EduEnvi

External Quality Assurance Report

Project No 585761-EPP-1-2017-1-FI-EPPKACBHE-JP

Enhancing Competencies of Sustainable Waste Management in Russian and Kazakh HEIs

Funded by ERASMUS+ Programme of the European Commission

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Executive Summary

External Evaluation report aims to assess to what extent the ERASMUS+ project 'Enhancing Competencies of Sustainable Waste Management in Russian and Kazakh HEIs' ref number 585761-EPP-1-2017-1-FI-EPPKACBHE-JP (EduEnvi, in the future) achieved objectives set in workpackages scheduled for the second year of the project. The quality control and monitoring are performed based upon all available documentation (project proposal, LFM, reports & deliverables, web site information). The auditor has participated in the online annual project quality assurance meeting and discuss the project activities and its progress with representatives from the partner institutions. The independent external evaluation findings are presented against the project the Logical Framework Matrix and the project deliverables. The interim report outlines areas of good practise as well as recommendations for the further duration of the project.

The report was prepared in accordance with the Standards and guidelines for quality assurance in the European Higher Education Area (ESG)

Project description

The EduEnvi project has been designed to enhance the waste management of partner countries (Russia and Kazakhstan) by creating a training system for personnel in the field of waste management. The project aims to bridge the gap in an acute need for undergraduate and graduate-level programs in the field of sustainable waste management, which meet the modern requirements. In this regard, this project aims to develop online courses and training modules in the field of sustainable waste management in Russian and Kazakh universities by studying the best practices of the European experience. Preparation of high-quality personnel in the field of sustainable waste management will give the impetus to developing research in cooperation with the local businesses and creating innovative technologies to reuse the valuable components from waste and thus closing the resources loops and reduce forming of waste at their sources. Industry-university cooperation as part of education has been up till now a largely under-utilized area in both partner countries.

The innovative aspects of the project are found in greater utilisation of available ICT technologies of online and blended learning pedagogy. The project started before the COVID-19 pandemic. In the light of most recent trends in education the importance of the project can't be overestimated. The project focuses on the development of online training provision for sustainable waste management which will shape the society and economy for near future. The core of the project is closer university-industry cooperation in the development of the teaching and learning materials in the field of waste management and building capacity in partner universities for such cooperation by emulating the experience of the EU partners.

Quality Control and Monitoring of the project activities and results by internal and external mechanisms were realized continuously throughout the whole duration of the project and evaluated at several levels. The quality mechanism is divided into three major tasks: 1) Internal and external quality assurance and monitoring plan 2) Annual evaluation of the progress of the project by external experts to identify design flaws or missed opportunities. 3) Final evaluation of the developed curricula and online learning module syllabi by three external experts.

The **project-wide objective** is the Modernisation, accessibility and internationalisation of higher education in Physical sciences and Environmental protection in Kazakhstan and Russia.

Specific project objectives include:
- Enchancing the capacity of the academic staff through professional development
  o in the content area
  o pedagogy
  o utilisation of ICT
- Developing new learning modules/curricula using eLearning technologies and pedagogic approaches to implement the curricula by August 2020[1].

To achieve the set objectives the project undertakes the following activities:

WORKPACKAGE	DELIVERABLES/ACTIVITIES
PREPARATION	
1.1 Project Opening	1.1.1 Partnership agreements and staff conventions are signed 1.1.2 Setup of the project website and start the dissemination 1.1.3 Organize kick-off meeting to launch the project
PROJECT MANAGEMENT	
2.1 Management, communication and coordination	2.1.1 Project managerial group meetings/Minutes of the meetings 2.1.2 Country/region coordinators online meetings 2.1.3 Project reports 2.1.4 Model of the monitoring report 2.1.5 Project management meetings/ Minutes of the meetings 2.1.6 Final management meeting of the project
DEVELOPMENT	
3.1 Start of the curriculum design and accreditation process	3.1.1 Two-day workshop for improving the competences of academic staff and starting the design and accreditation processes
3.2 Curriculum/ Module Designing	3.2.1 Competence workshops for working life representatives and academic staff 3.2.2 Report of the completed needs analysis 3.2.3 Workshop on curriculum/module design, structure and quality assurance, ITMO 3.2.4 Detailed description of Curriculum/Module Designs 3.2.5 Competence development in Professional English in Sustainable Waste Management through an online course 3.2.6 Setup of the eLearning and laboratory infrastructure 3.2.7 Minutes of online meetings for monitoring the WP progress
3.3 Accreditation of the curriculum/modules	3.3.1 Introduction of the curricula to company experts, rectors of Partner Universities and Ministry of Education of Kazakhstan. 3.3.2 Written proposals of the curricula for the accreditors 3.3.3 Minutes of meetings with the openedu.ru (Russia) and moocs.kz (Kazakhstan) stakeholders for the integration of the study modules into these platforms

