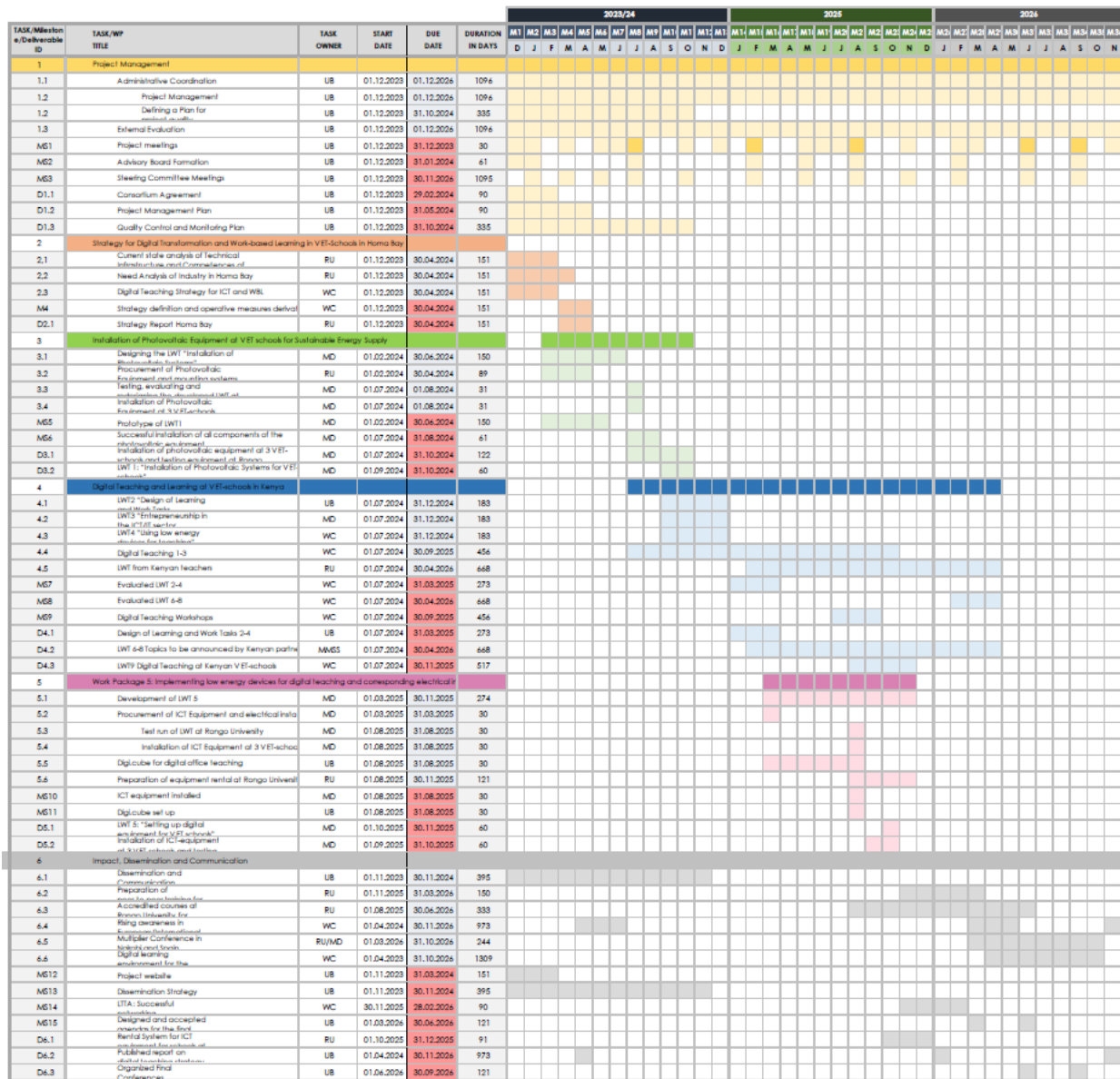


Figure 1: Gantt-Chart for DEVISE4KE

Work packages, on the other hand, represent the division of the project into manageable segments, each with a defined scope, objectives, tasks, deliverables, and allocated resources. This segmentation enhances clarity and focus, enabling team members to concentrate on specific aspects of the project while maintaining an overview of its holistic progression. Work packages facilitate the assignment of responsibilities, fostering accountability among partners and stakeholders. They also serve as a basis for

monitoring and evaluating the project's performance, as each package is designed to contribute tangibly towards achieving the overall project goal.

4 Quality Management

This chapter will delineate the processes, methodologies, and tools that the project will employ to uphold quality in every facet of its implementation. It is designed to be a living document, adaptable to the dynamic nature of the project, while providing a steadfast commitment to quality. The heart of our Quality Management system is a structured, systematic process that encompasses planning, control, assurance, and improvement – collectively these elements form a cyclical process of continuous enhancement.

The importance of Quality Management in this project is twofold. First, it serves as a blueprint that guides the project consortium through the various phases of the project, providing clear benchmarks and quality criteria against which all activities and outputs will be measured. Second, it acts as a reassurance to stakeholders, including the funding body, project partners, and end-users, that the project will deliver value and achieve its intended impact.

In the upcoming sections, we will explore the Quality Management structure tailored specifically to the unique demands of our project. This includes the identification and management of risks, the establishment of quality objectives, the implementation of quality control mechanisms, and the assurance of quality across all deliverables. We will outline the roles and responsibilities within the project team to manage and monitor quality, as well as the procedures for quality assessment and the tools for ensuring continuous quality improvement.

4.1 Internal Monitoring

4.1.1 Meeting Evaluation

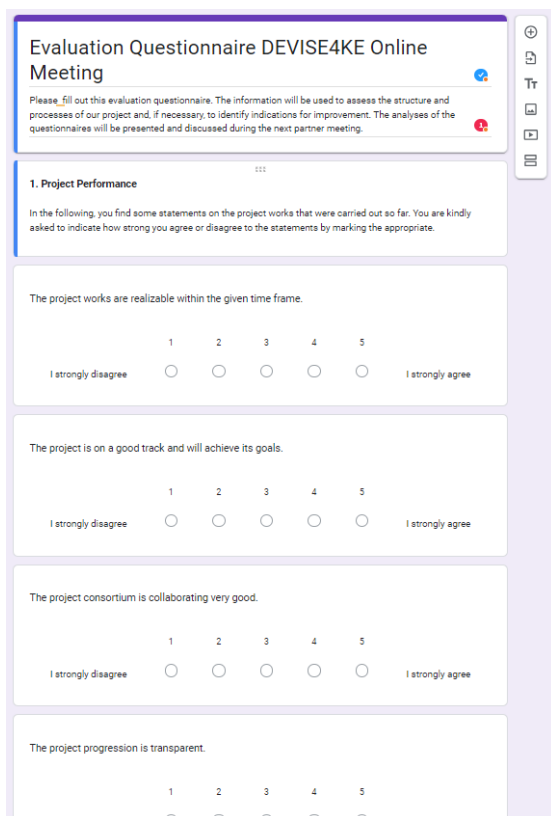
In any collaborative venture, especially one as dynamic and multifaceted as an Erasmus+ project, the calibration of teamwork is critical. Regular and systematic evaluations of meetings are a cornerstone of effective project management, ensuring not only the productivity of the time spent together but also fostering a culture of continuous improvement and engagement. This chapter focuses on the implementation of a standardized meeting evaluation form—an instrument designed to measure the effectiveness, participation, and decision-making prowess within project meetings.

