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ERASMUS + Capacity Building in Higher Education (CBHE)

Project 618835-EPP-1-2020-1-KZ-EPPKA2-TsBTE-SP

# *Implementation of the dual system in Kazakhstan / KAZDUAL*

## *EXTERNAL EVALUATION FINAL REPORT*

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## 1. INTRODUCTION

The present report is an integrative part of the continuous monitoring of the Erasmus+ Capacity Building project for Higher Education coordinated by South Kazakh University after Auezov (SKU). This report has to be seen as a part of the quality assurance process which is highly recommended by the EACEA. The present report can be seen as complementary to the final report submitted by the project coordinator where formative and summative assessments are provided. Feedback on the recommendations offered during the preparation of the intermediate report are taken into consideration.

The External Evaluation Final Report (EEFR) was prepared by Carlos Machado, PhD representing CM Consulting, the company contracted through a tendering procedure to provide the external evaluation of the KAZDUAL project (available at [www.kazdual.kz](http://www.kazdual.kz)). The EEFR is a document that reflects the outcomes of the external evaluation, and it was elaborated as part of the WP4: Quality control & evaluation Work Package. The activities leading to building the EEFR were concluded in January 2024, following the final event organized at KazNPU, 5-7 december , 2023. The EEFR evaluates the different aspects (outputs, activities, among others) of the KAZDUAL project that were undertaken from December 2022 to December 2023.

The present report focuses on project documentation and feedback from stakeholders, mapping the existing processes identified during the implementation phase until the intermediate report. The data obtained provides a qualitative and quantitative approach that embraces both formal and informal elements obtained through questionnaires and interviews with main actors involved in the project. The evaluation used the following data-collection methods to assess the results and outcomes of the work of the project: (a) Desk review and secondary data-collection analysis of project documentation, the project document, annual progress reports, workshop and meeting reports and evaluation surveys and other project documentation, such as project presentations, institutional reports, consolidated reports and the project web page; b) Semi-structured interviews were used to validate and confirm information and findings from the internal surveys and desk reviews.

The following sections examine the progress and quality of the WPs, risk assessment of the project, strengths and weaknesses and addresses important issues for the final stages of the project with subsequent recommendations.

In addition to this introduction, the EEFR includes the following elements:

**Methodology:** the report offers an explanation about the methodology used for conducting the external evaluation process;

**Analysis:** this report presents the analysis of the information gathered through the data collection process as part of the external evaluation, using a set of criteria;

**Lessons Learned:** the report provides findings from both the mid-term evaluation and final evaluation. The lessons learned aim to provide important considerations for the partners in KAZDUAL and contribute to the improvement of accountability and transparency; feedback from participants and conduct a workshop to assess project outcomes.

## **2. ASSESSMENT OF KAZDUAL ACCORDING TO 5 DAC CRITERIA**

"KAZDUAL - Implementing dual system in Kazakhstan " is a three-year project co-financed by the Capacity building in HE (Erasmus +) program. As a structural project, based on a multi-stakeholder partnership between higher education institutions from the EU and Kazakhstan, the project started in January 2021 and will end in January 2024. The project's overall goal is to enhance the competencies of higher education graduates in Kazakhstan through pilot programs under the dual system following the needs of employers so that universities increase the employability of graduates' employability and improve cooperation with the private sector. Higher education institutions from 4 (four) countries participate as partners in the project: Kazakhstan, Germany, Estonia, and Austria; 2 VET organizations from Kazakhstan, 3 Accreditation Agencies and Network for QA from Kazakhstan, Germany and the Ministry of Education and Science of Kazakhstan. The specific target groups of the project are academic staff/teachers/HE, QA accreditation reviewers/technicians/curriculum developers and students.

The project aims to adapt the dual system in Kazakhstan, which will increase the competence of students following the needs of employers, increase the employability of graduates and strengthen cooperation with the private sector.

The main tasks and objectives of the project that need to be solved to achieve the overall goal are:

1. Propose changes to the legislation/regulations for adapting dual education in Kazakhstan.
2. Provide students with the opportunity to acquire more up-to-date knowledge and skills by combining formal education with on-the-job training.
3. Develop a dual higher education system model that supports the different needs and interests of employers, higher education institutions and students in various industries, and provide recommendations to higher education institutions on the implementation of dual education.
4. Synchronize vocational college programs with post-secondary entry requirements.
5. To increase the motivation of students to study and the interest of universities and companies in supporting and implementing dual education, as well as to reduce student dropout.
6. Establish links and a research centre - the Observatory of Dual Education and Training.