4.1 Content planning and Teacher continuous training	4.1.1 Online meetings for monitoring the WP progress
	4.1.2 Information session for the use of electronic media
	4.1.3 1st Intensive Teacher Training and Curriculum Content Planning Workshop
	4.1.4 2nd Intensive Teacher Training and Curriculum Content Planning Workshop
	4.1.5 3rd Intensive Teacher Training and Curriculum Content Planning Workshop
	4.1.6 Communication and Discussion in social media
	4.1.7 Descriptions for Curriculum / Learning Module contents
5.1 New Pedagogies, introduction and training	5.1.1 Training session online for collection best practices
	5.1.2 Intensive Training Workshop on Learning Innovation and Entrepreneurship through University-Industry cooperation for teachers.
	5.1.3 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Kazakhstan.
	5.1.4 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Russia.
	5.1.5 Plan for how innovation and entrepreneurship will be present in the implementation and contents of the learning modules.
	5.1.6 Online meetings for monitoring the WP progress
6.1 eLearning pedagogy and tools	6.1.1 Resource blog: Online discussion and sharing existing good practices online and in social media
	6.1.2 Web-conference: identifying the ICT-based tools needed in building the learning module to bring added value to learning
	6.1.3 Intensive workshop: Pedagogical affordances and technical skills of using ICT-based learning tools in learning and teaching
	6.1.4 Completed plans for the learning modules and/or curricula
	6.1.5 Online meetings for monitoring the WP progress
DISSEMINATION AND EXPLOITATION	
7.1 Execution of the pilot in all partner HEIs	7.1.1 Piloting learning modules in partner HEIs
7.2 Analysis of the pilot and further development of learning modules	7.2.1 Analysis and report of student and teacher surveys concerning the piloted learning modules
	7.2.2 Finalized online modules on sustainable waste management ready for use
	7.2.3 Closing and evaluation meeting of the WP in Almaty
	7.2.4 Information sessions, demonstrations and training sessions for stakeholders
	7.2.5 Minutes of online meetings for monitoring the WP progress
QUALITY PLAN	
8.1 Quality assurance	8.1.1 Creation and refinement of the Quality Plan
	8.1.2 Minutes of the online meetings for monitoring the WP progress
	8.1.3 Yearly Quality Assurance Meetings and online meetings
8.2 External evaluation	8.2.1 Yearly external expert evaluation
	8.2.2 Curriculum Evaluation by External Experts and Direct and Indirect Beneficiaries
DISSEMINATION AND EXPLOITATION	

9.1 Project Dissemination	9.1.1 Refinement and completing of the Dissemination and exploitation plan during Kick-off meeting
	9.1.2 Website and social media updates
	9.1.3 Outreach articles
	9.1.4 Project national information days, workshops and webinar
	9.1.5 Conference presentations, Conference proceedings published
	9.1.6 Dissemination of project final results in an International Conference in Shymkent (SKSU)
	9.1.7 Online meetings for monitoring the WP progress

External Evaluation Methodology

Evaluation of project quality is grounded in the Project Management Institute methodology of project quality management. The focus of the external evaluation is to establish to what extent EduEnvi project produced the deliverables set in the project application and its documents.