The rationale for introducing such a tool is clear: it allows the project coordinator and all partners to gain objective insights into the performance and dynamics of their interactions. By reflecting on the feedback from these evaluations, the consortium can identify areas of strength to build upon and pinpoint aspects that require attention or improvement. This ongoing process of assessment and reflection is crucial to maintaining the project's momentum and aligning it with the overarching goals of the Erasmus+ framework.

The project coordinator provides a standardized meeting evaluation form to assess effectiveness, participation, and decision-making in project meetings (Figure 2). Figure 2 is a carefully structured questionnaire divided into four key sections: Project Performance, Cooperation and Communication within the Project Partnership, Responsibility and Commitment, and Feedback on the Organization of the Meeting. Each section is designed to capture a specific dimension of the meeting's efficacy.

- **Project Performance:** This section, with its six probing questions, is intended to assess how the meeting has contributed to the project's progression. It addresses whether the meeting's outcomes align with the project's strategic objectives and deliverables.
- **Cooperation and Communication within the Project Partnership:** Nine questions here are dedicated to evaluating the interpersonal and inter-institutional dynamics at play. This involves the extent to which partners collaborate, share information, and support one another in the pursuit of common goals.
- **Responsibility and Commitment:** This section's four questions scrutinize the individual and collective commitment of the participants, gauging their accountability and dedication to the project's responsibilities.
- **Feedback on the Organization of the Meeting:** The organization of a meeting can significantly influence its outcome. The six questions in this section allow participants to provide feedback on the logistical and structural aspects of the meeting, including time management, technology use, and clarity of the agenda.

The form is disseminated in paper meanwhile the schools don't have the necessary ICT equipment during project meetings. For online meetings and from 2025 on, we will be using Google Forms for its user-friendly interface and analytical capabilities. Following online meetings, advisory board meetings the form link is sent out by email to gather timely and pertinent feedback.



Evaluation Questionnaire DEVISE4KE Online Meeting

Please, fill out this evaluation questionnaire. The information will be used to assess the structure and processes of our project and, if necessary, to identify indications for improvement. The analyses of the questionnaires will be presented and discussed during the next partner meeting.

1. Project Performance

In the following, you find some statements on the project works that were carried out so far. You are kindly asked to indicate how strong you agree or disagree to the statements by marking the appropriate.

The project works are realizable within the given time frame.

1 2 3 4 5
I strongly disagree I strongly agree

The project is on a good track and will achieve its goals.

1 2 3 4 5
I strongly disagree I strongly agree

The project consortium is collaborating very good.

1 2 3 4 5
I strongly disagree I strongly agree

The project progression is transparent.

1 2 3 4 5

Figure 2: Extract of an online meeting evaluation form

Erasmus+

1st Transnational Project Meeting
22.-27.07.2024
Rongo, Kenya

1st Evaluation Questionnaire

Please be kind enough to fill out this evaluation questionnaire. The information will be used to assess the structure and processes of our project and, if necessary, to identify indications for improvement. The analyses of the questionnaires will be presented and discussed during next partner meeting.

1. Project performance

In the following, you find some statements on the project works that were carried out so far. You are kindly asked to indicate how strong you agree or disagree to the statements by marking the appropriate.

	strongly disagree				strongly agree
The project works are realizable within the given time frame.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The project is on a good track and will achieve its goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The project consortium is collaborating very good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The project progression is transparent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The project management & administration is implemented well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I am sufficiently involved in the project activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2. Cooperation and communication within the project partnership

In the following some statements on the general structure of cooperation within our project are given. Please indicate how strongly you agree or disagree to the statements by marking the appropriate!

	strongly disagree				strongly agree
We all share a common understanding of what the project is about.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
We have a common understanding how to get things done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The roles within the project consortium are clear.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Our consortium has developed rules and norms that guide our cooperation and social interaction in the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The planned communication channels are sufficient to achieve excellent project results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Project partners maintain an open communication.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The communication among the consortium is very good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
There is a free sharing of information in the partnership.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Universität Bremen

3. Responsibility and commitment

Please give your estimation of the project partners' responsibilities and commitment by indicating how strongly you agree or disagree to the statements below.

	strongly disagree				strongly agree
All members of the consortium put much effort in their tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
There is a high level of accountability within the partnership.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The partners are acknowledging skills and expertise of other team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The partners' responsiveness is excellent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4. Feedback on the organization of the meeting

Please give feedback on the organization and management of the meeting by indicating how strongly you agree or disagree to the statements by marking the appropriate!

	strongly disagree				strongly agree
The meeting was well structured.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The meeting addressed all necessary aspects that I needed for carrying out the project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The meeting provided enough opportunities to discuss and exchange ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The meeting prepared me well for the next steps of the project work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The agenda covered all relevant subjects.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Information on travel and accommodation was appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

General comments/suggestions:

the meetings and the trainings were well organized and provided opportunity for every participant to be fully engaged.

Figure 3: Evaluation sheet of an in-person meeting

The responses are then compiled and translated into bar charts, providing a visual and intuitive representation of the feedback. These charts serve as a valuable reference point for assessing the evolution of the project's meetings over time. They enable the project coordinator to maintain an accurate overview of meeting progress and to take informed actions to optimize the efficacy of future interactions. By institutionalizing this evaluation process, the project commits to a transparent and data-driven approach to quality management, ensuring that each meeting is not just a procedural necessity but a substantive step towards achieving the project's ambitious goals.

4.1.2 Evaluation of the Project process

The thorough evaluation of the project process is an indispensable component of any structured endeavor, particularly in the context of an Erasmus+ project. It serves as the barometer by which the project's health is measured, ensuring that every phase, from conception to completion, aligns with the defined goals and objectives. In this chapter, we will expound on the mechanisms and methodologies employed to monitor, assess, and steer the project process towards its successful realization.