The purpose of the present assessment is to offer a final assessment on project implementation using 5 DAC criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability). It aims to determine the relevance and level of achievement of project objectives, development effectiveness and efficiency and impact by the end of the project as well as the support for sustainability of the project in the medium-long term. The scope of the external evaluation is exclusively associated with the KAZDUAL project and affects all partners belonging to the project consortium and other stakeholders participating in the project. It covers only the organizational, administrative, and managerial aspects of the project. Although the use of resources included in efficiency cover financial issues, the eligibility and validity of them is covered by the financial audit. The summative external evaluation is a tool to assess whether recommendations have been taken place, whether

activities and deliverables have been fully completed and whether good practices have been identified.

For programs like Erasmus+ for capacity building it is useful to consider the OECD framework called DAC (Development Assistance Committee) criteria, as laid out in the DAC Principles for Evaluation of Development Assistance. Evaluation is very difficult unless the objectives which the evaluated project/program have been clearly defined and the project agreements and operational plans and arrangements for obtaining relevant baseline data had been made. To what extent were the original objectives achieved? Or are likely to be achieved? What were the major factors influencing the achievement or non-achievement of objectives? Should objectives not have been stated clearly enough to allow for an evaluation of goal achievement, an assessment of impact and effects of the activities undertaken should still be attempted.

The EEFR was developed by analysing information gathered from desk research, participation in project management meetings and project final meeting, project closure and satisfaction survey, physical visits to labs, and e-mail questionnaire. The EEFR is further based on the 5 OECD DAC criteria as stated in the Service Contract, and also referred to below.

Table 1. Key external evaluation criteria

<b>Criteria</b>	<b>Focus of evaluation</b>
<b>Relevance</b>	The consistency and validity of the project activities and outputs against the initially proposed objectives.
<b>Effectiveness</b>	Measuring the success rate of project results and outputs against the initially proposed objectives.
<b>Efficiency</b>	Measuring the resource used both from economic and time perspectives in the project activities to achieve the project objectives
<b>Impact</b>	Examination of the changes produced by the project. The changes could be positive or negative, direct or indirect, intended or unintended.
<b>Sustainability</b>	Measuring to what extent will the benefits of a project continue after the project closure and funding has been withdrawn.

The participation in the final conference at Abai Kazakh National Pedagogic University served to collect information needed for the final assessment.

Contrary to the intermediate report, through this ex-post assessment, instead of looking at the implementation of the Work Packages individually, we prioritize the 5 DAC criteria which helps to offer an overall overview of the project at large.

## 2.1. RELEVANCE OF KAZDUAL PROJECT

According to the current definition of the criteria provided at the OECD/DAC (2006) website, relevance refers to the extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, global priorities and partners' and donors' priorities. Relevance may also become a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances. In our case, we are interested to find out to what extent are the objectives of the program supported.

Under relevance, especially the following aspects were analysed within the external evaluation:

Modernization of higher education

Cross-cutting issues (e.g. gender balance)

Management of the action

It is worth remembering that Erasmus+ CBHE program attempts to promote institutional cooperation involving the European Union and Partner Countries while focusing on the reform and modernisation of higher education systems in the Partner Countries, for our case in Central Asia and more particularly in Kazakhstan.

1.1 Modernisation of higher education. On the one hand, the relevance of the project has to be seen in relation with the endorsement of the Erasmus+ guideline goals and priorities for capacity building programs. The project is aligned to national educational policies addressed directly by the Ministry of Education and Science of Kazakhstan (MESK) where its national education authorities aim to have an efficient dual education and professional system. Recent approval of the framework for professional educational and teacher standards emphasizes this goal. The project covers two categories of activities for structural projects which is relevant for the Erasmus+ program:

- Modernizing the policies and management of higher, vocational education systems;
- strengthening the link between the higher, vocational education system and the broader economic and social environment

The dual education system in Kazakhstan is of great importance in solving the problem of youth unemployment.

Dual education assumes that the student, receiving theoretical knowledge at a university or college, has the opportunity to gain practical skills in real production. This approach benefits all parties: students not only understand how to apply what they have learned, but also have a real chance of employment in the company where they were trained. Business managers, in turn, can hire new employees with qualifications and experience

in their enterprise. It also allows educational institutions to reduce equipment costs and produce qualified professionals, which increases the competitiveness of universities and colleges. It also allows educational institutions to reduce equipment costs and produce qualified professionals, which increases the competitiveness of universities and colleges. However, despite the introduction of a dual education system, its scaling and significant development in Kazakhstan did not take place. It is important to continue to work on this system to ensure a better future for the youth and the country's economy.

1.2 If on the one hand KAZDUAL' s c o n t r i b u t i o n s c a n b e s e relevance improving teaching material for professional developing setting standards for electric power engineering, heat power engineering, technician-electrician and thermal professional education as well primary education with ICT, on the other hand, the project also supports cross-cutting issues like gender equality. A gender balance has been observed in the implementation of the project. A majority of coordinators were female as well as participants in different activities of the project (approximately 75%).