In order to carry out the External Evaluation, the author was given full access to all relevant external and internal documents. Starting from the original documentation eg. project proposal, the Logical Framework Matrix-LFM, available documentation included reports & deliverables, internal quality control and monitoring reports for work packages, intermediate report. Due to the travel restriction and national lockdowns face-to-face communication and site visits were not possible to assess in person progress made by the participating institutions. The author also was given access to the piloted modules available via MOOC platform in Kazakhstan.

The methodology starts with a project overview and analyses of planned and achieved deliverables, and cross-matching with the LFM to define to which extent the quality of results meet the plan according to the available indicators.

Evidence, analysis and findings

General findings

The project theme is of the highest importance in face of environmental challenges facing today's society and there is no doubt that this is a worthy project. After careful examination of the project proposal and accompanied documents it is clear that the project was carefully planned and the team was aware of possible obstacles and risks. The project's wide and specific objectives are well defined, however, they could expand the number of academic staff involved in professional development and scope of the project and look at the broader societal implication of the project.

Project documents outline the project management process without naming the project management board and quality management board, each workpackage is assigned a lead organisation and responsible personnel. In addition to project management meeting each workpackage included online meetings to monitor the progress of a particular workpackage.

During the first project Kick-off meeting, all partners further discussed the project objectives and approved the quality and dissemination strategy. The partnership agreement has been signed.

Development workpackages produced results in various forms: reports, staff training, teaching and learning resources. All deliverables are harmonized with the proposal and LFM.

The vast majority of the development workpackages (3.1-6.1) were practically oriented and focused on enhancing the competencies of the academic staff in designing T&L resources as well as utilising modern pedagogy and technology in the delivery of eLearning courses. They produced the outcomes aligned with the proposed LFM including a comprehensive competence framework, detailed modules and courses descriptors as well as accreditation of the curriculum on institutional and national levels. The emphasis on university-industry collaboration in curricular development and involvement of the industry experts in the curricular evaluation deserves special praise.

The piloting of online modules in Russia and Kazakhstan as well as analysing the results of the pilots contributed to the exploitation of the project and are fully in line with the proposed project outcomes.

The sufficient number of dissemination activities is highly evident. However, the activities of different partner universities are uneven; some universities, such as ITMO, reported a wide and diverse range of activities, while others have had very limited dissemination activities or didn't report them to the project/workpackage management team.

Overall the project activities are completed on time outlined in the project proposal with some minor deviation from the agreed schedule. Due to the COVID-19 pandemic, activities planned for the third year of the project have been postponed with agreement from the ERASMUS+ office.

Indicators of Progress

The progress of completion of each workpackage is documented in the midterm reports with a very clear indication of all activities/deliverable and supporting evidence. A detailed table of the project deliverables and supporting evidence is presented in Appendix 1.

WP1. Project Opening

This package is established to set the ground for the forthcoming actions. Within the framework of this meeting, the partnership agreement has been signed, and the kick-off meeting took place. In the course of the kick-off meeting, the partner universities further discussed their roles and responsibilities, approved dissemination and quality strategy.

Appropriate deliverables are documented and available in the project GDrive. Deliverables are fully aligned with the project proposal.

WP2. Project Management

The focus of this workpackage is to ensure that the project is run smoothly and completed successfully in time and on budget. TAMK is a lead university that oversee the project implementation. The project management team consisted of the project coordinator, local project coordinators and a representative from each. The international office at TAMK is responsible for administrative tasks and resource allocation (finance).

As a part of the workpackage, the project management group held annual face-to-face meetings and six-month online project review meetings. To support the project management team, regional coordinators organised online meetings to monitor progress and resolve any issues. According to the EACEA and terms of the ERASMUS+ grant, TAMK is responsible for the preparation and submission of the interim progress reports.

A review of the appropriate deliverables confirmed that they are correctly documented and available in the project GDrive. Deliverables are fully aligned with the project proposal. It is worth noticing that the project management team adopted online project management tools such as Trello.

WP3. Curriculum design and accreditation

This is one of four workpackages in the DEVELOPMENT and it concerns with enhancing academic staff competencies in eLearning curriculum design and consequent development of physical infrastructure for the delivery of online Masters-level modules and courses.