The Project Coordinator (PC), Steering Committee (SC), and Advisory Board (AB) will orchestrate the general project monitoring, underpinned by biannual meetings that serve as strategic touchpoints for evaluation and course correction. This collaborative effort aims to maintain the project trajectory through vigilant oversight and adaptive management.

To concretize the evaluation of the project process, a multi-faceted mechanism is established, intertwining communication, coordination, and technological tools to create a cohesive operational framework.

- **Regular Communication Channels:** Vital to the project's success is the establishment of regular communication channels. These include email, video conferencing, and instant messaging platforms. Such channels are not merely for the exchange of information; they are lifelines that connect the consortium, facilitating a real-time exchange of updates, feedback, and concerns, ensuring that all stakeholders remain synchronized with the project's pulse.
- **Coordination Meetings:** The PC is tasked with scheduling coordination meetings with the SC. These sessions are critical for discussing the project's progression, sharing updates, and collaboratively planning future steps. They are opportunities for collective problem-solving and decision-making, ensuring that all participants have a voice in the project's direction. These meetings will alternate between physical presence and virtual platforms, providing flexibility and continuous engagement.
- **Joint Partners Meetings:** To foster a collaborative environment, joint partners meetings will be organized, bringing together all participating organizations, associated partners, and the AB. These workshops are designed to be brainstorming sessions where partners can collaborate, share ideas, and address challenges. They will be held three times throughout the project lifecycle and will offer both in-person and hybrid participation formats to accommodate all partners.

The evaluation approach outlined in this chapter is crafted to ensure the project not only adheres to its schedule and objectives but also evolves in response to the insights gained from these evaluative practices. The result is a project that is resilient, responsive, and aligned with the needs and expectations of all stakeholders.

4.1.3 Work Package Evaluation

The evaluation of work packages within any project, especially one as collaborative and innovative as an Erasmus+ project, is a critical activity that ensures the project's goals are met with precision and efficacy. Work Package 2 (WP2) – Strategy for Digital Transformation and Work-based Learning in VET-Schools in Homa Bay – is particularly vital as it lays the groundwork for all following WP as photovoltaic and ICT equipment as well as the competence-oriented and targeted teacher trainings are based on the results. This chapter aims to outline the evaluation methods of all content-related WP, ensuring that its objectives are achieved, and results are quantifiable and qualitatively superior.

4.1.3.1 WP2 – Strategy for Digital Transformation and Work-based Learning in VET-Schools in Homa Bay

The cornerstone of this project is its evidence-based approach, built upon comprehensive needs assessments conducted in collaboration with local stakeholders and project consortium partners. This collaborative foundation ensures that all quality control measures are contextually appropriate and aligned with both local requirements and international standards.

This work package (WP2) focuses on three critical components:

- Technical infrastructure assessment and implementation, encompassing both ICT and photovoltaic systems
- Industry-aligned competency development through careful analysis of workplace requirements

- ICT competence assessment of teachers and learners based on the European Digital Competence Framework (DigComp), establishing a baseline for digital literacy and skills development at the participating VET schools

The state analysis conducted at three pilot schools provides a comprehensive foundation for understanding the current technological landscape, human capital capabilities, and industry requirements. This three-dimensional approach ensures that the project addresses not only physical infrastructure needs but also the human capacity development necessary for sustainable implementation.

The quality control measures outlined in this document are designed to ensure that all deliverables meet specified standards while adhering to Erasmus+ funding guidelines and sustainability requirements.

a) Specific objectives for WP2

- To elaborate the need of technical ICT infrastructure of partner VET-schools in line with Erasmus+ funding rules
- To calculate the necessary size of photovoltaic systems and power storage for VET schools
- To buy the necessary technical infrastructure
- To identify the necessary ICT and professional competences of employees through a company survey in order use them as a base for WBL in VET schools

b) Main results of WP2

- The main results of WP2 will be defined common core spheres of activity in all participating countries as well as country specific.
- A comparative report is published and made known to the project partners and associated companies.

c) Qualitative indicators of WP2

- Completeness of ICT infrastructure assessment at three VET schools
- Quality of energy supply evaluation
- Accuracy of workspace requirements analysis
- Thoroughness of photovoltaic system specifications
- Reliability of power consumption calculations
- Quality of expert interview insights
- Comprehensiveness of company questionnaire responses
- Relevance of identified ICT and transversal competences
- Depth of professional competence descriptions for business administration and photovoltaics
- Integration of T2.1 and T2.2 findings
- Alignment with LTTA requirements
- Adaptability of strategy for future modifications
- Clarity of teaching guidelines

d) Quantitative Indicators

- Number of VET schools analyzed (Target: 3)
- Number of ICT infrastructure parameters assessed
- Number of working spaces identified

- Photovoltaic system specifications completed (100%)
- Number of expert interviews conducted (Target: minimum 3)
- Number of company questionnaires completed (Target: minimum 10)
- Coverage of transversal, ICT and professional competences

Table 1: Performance Indicators for WP2

Category	Indicator	Responsibility	Deadline
Current State Analysis (T2.1)	Complete infrastructure assessment for 3 schools : Energy supply evaluation, Workspace requirements, PV system specifications	Rongo University	4
Industry Needs Analysis (T2.2)	3+ expert interviews completed 10+ company questionnaires	Rongo University	4
Digital Teaching Strategy (T2.3)	LTTA integration plan presentation	Warnborough College	4
Strategy definition and operative measures derivation (MS4)	Presentation of the Strategy Report for Homa Bay,	Warnborough College	5
Strategy Report (D2.1)	40-page report in ENG/SWAHILI, consisting of: <ul style="list-style-type: none"> • Site assessment documentation • Need analysis results • Equipment specifications • Digital teaching strategy 	Rongo University/Warnboroughj College	5

4.1.3.2 WP3 – Development of Learning and Work Tasks (LWT) in a Multimedia Learning Environment

The installation of photovoltaic equipment at VET schools is an important step towards achieving sustainable energy supply in the education sector. With the increasing demand for electricity in VET schools, the use of low-emission, low-cost photovoltaic equipment is a key strategy for reducing carbon emissions, while increasing access to modern technology. The goal is to ensure that VET schools are equipped with reliable and sustainable sources of energy that will support their educational programs and reduce their carbon footprint. The work package aims to install photovoltaic (PV) equipment at selected vocational education and training (VET) schools to ensure a sustainable energy supply for their ICT labs. The main objective is to reduce the schools' dependency on non-renewable energy sources and to create a sustainable and eco-friendly environment for the students. The underlying research method in this work package is Design-based research (DBR) to link development and research on the topic as closely as possible.