1.3 Management. Overall speaking there was a high degree of satisfaction among the consortium. The project experienced some internal management issues during the first half of the project which were subsequently corrected. It seems that the coordinating team and partner institutions have worked very well together, particularly in the third year of the project. There is also an overall satisfaction with the contribution of EU partners, notably the coordinator. It was noted that despite the disruption of the Pandemic, partners could cooperate via the Zoom and google docs and despite certain delays complete the work expected. It was also felt that not all Kazakh partners functioned at the same level and there was some variability in their contributions and impact. Fortunately, this has been corrected after the intermediate report and during the third year.

Certain aspects like understanding guidelines and procedures and definition of action plans caused some disruption in the consortium. According to some participants the organization of some training and guidance on financial documentation regarding the implementation of EU procedures was needed.

Some of the observations from desk research is that there is an alignment of the content of the project outputs produced with the initially proposed objectives.

- Alignment of the content of the project outputs produced with the needs that the project aims to solve with important participation of the MESK and IQAA;
- The right target groups are addressed by the project activities and outputs.
- The project reinforces the objectives and priorities of the Erasmus+ program.

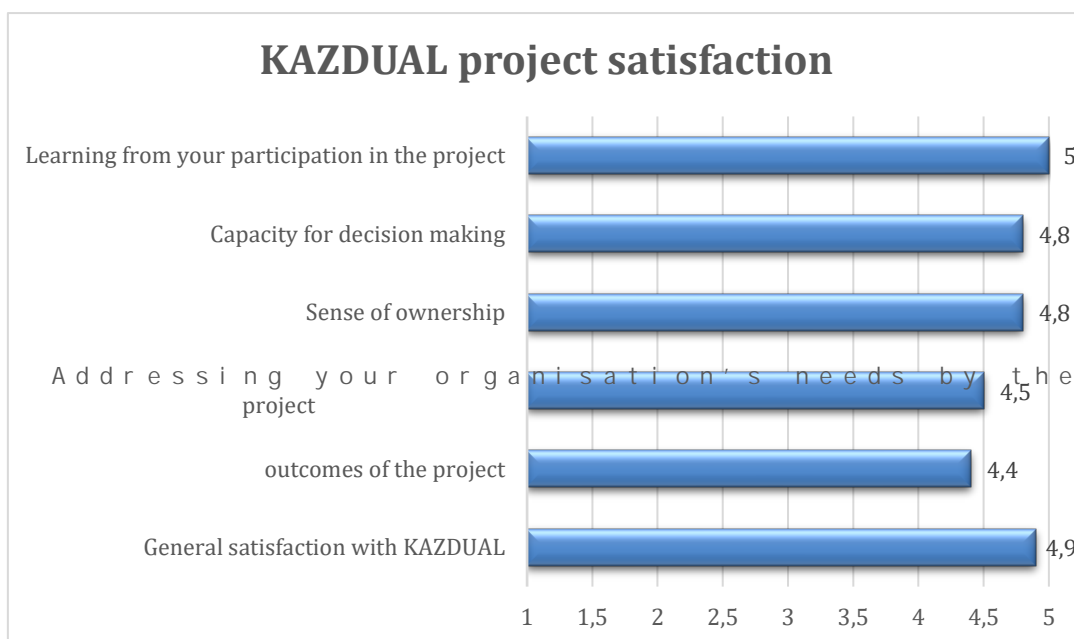
The lessons learned were the following:

- Cultural difference in time, management and information procedures mitigated by goodwill by partner members.

- Although WhatsApp group was most effective informal way of communication, formal communication was done through zoom sessions. Email was also relevant source for information. Google drive was available as digital repository but seems not all partners looked into it as a source for documentation/information and organization could have been improved.

- Although the project addressed how to focus and integrate different activities within a given time frame this was not always possible.

Based on the review of the available documentation and other inputs, primarily results of the project closure and interviews, it can be concluded that the contribution of the KAZDUAL project to the initially foreseen objectives is high, with all major outputs being achieved and appropriate target groups addressed. The general satisfaction from participation in the project was also very high.



The overall assessment is that outputs of the KAZDUAL project contribute to the improvement of the quality of higher and vocational education among all involved partner universities and colleges and consequently, the overall quality of educational system in Kazakhstan. It can also be concluded that the needs of institutions towards professional education are well addressed by the project activities and outputs. Particularly appreciated has been the pilot accreditation of professional programs conducted by ACQUIN and supported with experts from CEENQA.