As a part of the workpackage, three separate professional development workshops were organised for academic staff to improve knowledge and skills in curricula design, quality assurance and competence framework. As a result, a comprehensive competence was developed that guided the further curricula development.

The competence framework and draft module descriptors were grounded in a thorough need analysis which was performed as a part of the workpackage. In accordance with quality assurance practice, the draft module descriptors were reviewed by academic staff and industry experts before the beginning of the accreditation process.

Another aspect of the enhancing capacity of the academic staff is competence development in English. Project documents provide comprehensive evidence of the progress of the English training through participants' feedback and observation as well as a video recording of the achievements.

In addition to developing competencies of academic staff, the project set to enhance the physical infrastructure by creating eLearning laboratories in the participating universities. Unfortunately, due to COVID-19 pandemic and travel restriction, on-site visits were not possible. Nonetheless, there are photographic evidence of completed work at ITMO and KazNU (Appendix2).

The deliverables documented in workshop programmes and PowerPoint presentation of training materials, draft competence framework and draft module descriptors/specifications, video recording of participants progress with English language skills, photographic evidence of complete work on eLearning laboratories.

WP 4. Sustainable Waste Management Curriculum Content Planning and Teacher Training

This is a second development workpackage and it moves from curricular development to the planning and developing module content based on the experience of leading European institutions. During WP4 academic staff from participating universities were given an opportunity to visit their European partners and participate in technical visits to research laboratories, waste management plants. They also were able to learn more about project-based learning, new software, etc. In addition to strengthening academic capacity, the competence framework developing within WP3 was revised and finalised.

To formalise and structure the exchange of best practice between all partners, the project team has created a resource blog. In the course of the executing project to rationalise the activities the resourse blog (activity 4.1.6) merged with resource blog (6.1.1). The resource blog wasn't used to its full capacity, possibly due to the cultural differences and lack of experience with blogging.

All deliverables of this workpackage are well documented. The evidence include outlines of training workshops, PowerPoint presentations of the training materials, revised competencies framework and detailed module and course curriculum. The content and the outcomes of the workpackage fully correspond to the project proposal.

WP5 Learning Innovation and Entrepreneurship through University-Industry cooperation

This is the third development workpackage and it feeds into activities in WP3. It aims on enhancing academic staff capacity in embedding innovation and entrepreneurship into the proposed curricular. Similarly to the WP4, WP5 adopted a very practical and hands-on approach allowing the participants from Russia and Kazakhstan to gain knowledge about innovation, entrepreneurship, university-industry cooperation, and problem-based learning as well as develop skills on how to embed innovation and entrepreneurship into the subject-specific curriculum.

According to the project proposal, each university is expected to summarise lessons learned during WP5 and how they were integrated into the curriculum and publish it on the intranet of the project. As a part of the workpackage, an intensive workshop was organised at Lillebaelt Academy University of Applied Science as well as further staff development programmes in partner universities. During this workshop participants discussed how the innovation and university-industry cooperation were taken into account in the module plans.

The deliverables on professional development activities are well documented in training outlines, PowerPoint presentations and participants evaluation. Overall, the deliverables at large aligned with the project proposal.

WP6. eLearning Pedagogies and Tools

This is the fourth and final development workpackage. It aims at developing academic staff knowledge and skills in the application of ICT tools and technique to create a stimulating and engaging eLearning environment. The focus of the WP6 is pedagogical aspects of virtual learning. The activities in this workpackage include developing a resource blog to share institutional practices in online learning, two online training workshops. The workpackage resulted in finalising the online curricular.

The resource blog, https://nowastedu.blogspot.com/, was created in the early stages of the project and developed during the life span of the project. The resource blog contains some useful information. Potentially if could be used even better. A snapshot of the blog page is found in Appendix 3.

Training workshops are well documented. The video recording of the webinar is available in the project GDrive.

The project team has developed solid content for set modules and courses mapping the learning outcomes and the competencies. The syllabi include the detailed outline of the weekly courses contain and recommended reading. As a part of the workpackage, a harmonized handbook of the full curricular was developed and available to view online

https://read.bookcreator.com/uxKY9EeTOFWdCpw7LiDlSqXN90o1/2kV_OgiIRxmLB2nK3js8ig

Although a review of the curricula is outside of the scope of the project quality audit, the author was able to access the course "Basics of ecological biotechnology". I was very impressed with the visuals and a brief outline of the lectures.