WP3 is dedicated to creating work-process oriented LWTs, fostering a didactic approach that integrates theoretical knowledge with practical application. This method signifies a paradigm shift from passive learning to an active, problem-solving educational experience that resonates with the operational realities

of the workplace. The objectives are carefully crafted to support the acquisition of specialist occupational content, enhance transversal and media competences, and provide learners with the autonomy necessary for self-organized, responsible learning

a) Specific objectives for WP3

- Design a Learning and Work Task (LWT) for Installations of Photovoltaic systems
- Testing, evaluating and (if necessary adapting) of designed LWT at Rongo University
- Execution and Evaluation of LWT “Installation of Photovoltaic Systems” at VET schools
- Providing 3 VET-Schools and Rongo University with necessary and functioning Photovoltaic Equipment, including a monitoring and maintenance plan

b) Main results of WP3

- Developed and tested Learning and Work Task (LWT) for photovoltaic system installations
- Successfully installed photovoltaic equipment at at:
 - 3 VET schools
 - Testing facility at Rongo University
 - Complete documentation of installation process and maintenance plans
- Published LWT materials in English and Swahili (both digital and e-publication)
- Established monitoring and maintenance systems at all locations

c) Qualitative indicators of WP3

- Quality of LWT design and implementation
- Effectiveness of the training process
- Satisfaction levels of participating teachers and students
- Functionality and reliability of installed systems
- Clarity and usability of documentation materials
- Success of knowledge transfer to local staff

d) Quantitative indicators of WP3

- Installation of PV systems at 4 locations (3 VET schools + Rongo University)
- Budget allocation:
 - €10,000 per VET school
 - €5,000 for Rongo University
- Completion of 6-step LWT development process
- Production of 20-page documentation in two languages
- Achievement of planned installation timeline (11 months)

Table 2: Performance Indicators for WP3

Category	Indicators	Responsibility	Deadline
LWT Design (T3.1)	Completion of LWT Review by Advisory Board Available in two languages	Maristak Durango/University of Bremen	5
Equipment procurement (T3.2)	Equipment meets quality standards	Rongo University	4

	Within budget limits (€35,000 total) Complete component list		
Testing at Rongo University (T3.3)	Successful installation Evaluation checklists completed System functionality verified LWT evaluated	Maristak Durango	8
Vet school Implementation (T3.4)	Three successful installations Documentation completed Monitoring system in place Maintenance plan established	Maristak Durango/Rongo University	8
Prototype of LWT1 (MS5)	Documented LWT and evaluation documents consisting of questionnaires	Maristak Durango	7
Successful installation of photovoltaic equipment	Documentation of the installation process, including photos, all plans and designs, equipment and materials used, any issues encountered during the installation.	Maristak Durango	9
Installation of photovoltaic equipment (D3.1)	Installed equipment, monitoring and maintenance report, ENG/SWA	Maristak Durango	11
LWT1 „Installation of Photovoltaic Systems for VET schools” (D3.2)	Evaluated and finalized LWT as E-Publication and in an online tool, ENG	Maristak Durango/University of Bremen	11

4.1.3.3 Digital Teaching and Learning at VET-schools in Kenya

In the evolving landscape of vocational education, digital teaching and learning competencies have become essential components of effective education delivery. Work Package 4 focuses on comprehensive training initiatives and knowledge transfer processes, positioning digital literacy and pedagogical innovation at the forefront of VET education in Kenya. Rather than merely implementing devices, this work package emphasizes the development of teaching capabilities and the strategic transfer of knowledge from teachers to students.

The program is structured around innovative training approaches that prepare teachers to effectively utilize digital tools while maintaining a focus on practical, work-based learning methodologies. Through targeted train-the-trainer sessions in both Kenya and Germany, teachers will develop not only technical competencies but also pedagogical strategies for implementing digital learning in their classrooms. This dual-location training approach ensures exposure to diverse educational perspectives and methodologies.

Central to this work package is the development and implementation of Learning and Work Tasks (LWTs), which serve as the primary vehicle for knowledge transfer from teachers to students. These LWTs are specifically designed to address local industry needs while incorporating digital competencies and

transversal skills. Teachers will learn to create and implement these tasks, ensuring that at least 180 students per school benefit from enhanced digital learning experiences.

The training program extends beyond basic digital literacy to encompass entrepreneurship education, recognizing that the combination of digital competencies and entrepreneurial skills is crucial for economic and social development in rural Kenya. This holistic approach ensures that both teachers and students acquire not just technical skills, but also the ability to apply these skills in practical, business-oriented contexts.

Through this comprehensive training approach, WP4 aims to create a sustainable model of digital education that can be effectively transferred from teachers to students, ultimately contributing to the development of a digitally competent workforce in Kenya.

Specific objectives for WP4

- Train-the-teachers in the field of digital teaching and learning considering the equipment they will receive at their schools
- Train university staff and youth organization in order to provide support to colleagues, implement accredited digital learning courses at Rongo University as well as provide mentoring or training to other interested schools and for youth at the youth centers
- Train all partners in the field of Entrepreneurship as this is an important field for their students. Gaining knowledge both in the field of sustainable energy supply as well as digitalization and teaching are vital components for economic and social development in poor rural regions of Kenya
- Train all partners in development and design of LWT and provide theoretical knowledge for the upcoming project activities (setting up digital equipment and electrical installations as well as using raspberry Pii and tablets for teaching)
- Train students with developed LWTs and evaluate their ICT-, transversal- and professional (if applicable) competences before and after the trainings in order to see the effect of the LWT on the development of competences.

a) Main results of WP4

- Innovative pedagogical approaches for digital teaching and learning
- Practical application of digital tools in vocational education
- Development of customized Learning and Work Tasks
- Integration of entrepreneurship education
- Sustainable knowledge transfer methodologies
- Building local support networks through university staff and youth organizations

b) Qualitative Indicators of WP4

- Quality of developed Learning and Work Tasks (LWT 2-4)
- Effectiveness of digital teaching workshops
- Success of knowledge transfer in teacher trainings
- Relevance of teacher-developed LWTs to local context
- Impact of cross-school LWT implementation
- Quality of digital teaching materials and resources
- Appropriateness of entrepreneurship training content

c) Qualitative Indicators of WP4

- Minimum 180 students per school testing LWTs
- Creation of 3 teacher-developed LWTs (one per school)
- Completion of 3 digital teaching workshops
- Cross-evaluation of LWTs at 3 schools
- Implementation timeline (up to month 29)