All the activities fully correspond to the project proposal and its LFM.

WP7 Piloting

The exploitation of the outcomes created in WB3-6 has culminated in the piloting of the curriculum in Russia and Kazakhstan. The workpackage included not only the piloting of the modules but also the analysis of the result and incorporating lessons learned into the final module design.

Between September and December 2019 partner university in Russia and Kazakhstan piloted modules and coursed developed within WP3. According to the project proposal, at least 120 students were expected to participate in the pilot, the actual number of students reached 147.

The overall analysis of the Pilot is available on the project website

https://eduenvi.tamk.fi/activities/piloting-new-curricula-and-learning-modules/

In addition to general analysis, the participating partners presented the outcomes of the pilot and the lessons learned as well as strengths and weaknesses in the curriculum. Students complemented modules for their practical orientation, focus on critical and analytical thinking, ability to learn on their own time. At the same time provision of the modules in English restricts student engagement. The use of online learning and technical issues also were named as impediments to the courses.

The project team has to be commended for collecting feedback not only from the students but also from tutors and industry representatives.

Due to the COVID-19 pandemic, the final closing and evaluation meeting was postponed. At the time of writing this report, there are no formal documents to confirm deliverables for this activity. However, evaluation documents from partner universities provide a solid foundation to confirm that

the results of the pilots were thoroughly reviewed and, based on the reviews, the module documents (module specifications, content and pedagogical notes) were finalised.

WP8 Quality Assurance and Monitoring

The purpose of this workpackage is to ensure that the project deliverables are completed to high standards and on time. As a part of this package during the kick-off meeting, the project team has approved the quality management strategy. The quality strategy outlines the key project milestones and indicators to measure the outcomes of specific project activities.

Activities in this workpackage included internal quality assurance, external project quality audit and external evaluation of the curriculum.

The internal quality assurance included a quarterly survey of the partner universities. The quarterly surveys are based on a very small sample and the quantitative evaluation of data wasn't particularly representative. In coincide, a more qualitative approach to quality evaluation would be more appropriate. Later in the project, the project team started using Trello to record the project deliverables. The quality management team had to be more forceful ensuing that lead institutions uploaded all necessary documentation to the online platform.

The project activities included multiple training activities and it would be useful to have more detailed feedback and a more systematic analysis of the feedback to draw lessons both for this project and future projects.

In a course of executing WP4 an attempt was made to use a traffic light system to highlight issues emerging in the project. The project team was advised to extend the application of the traffic light system across all project activities. Unfortunately, this advice wasn't adopted.

At the time of writing this report, an external evaluation of the curriculum wasn't available.

This report constitutes the third and final quality audit report. The detailed findings of the annual reports as well as recommendations were presented in person and online to the project team.

Overall the deliverables of the WP8 are appropriately documented and meet the objectives set in the project proposal.

WP9 Dissemination and Exploitation

This workpackage aims to disseminate the information about the project and its outcomes to a wide range of stakeholders. It also focuses on the integration of the project outcomes (designed module and courses) into existing curricular to ensure the sustainability of the project.

The workpackage included a variety of activities spanning from creating a project webpage to presenting the project information and its outcomes to Ministries of Education in Russia and Kazakhstan.

The project has a single website hosted by TAMK; TAMK is also maintaining a presence in social media. However, this presence is limited to Facebook. According to the project proposal, the project team is expected to develop a set of videos for YouTube. There are only two videos by SKSU and KazNU. Not all partner universities in Russia and Kazakhstan created the Project pages on their own universities websites; the quality of the content varies from university to university. Providing potential students are one of the target groups for dissemination, it would be useful to link the project and information for prospective students on the university web pages.

The project set an ambitious task to involved as much as possible representatives of the private sector by involving the local private companies and authorities in training activities (WP5). The project document confirmed that this objective has been achieved by site visits during Competence workshops in Russia and Kazakhstan.

More traditional dissemination activities included outreach articles and activities, project national days, workshops and webinars, and conference presentations. Generally, the deliverables are fairly well documented. However, the level of engagement in the dissemination activities and reporting varies from institution to institution. COVID-19 pandemic limited the impact of some of the dissemination activities that had to be moved to the online format.

Overall the review of the deliverables can confirm that they are documented and aligned with the project proposal.

Features of good practice, demonstrated by the institutions

COVID-19 pandemic and accelerated transition to online, blended and hybrid learning magnified the importance of the EduEnvi project.

From its inception, the project emphasised practical aspects in curriculum development, greater involvement and collaboration with industry and application of experiential pedagogy.

The project is managed in an effective manner ensuring the project activities are completed in time and to a good standard. Overall the project is on track without any significant deviation from the project work plan.

Despite the pressure, and impact of the COVID-19 pandemic the project team maintains a great team spirit and thrive to make the project a success.

Conclusions

This is a project, with the theme of the highest importance. To the date of the annual evaluation, most of the development workpackages were completed. Based on the discussion with the participants and the review of the project documentation, all activities were completed to good or excellent standards. The quality of the project doesn't present any concern.

As a result of project activities, wider and specific project objectives are achieved.

Wider Objective: Modernisation, accessibility and internationalisation of higher education in Physical sciences and Environmental protection in Kazakhstan and Russia

Project Outcomes:

- A comprehensive competence framework of modules and courses based on the need analysis, which was further developed into detailed module specification documents/ module descriptors, and online handbook of the full curriculum.
- Eight accredited Masters-level modules are developed ready to be integrated into existing curricular.

Specific Project Objective: develop capacity in Russian and Kazakh HEIs to improve Sustainable Waste Management education through 1) training of the academic staff in the content area and modern pedagogy 2) building new learning modules/curricula using eLearning technologies and pedagogic approaches to implement the curricular.

Project Outcomes:

- Enhanced academic staff capacity via extensive workshops, internal conferences, and webinar for the academic staff aimed at enhancing their capacity in designing online curricular, developing module-specific content, incorporating innovation and entrepreneurship through university-industry collaboration, and integrating ICT tools in eLearning pedagogy.
- Enhanced institutional capacity via eLearning physical infrastructure in the partner universities enabling the provision of online learning via national MOOC platforms (WP3.3.3).

Appendices

Appendix 1. Indicator of Progress

DELIVERABLES	TYPE OF DELIVERABLES	Evidence
PREPARATION		
1.1.1 Partnership agreements and staff conventions are signed	Report	Signed partnership agreement
1.1.2 Setup of the project website and start the dissemination	Service/ Product	Project website
1.1.3 Organize kick-off meeting to launch the project	Event/ Report	Minutes and Programme of the kick-off meeting
MANAGEMENT		
2.1.1 Project managerial group meetings/Minutes of the meetings	Event/ Report	Minutes of the managerial group meeting
2.1.2 Country/region coordinators online meetings	Event/ Report	Minutes of country/region coordinators online meeting
2.1.3 Project reports	Report	Interim Reports and Responses to EC monitoring comments
2.1.4 Model of the monitoring report	Report	E-form
2.1.5 Project management meetings/ Minutes of the meetings	Event/Report	Minutes of the managerial group meeting; Attendance of the meetings
2.1.6 Final management meeting of the project	Report	Final Reporting documents
DEVELOPMENT		
3.1.1 Two-day workshop for improving the competences of academic staff and starting the design and accreditation processes	Event/Report	Workshop programmes from all participating institutions
3.2.1 Competence workshops for working life representatives and academic staff	Event/Report	Competence framework detailed by modules and courses
3.2.2 Report of the completed needs analysis	Report	Comprehensive Needs Analysis Report