Table 3: Performance Indicators for WP4

Category	Indicators	Responsibility	Deadline
LWT2 “Design of Learning and Work Tasks” (T4.1)	Quality of LWT design materials Effectiveness of LTTA introduction Implementation success in school-based VET	University of Bremen	15
LWT3 “Entrepreneurship in ICT/IT” (T4.2)	Relevance to rural context Integration of digital technologies Quality of e-commerce components	Maristak Durango	15
LWT4 “Low Energy Devices” (T4.3)	Energy efficiency awareness Effectiveness of device usage training	Warnborough College	15
Digital Training 1-3 (T4.4)	Workshop completion (3 sessions) Multiplier effect success Integration of WP2 results	Warnborough College	21,21,22
Kenyan Teacher LWT (T4.5)	3 school-specific LWTs developed 180 students per school minimum Cross-evaluation completion Survey feedback implementation	Miramba Mixed Secondary School, Kiabuya Mixed Secondary School, St. Josepg Olando Mixed Secondary School, Rongo University	26
Evaluated LWT2-4 (MS7)	Evaluation material (e.g. surveys from teachers) and notes from group discussions	Warnborough College	16
Evaluated LWT6-8 (MS8)	Evaluation material from consortium partners and students of participating VET-schools (surveys). Surveys from 180 students	Warnborough College	29

Digital Teaching Workshops (MS9)	Interactive teacher trainings, open for other stakeholders Evaluation Sheets	Warnborough College	22
LWT 2-4 (D4.1)	3 LWT E-publication completion Online tool integration English language version	Warnborough College	16
LWT 6-8 Development (D4.2)	3 evaluated LWT dealing with relevant topics and promoting transversal and ICT skills E-publication completion Online tool integration English/Swahili language version	Warnborough College	29

4.1.3.4 WP5 – Implementing Low-Energy Devices and Digital Infrastructure for VET Schools

This work package represents a pivotal step in the project, focusing on the implementation of low-energy digital devices and associated electrical infrastructure to support enhanced teaching and learning at Kenyan VET schools. By promoting the use of sustainable technology solutions, this work package aims to improve the quality of education while reducing energy consumption across the participating institutions.

The successful implementation of WP5 will have a lasting impact on the VET education system in Homa-Bay. The installation of low-energy devices, coupled with the establishment of the "Digi.Cube" offline digital infrastructure, will ensure reliable and accessible digital learning resources even in areas with limited internet connectivity.

Furthermore, the rental system at Rongo University will promote the broader dissemination of these digital solutions, enabling more VET schools to benefit from the project's outcomes and fostering a culture of knowledge sharing and collaboration between educational institutions.

a) Specific objectives for WP5

- Designing LWT5 for self-execution at VET-schools (involving teachers and students) with experts from ICT/IT
- Testing, evaluating, if necessary re-designing and finalizing the LWT (Methodology: DBR)
- Installing "Digi.Cube" (Raspberry Pi) for offline digital teaching
- Implementing a rental system for mobile equipment bought for Rongo University

b) Main results of WP5

- LWT5 design, testing, and finalization
- Procurement and installation of ICT equipment and electrical infrastructure
- Test run of LWT5 at Rongo University
- Full-scale installation of digital solutions at the three VET schools
- Deployment of "Digi.Cube" offline digital teaching systems
- Establishment of the equipment rental program at Rongo University

c) Qualitative indicators of WP5

- Quality and effectiveness of LWT5 design
- Successful integration of feedback and iterative refinement
- Compliance with safety and regulatory standards during installation
- User satisfaction with installed digital equipment and infrastructure
- Effectiveness of Digi.Cube implementation for offline digital teaching
- Usability and accessibility of the equipment rental program
- Sustainability of the overall digital solutions framework

d) Quantitative indicators of WP5

- Installation of digital equipment and Digi.Cube systems at 3 VET schools
- Utilization of rental equipment at Rongo University
- Number of VET schools accessing the rental program
- Budget allocation: €10,000 per VET school, €5,000 for Rongo University
- Timeline for full implementation (up to Month 24)

Category	Indicator	Responsibility	Deadline (Month)
LWT5 Development (T5.1)	LWT dealing with the topic on how to set up and maintain electrical installations and low energy devices will be developed. This LWT will also include a monitoring and evaluation plan for maintaining the equipment.	Maristak Durango	18
ICT Equipment Procurement (T5.2)	Alignment with energy efficiency requirements Suitability for Kenyan environment Security cabinet installation	Rongo University	16
LWT5 Test Run at Rongo (T5.3)	Successful test execution Incorporation of feedback Effectiveness of safety standards	Maristak Durango/Rongo University	21 (August)
VET School Installations (T5.4)	Smooth implementation process Compliance with building codes Involvement of school staff and volunteers	Maristak Durango	21
Digi.Cube Implementation (T5.5)	Reliable IT infrastructure setup Effectiveness of teacher training	University of Bremen	21

	Integration into teaching practices		
Rental Equipment at Rongo (T5.6)	Operational rental system Availability of LWT resource Engagement with interested schools	Rongo University	24
ICT equipment installed (MS 10)	Installation report (including photo documentation of the WP execution and supporting documents from D5.1 and D5.2)	Maristak Durango/Rongo University	21
Digi.cube set up	Installation and launching report	University of Bremen	21
LWT5 Development (D5.1)	E-publication completion English and Swahili versions	Maristak Durango	24
ICT Installation Documentation (D5.2)	Comprehensive installation report Maintenance plan inclusion E-publication in two languages	Maristak Durango	24

Table 4: Performance Indicators for WP5

4.1.3.5 WP6 – Impact, Dissemination and Communication

Work Package 6 focuses on dissemination and communication activities to ensure the project's visibility and impact across European and African regions. Through targeted outreach, we aim to connect VET institutions, universities, and labor market stakeholders while making project deliverables widely accessible. The work package includes practical initiatives such as peer-to-peer training, digital learning environments, and multiplier events, alongside the development of accredited courses and a rental system for digital equipment.

This work package plays a vital role in the project's success by extending results beyond the immediate consortium partners and creating lasting impact in both regions' educational systems. It helps bridge the gap between education and employment needs through knowledge exchange, while establishing sustainable structures through accredited courses and equipment rental systems. The use of platforms like EPALE and EDEHub ensures that project innovations reach an international audience, while the peer-to-peer training approach builds local capacity, particularly beneficial in rural areas.

e) Specific objectives for WP6

- Disseminate and communicate the project results to appropriate target groups, clusters and associations ensuring a European and African wide impact
- Tightening the link between VET institutions, university and the labor market
- Disseminating results and exchanging best practices in European platforms EPALE and EDEhub
- Setting up a digital course with all LWT for wider use of the project results

- Accreditation of at least two teacher training courses at Rongo University based on the project outputs
- Implementing a rental system of tablets and a Digi.Cube for VET-schools who would like to teach LWT6-8 to their students

f) Main results of WP6

- Established project website and social media presence
- Implemented peer-to-peer training system for VET teachers
- Accredited teacher training courses at Rongo University
- Active presence on EPALE and EDEHub platforms
- Successfully executed multiplier conferences in Nairobi and Spain
- Operational rental system for ICT equipment
- Digital learning environment for LWT implementation

g) Qualitative indicators of WP6

- Quality of stakeholder engagement and feedback
- Effectiveness of knowledge transfer in peer-to-peer training
- Relevance and applicability of accredited courses
- User satisfaction with digital learning environment
- Sustainability of established partnerships
- Quality of conference presentations and discussions
- Usability of the rental system

h) Quantitative indicators of WP6

- I Number of website visitors and social media engagement rates
- Number of trained teachers through peer-to-peer system
- Number of accredited courses implemented
- Number of posts and interactions on EPALE and EDEHub
- Conference attendance numbers (in-person and virtual)
- Usage statistics of rental equipment
- Number of active users in digital learning environment

Category	Indicator	Responsibility	Deadline (Month)
Dissemination Strategy (T6.1)	Completion of strategy document Number of stakeholders mapped Social media engagement metrics	University of Bremen/Warnborough College	12
Peer-to-peer Training (T6.2)	Number of training sessions conducted Number of teachers trained Participant satisfaction rates (>80%)	Rongo University/OYSDG	34

Course Accreditation (T6.3)	Number of courses accredited Course evaluation scores	Rongo University	34
European Network Engagement (T6.4)	Number of publications on platforms Engagement metrics Number of cross-platform connections	Warnborough College	34
Multiplier Conferences (T6.5)	Number of attendees Geographic distribution of participants Post-event survey results	Rongo University/Maristak Durango	31,34
Digital Learning Environment (T6.6)	Acceptance of Learning Environment by teachers and students	Warnborough College	34
Project Website (MS12)	Language English Visitor metrix	University of Bremen	4
Dissemination Strategy	List of measures which are planned to be executed	University of Bremen	12
LTTA: Successful networking, dissemination and preparation of (hybrid) events	Screenshot and presentations from virtual LTTA	Warnborough College	27
Designed and accepted agendas for the final conferences (MS15)	Website announcements, invitation letters, anonymized attendee list	University of Bremen	28,31
Rental System (D6.1)	Equipment utilization rate User satisfaction scores Maintenance efficiency	Rongo University, OYSDG	25
Published Reports (D6.2)	E-Publications on EPALE/EDEHub	University of Bremen/Warnborough College	7, 30, 36
Conference Organisation (D6.3)	Invitation, documentation of previous dissemination conference presentations, anonymized participant lists photos/screenshots	University of Bremen	31/34

Table 4: Performance Indicators for WP6

4.1.4 Annual evaluation

Within our Erasmus+ project, the annual evaluation serves as a pivotal moment to reflect on our journey towards creating a transformative educational experience in applied informatics. By employing a SWOT analysis, we aim to dissect our project's internal dynamics and external influences comprehensively. This

process is vital for assessing our strides in equip schools with the necessary ICT equipment, train teachers and develop work-based learning and work tasks and test them in schools during the pilot.

SWOT Analysis in the Context of the Project

Strengths:

- Evaluate the internal positive attributes of the project.
- Analyze the robust aspects of the project management processes, partnerships, and resource allocations that contributed to successes.

Weaknesses:

- Critically assess areas where the project did not perform as expected.
- Identify any shortcomings in communication, coordination, or execution within the project framework.

Opportunities:

- Investigate external factors that the project could exploit to its advantage.
- Consider trends within the Erasmus+ programme, potential funding opportunities, emerging educational technologies, and partnerships that could be strengthened or initiated.

Threats:

- Anticipate challenges that could hinder project progress.
- Analyze risks associated with policy changes, funding, partner dynamics, and broader socio-economic factors.

Process and Implementation

Facilitated by the Project Coordinator, the annual SWOT analysis will engage stakeholders in a structured reflection process. The synthesis of these diverse perspectives will culminate in a report that not only outlines our findings but also charts a path forward, directly influencing our strategies for the upcoming year.

4.2 External Monitoring

In the dynamic and collaborative landscape of an Erasmus+ project, external monitoring stands as a crucial pillar ensuring the project's alignment with its intended goals and the broader educational ecosystem. This chapter delves into the structured mechanisms established for external review and feedback, underpinning the project's commitment to excellence, relevance, and impact. Through the establishment of an Advisory Board and the rigorous evaluation of events and webinars, the project embraces a transparent, accountable approach to quality assurance and stakeholder engagement. These mechanisms not only foster a culture of continuous improvement but also ensure that the project remains responsive to the needs of its diverse audience and stakeholders. By prioritizing external input and data-driven insights, the project solidifies its foundation for delivering innovative, impactful outcomes in vocational education and training.

4.2.1 Advisory Board

The project leverages the expertise of an external Advisory Board (AB), comprising esteemed industry experts and academics. This board plays a pivotal role in the project's strategic direction and quality assurance. Regular reviews and feedback sessions are scheduled every quarter to scrutinize project activities and relevant documents. This structured engagement ensures that the project remains aligned with the latest industry standards and educational frameworks, incorporating a broad spectrum of perspectives into its evolution. The AB's insights are invaluable, offering a blend of critical oversight and constructive feedback that informs the project's continuous improvement.

4.2.2 Evaluation of events

Events serve as critical platforms for disseminating knowledge, fostering collaboration, and engaging with a wider audience.

Participant Surveys

Immediately following each event, surveys are distributed to participants. These surveys are designed to capture feedback on the content, delivery, and overall effectiveness of the session. Key metrics such as participant engagement, clarity of presentation, and applicability of the information shared are assessed through this feedback.

5 Financial reporting

The financial administration of the project and its funds will be managed by the ITB (Institute of Technology and Education at the University of Bremen), in close and transparent cooperation with the financial managers of each partner. This will ensure proper budget control and time management throughout the project.