3.2.3 Workshop on curriculum/module design, structure and quality assurance, ITMO	Event/ Report	PowerPoint Presentation on Curriculum and accreditation
3.2.4 Detailed description of Curriculum/Module Designs	Service/ Product	Module descriptors; Outline of the online course production
3.2.5 Competence development in Professional English in Sustainable Waste Management through an online course	Event	Participants' video recording and training evaluation
3.2.6 Setup of the eLearning and laboratory infrastructure	Event/ Service/ Product	Reports on acquired resources; photo evidence of equipped eLearning labs
3.2.7 Minutes of online meetings for monitoring the WP progress	Event/Report	Minutes of online meetings
3.3.1 Introduction of the curricula to company experts, rectors of Partner Universities and Ministry of Education of Kazakhstan.	Event	Peer reviews on the module documents
3.3.2 Written proposals of the curricula for the accreditors	Service/ Product	List of accredited modules and course on an institutional level
3.3.3 Minutes of meetings with the openedu.ru (Russia) and moocs.kz (Kazakhstan) stakeholders for the integration of the study modules into these platforms	Event	Minutes of meeting with representatives of the opened.ru
4.1.1 Online meetings for monitoring the WP progress	Event/Report	Minutes of one meeting
4.1.2 Information session for the use of electronic media	Event	Part of Kick-off Meeting documentation
4.1.3 1st Intensive Teacher Training and Curriculum Content Planning Workshop	Event/Report	Outline of training in Tymen; Finalised Competencies framework
4.1.4 2nd Intensive Teacher Training and Curriculum Content Planning Workshop	Event/Report	Outline of the training in Shymkent
4.1.5 3rd Intensive Teacher Training and Curriculum Content Planning Workshop	Event/Report	PowerPoint Presentations from training at UOV
4.1.6 Communication and Discussion in social media	Blog	Online Blog + Trello platform for sharing ideas and practices

4.1.7 Descriptions for Curriculum / Learning Module contents	Product/Service	Detailed module and course curriculum
5.1.1 Training session online for collection best practices	Service/Product	Resources on how to collect best practices
5.1.2 Intensive Training Workshop on Learning Innovation and Entrepreneurship through University - Industry cooperation for teachers.	Event/Report	Programme and Powerpoint Presentations on training at EAL
5.1.3 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Kazakhstan.	Event/Report	Training outline; PowerPoint Presentation and limited reflection on lessons learnt
5.1.4 Training Workshop for teachers on integrating ICT-based innovation and entrepreneurship practices into learning modules in Russia.	Event/Report	Training outline; PowerPoint Presentation and limited reflection on lessons learnt
5.1.5 Plan for how innovation and entrepreneurship will be present in the implementation and contents of the learning modules.	Report	PowerPoint presentation on inclusion of innovation and intreprenereurship into curricular with reference to specific learning modules
5.1.6 Online meetings for monitoring the WP progres		Minutes of the meetings
6.1.1 Resource blog: Online discussion and sharing existing good practices online and in social media	Training Material/Service/Product	https://nowastedu.blogspot.com/p/blog-page.html - underutilised
6.1.2 Web-conference: identifying the ICT-based tools needed in building the learning module to bring added value to learning	Event	Took place offline as a part of the Kick-off meeting
6.1.3 Intensive workshop: Pedagogical affordances and technical skills of using ICT-based learning tools in learning and teaching	Event	Video recording of the webinar
6.1.4 Completed plans for the learning modules and/or curricula	Report	Handbook of the full curricular
6.1.5 Online meetings for monitoring the WP progress	Event	Minutes of the meetings
DISSEMINATION AND EXPLOITATION		