Payments

- 1st advanced payment (40 %) will be transferred after signing of the consortium agreement
- 2nd advanced payment (40 %) will be transferred after approval of continuous report
- Final Payment (20 %) will be transferred after approval of final report

Changes in the budget

- In general, the budget is not flexible (grant agreement § 5.5)
- The budget is assigned to Work Packages (WP) and Activities (activities are listed in Annex 1) of the amendment and in the calculation)
- Changes require amendments in grant agreement
- Shifts between WPs are only possible if the affected WPs are not completed and if they are justified by the technical operation of the project

Reporting

- Continuous Reporting includes technical report and financial report
- 1st reporting period 01.12.23 - 30.08.25

- 1st report due 30.08.25 (in order to get second advanced payment)

Financial Documentation

- Consortium obliged to provide all information and documents the EU asks for (grant agreement § 19)
- Consortium are obliged to keep all records for 5 years after the final payment (§ 20.1)

Consortium provides to coordinator:

- Timesheets workdays to activities
- Copies of Contract
- Proof of Payment
- Travel: (receipt of hotel, flight tickets etc.)
- Others (only VPS and SJM): Invoices/Receipts for catering, rent etc. for project meetings

6 Risk Management

Risk management within DEVISE4KE is a critical component that ensures its smooth execution and successful outcome. The project employs a proactive approach to identify potential risks and implement strategic measures to mitigate them. This chapter outlines the comprehensive risk management strategies devise Risk Mitigation Strategies:

Critical risks and risk management strategy			
Risk No	Description	Work package No	Proposed risk-mitigation measures
1	A partner leaves the consortium before the end of the project. Key knowledge missed (MEDIUM)	All	Partners sign a commitment to participate. Only reliable partners are chosen. Partners have overlapping skill profiles to be able to reorganize activities to cover the loss of a partner
2	Personnel changes: possible delay in work progress (LOW)	All	Exchange of information among researchers done on a regular basis under the coordination of the Project Coordinator in order to avoid any delay in case of personnel changes.
3	Poor internal communication or awareness of issues (LOW)	All	Setup project communication plan, and appropriate tools. Use of regular work package and/or task meetings to coordinate the work. Reassess and monitor results regularly.

4	THE WP results are delayed (LOW)	All	WP leaders will continuously monitor the progress of the work package to identify delays and red flags allowing for the required corrective actions.
5	Political instability: There is a risk of political instability in Kenya, which could impact the project's implementation (MEDIUM)	All	To mitigate this risk, the project team will establish good relationships with local stakeholders and authorities, as well as monitor the political situation in Kenya regularly
7	Worsening the situation regarding the COVID-19 pandemic - staff health and travelling issues (MEDIUM)	All	Self-awareness about health issues. All partner institutions will include enough employees to fulfil all project activities. In case of impossibility to travel, project activities will be organized blended or online through video communication platforms (Zoom)
6	Partner does not report in time to release the management report (LOW)	1	The project management will enforce timely and correct reporting.
7	Low visibility of DEVISE4KE (LOW)	6	Partners are part of European and national networks which will be activated to maximize the visibility of the project, which is one of the projects' objectives.
8	Unsuccessful equipment purchases (MEDIUM)	3, 5	Good project management and extensive experience of project partners in procurement. There has already been done a rough need analysis in order to get an idea of the amount of equipment to be bought which will be specified in WP2. Equipment will be ordered with enough time to avoid delays in the project due to delivery delays
9	Lack of quality standards	2,3,4,5	Leading partner UB and other partners have great experience in quality assurance and monitoring; therefore, SC, AB and all consortium partners are expected to follow the standards proposed in the Quality Control and Monitoring Plan and Manual. Good project management and

			continuous communication among all project partners.
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7 Design Based Research Manual

The methodology has a logical order of activities, starting with collecting information, then discussion, and production of outputs with continuous quality control. Activities and the methodology mentioned above are based on the constant and deep dialogue among stakeholders about all project aspects.

A formative research design is used for the project. Since the core of the research is for a need of an intervention, a developmental research approach - also called Design Based Research (DBR) - is suitable for this. A significant feature of the DBR approach is the starting point of the research, as DBR is concerned with a

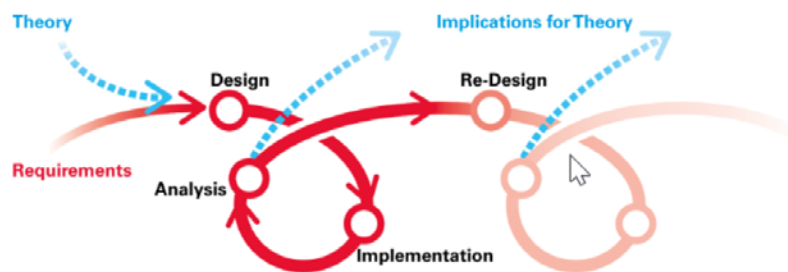
"practically relevant educational problem for which a new solution has yet to be developed: e.g. an educational or teaching-learning concept, a teaching-learning method, teaching-learning material, a technical tool, a media technology infrastructure, an educational program and others (...)"

(Reinmann, G. (2015): Reader zum Thema entwicklungsorientierte Bildungsforschung.

http://gabi-reinmann.de/wp-content/uploads/2013/05/Reader_Entwicklungsforschung_Jan2015.pdf)

Design-Based Research is thus considered research-driven (Edelson, D. C. (2002): Design Research: What we learn when we engage in design. In: The Journal of Learning Sciences 11 (1), S. 105–121), as theoretical and practical outputs are generated through basic research and theoretical findings. The outputs are developed, tested, evaluated and continuously improved in several development cycles in the form of an intervention until a suitable solution for the educational problem is available. (Reinmann, G. (2015): Reader zum Thema entwicklungsorientierte Bildungsforschung. http://gabi-reinmann.de/wp-content/uploads/2013/05/Reader_Entwicklungsforschung_Jan2015.pdf).

In a starting point both, Theory and Requirements are taking into consideration for finding solutions:



Source: Urban Fraefel (2014): Professionalization of pre-service teachers through university-school partnerships Partner schools for Professional Development»: development, implementation and evaluation of cooperative learning in schools and classes. Edinburgh: WERA Focal Meeting

In DEVISE4KE, the educational problem (Requirements) is the lack of ICT-equipment and relevant training for teachers and students, as well as a reliable energy supply to allow for effective and innovative digital teaching (confirmed by desk research and previous projects). Also, students face difficulties in finding jobs

as they are not properly trained, with industrial trends not sufficiently integrated into school curricula (confirmed by desk research).

Therefore, WP2 requires a structured procedure to evaluate the current state of participating VET schools through interviews with school management and teachers, site inspection, and interviews with industry contacts. Factors to be evaluated include necessary ICT, transversal and (if needed, professional) competences of employees to consider for LWT (both for teachers and students). The first step will be developing a LWT with relevant experts. This LWT will be evaluated by the AD before it is piloted (WP 3 and 5) or in digital teacher trainings (WP4). In the pilots, there will be a first test run on a smaller scale to see if the LWT leads to the expected outcome. Feedback forms for evaluation (level of satisfaction, challenges faced, recommendations for improvement, etc.) will be completed after this run, so re-designs or modifications can be done. When it is ready, it will be run with the project consortium, school staff and students at the VET-schools.

In WP4, evaluation will be obtained from the teachers to improve the tasks. Experiences out of the project will be part of dissemination of the project, published on various communication channels. When the project ends, partners will have a solution for their educational problem and the project consortium aims to spread the knowledge, results and trainings to other VET-schools in Kenya and abroad.

7.1 Surveys/Questionnaires

Please find several introduced questionnaires on the following pages. Some will be continuously used for e.g. project meeting evaluation. Others have been implemented in executed project activities. For further activities new questionnaires will be created accordingly.

Von: vivian.harberts@gmail.com
An: harberts@uni-bremen.de
Betreff: Evaluation Questionnaire DEVISE4KE AB Meeting
Datum: Mittwoch, 30. Oktober 2024 13:24:40



Ich bitte Sie, ein Formular auszufüllen:

Evaluation Questionnaire DEVISE4KE AB Meeting

Please fill out this evaluation questionnaire. The information will be used to assess the structure and processes of our project and, if necessary, to identify indications for improvement. The analyses of the questionnaires will be presented and discussed during the next AB meeting.

[IN GOOGLE FORMULARE AUSFÜLLEN](#)

Powered by



[Eigenes Google-Formular erstellen](#)

Evaluation Questionnaire DEVISE4KE Online Meeting

Please fill out this evaluation questionnaire. The information will be used to assess the structure and processes of our project and, if necessary, to identify indications for improvement. The analyses of the questionnaires will be presented and discussed during the next partner meeting.

1. Project Performance

In the following, you find some statements on the project works that were carried out so far. You are kindly asked to indicate how strong you agree or disagree to the statements by marking the appropriate.

1. The project works are realizable within the given time frame.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

2. The project is on a good track and will achieve its goals.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

3. The project consortium is collaborating very good.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

4. The project progression is transparent.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

5. The project management & administration is implemented well.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

6. I am sufficiently involved in the project activities.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

2. Cooperation and communication within the project partnership

In the following some statements on the general structure of cooperation within our project are given. Please indicate how strongly you agree or disagree to the statements by marking the appropriate!

7. We all share a common understanding of what the project is about.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

8. We have a common understanding how to get things done.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

9. The roles within the project consortium are clear.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

10. Our consortium has developed rules and norms that guide our cooperation and social interaction in the team.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

11. The planned communication channels are sufficient to achieve excellent project results.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

12. The planned communication channels are sufficient to achieve excellent project results.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

13. Project partners maintain an open communication.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

14. The communication among the consortium is very good.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

15. There is a free sharing of information in the partnership.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

3. Responsibility and commitment

Please give your estimation of the project partners' responsibilities and commitment by indicating how strongly you agree or disagree to the statements below.

16. All members of the consortium put much effort in their tasks.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

17. There is a high level of accountability within the partnership.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

18. The partners are acknowledging skills and expertise of other team members.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

19. The partners' responsiveness is excellent.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

4. Feedback on the organization of the meeting

Please give feedback on the organization and management of the meeting by indicating how strongly you agree or disagree to the statements by marking the appropriate!

20. The meeting was well structured.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

21. The meeting addressed all necessary aspects that I needed for carrying out the project.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

22. The meeting provided enough opportunities to discuss and exchange ideas.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

23. The meeting prepared me well for the next steps of the project work.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

24. The agenda covered all relevant subjects.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

25. Information on travel and accommodation was appropriate.

Markieren Sie nur ein Oval.

1 2 3 4 5

I str I strongly agree

26. General Comments / Suggestions

Dieser Inhalt wurde nicht von Google erstellt und wird von Google auch nicht unterstützt.

Google

Von: vivian.harberts@gmail.com
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Betreff: Evaluation Questionnaire LWT Photovoltaics
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Evaluation Questionnaire LWT Photovoltaics

Assessment and evaluation are critical components of the Learning Work Task (LWT) for photovoltaic system installation training. They ensure that students have acquired the necessary theoretical knowledge, practical skills, and problem-solving abilities to successfully install, maintain, and troubleshoot photovoltaic (PV) systems in real-world settings

Execution of the LWT

In the following, you find some statements on the project works that were carried out so far. You are kindly asked to indicate how strong you agree or disagree to the statements by marking the appropriate.

How do you rate the structure of a LWT in subtasks

1 2 3 4 5

I strongly disagree

I strongly agree

Did the subtasks structure the LWT in an appropriate way?

1 2 3 4 5

I strongly disagree

I strongly agree

Was the information provided within the LWT clear and sufficient?

1 2 3 4 5

I strongly disagree

I strongly agree

Which aspects of the LWT/activities did you find most useful?

Do you think your knowledge about photovoltaic installation has increased by executing the LWT?

How would you rate your current knowledge about solar panels and their installation?

1 2 3 4 5

I strongly disagree

I strongly agree

What was/were your favourite subtasks?

Please share any additional comments or suggestions about the LWT/activities

General Comments / Suggestions



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DEVISE4KE

Empowering Sustainable Development of VET in Kenya Using Solar Energy and Low Energy Devices

Teacher Training Feedback Form

Presenters:

Day and Time:

Key: 5 = Strongly agree -----> 1 = Strongly disagree

Feedback Criteria	
Learning Objectives and Aims <ul style="list-style-type: none"> I learnt a lot of new things Information was clear, easy to follow Practical and useful to me 	✓ 5 4 3 2 1 ✓ 5 4 3 2 1 ✓ 5 4 3 2 1
Presentation <ul style="list-style-type: none"> Interesting/Engaging I could understand everything Logical flow of information Activities (if any) Resources were good (if any) 	✓ 5 4 3 2 1 5 ✓ 4 3 2 1 ✓ 5 4 3 2 1 ✓ 5 4 3 2 1 ✓ 5 4 3 2 1
Quality of Learning <ul style="list-style-type: none"> I enjoyed this session a lot Questions were answered well The presenter(s) was knowledgeable 	✓ 5 4 3 2 1 ✓ 5 4 3 2 1 ✓ 5 4 3 2 1
Things you liked <i>overall presentation</i>	
Things that could be improved <i>More time allocation</i>	
Any Additional Comments <i>Very interesting lesson</i>	