7.1.1 Piloting learning modules in partner HEIs	Service/ Product	Link to the online courses in Russia and Kazakhstan
7.2.1 Analysis and report of student and teacher surveys concerning the piloted learning modules	Report	Report based on the survey of students and tutors
7.2.2 Finalized online modules on sustainable waste management ready for use	Report/ Service	Final module/course curriculum
7.2.3 Closing and evaluation meeting of the WP in Almaty	Event/Report	Minutes of the meetings
7.2.4 Information sessions, demonstrations and training sessions for stakeholders	Event	Feedback/Approval letters from the national department of education; feedback from industry experts
7.2.5 Minutes of online meetings for monitoring the WP progress	Event	Minutes of the meetings
QUALITY PLAN		
8.1.1 Creation and refinement of the Quality Plan	Event/Report	Project Quality Strategy
8.1.2 Minutes of the online meetings for monitoring the WP progress	Event/Report	Minutes of online Quality Meeting
8.1.3 Yearly Quality Assurance Meetings and online meetings	Event/Report	Quarterly Project Quality Reports; Minutes of quality assurance meeting; quality assurance survey
8.2.1 Yearly external expert evaluation		Interim/Annual external expert quality assurance report
8.2.2 Curriculum Evaluation by External Experts and Direct and Indirect Beneficiaries		TBC
9.1.1 Refinement and completing of the Dissemination and exploitation plan during Kick-off meeting	Report	Dissemination plan
9.1.2 Website and social media updates	Service/Prod uct	Project Website and Project webpages at the institutional level
9.1.3 Outreach articles	Service/Prod uct	Documents on dissemination activities from the participating institutions
9.1.4 Project national information days, workshops and webinar	Event	PowerPoint presentations
9.1.5 Conference presentations, Conference proceedings published	Event	Documents on dissemination activities from the participating institutions

9.1.6 Dissemination of project final results in an International Conference in Shymkent (SKSU)	Event	Photos from the conference
9.1.7 Online meetings for monitoring the WP progress		Minutes of the meetings

Appendix 2 eLearning Labs
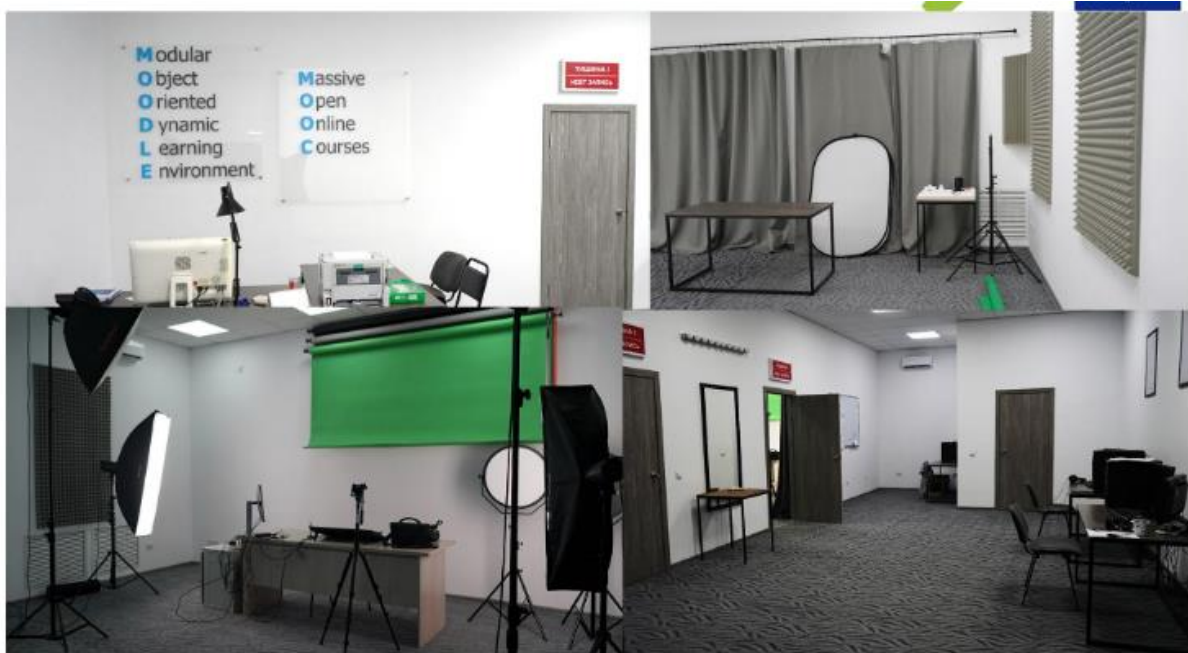
Figure 1 KazNU

Figure 2 ITMO

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Appendix 3 Project Resource Blog

Figure 3 Snapshot of the EduEnvi resource blog