The target groups were reached through a different approach from partner to partner, due to the specificities of the programs covered and local considerations for target groups. We observed that there could have been more suitable options for the equipment purchased to support the needs of teaching staff to deliver STEM education although logically more technical resources were expected from the project.

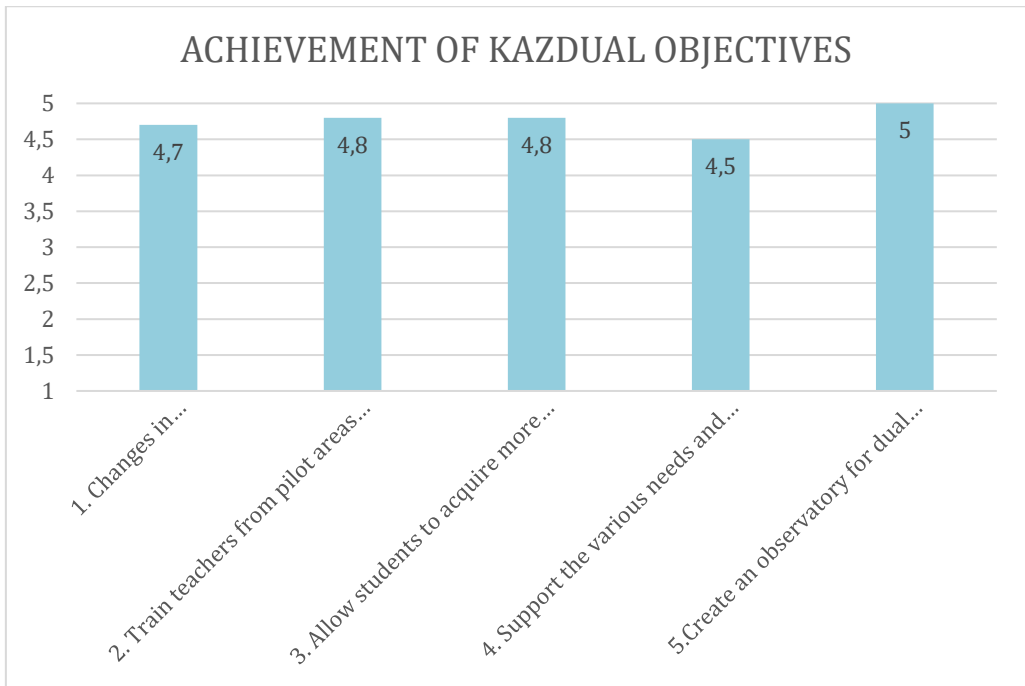


## 2.2. EFFECTIVENESS OF KAZDUAL PROJECT

Effectiveness in intervention actions like Erasmus+ CBHE is usually understood as the extent to which an activity attains its objectives. In evaluating the effectiveness of the project, it is useful to consider to what extent were the objectives achieved or what were the major factors influencing the achievement or non-achievement of the objectives. Our natural departure point is the logical framework and the project objectives expected to be achieved. Therefore, we have concentrated in the 5 major objectives as described in the proposal: the contribution of the project to:

1. Work closely with MESRK and accreditation agency IQAA to recommend adequate changes to legislation/regulations to adapt KAZDUAL model of higher education in Kazakhstan
2. Train teachers from piloted field of studies to provide practical skills and practical-oriented education within the classroom and employers to achieve pedagogic skills for adequate monitoring of students.
3. Enable students to acquire more relevant competences and practical skills by combining formal education with training acquired at the workplace.
4. To support different needs and interests of employers, HEIs and students in different industrial sectors through KAZDUAL model of education and to provide recommendations to HEIs and MESRKs for further implementation.
5. To create an observatory of dual best practices and research that contributes to disseminate KAZDUAL across Kazakhstan.

The research on documentation and information from partners help us to assess the level of achievement of the objectives. Notoriously, most objectives have been totally or largely achieved (see table below).



Thus, we can assert that to a very large extent, the KAZDUAL project has been very effective with punctual delays (mainly due to covid) and relatively small changes along the lifespan of the project.

**2.3. EFFICIENCY OF KAZDUAL PROJECT**

According to the OECD 5 DAC criteria, efficiency is a measure of how well resources are utilized to achieve the desired results. It is the ratio of outputs (results, benefits) to inputs (resources). Efficiency can be improved by eliminating waste and unnecessary duplication of services. Conversely, efficiency can be maximise for example when one event/mobility can serve for different purposes (e.g. curriculum development and project management).

It is worth mentioning, that we don't consider the amount of resources allocated since this would be the role of the financial auditors. For this project, the first element of measurement is how the grant has been used. We can notice from the two tables below that almost all the grant has been spent (nearly 100%). It has been declared practically the same amount that was granted (922315 vs 922775 euros). A good and standard practice would situate this value above 95%.

## Original budget

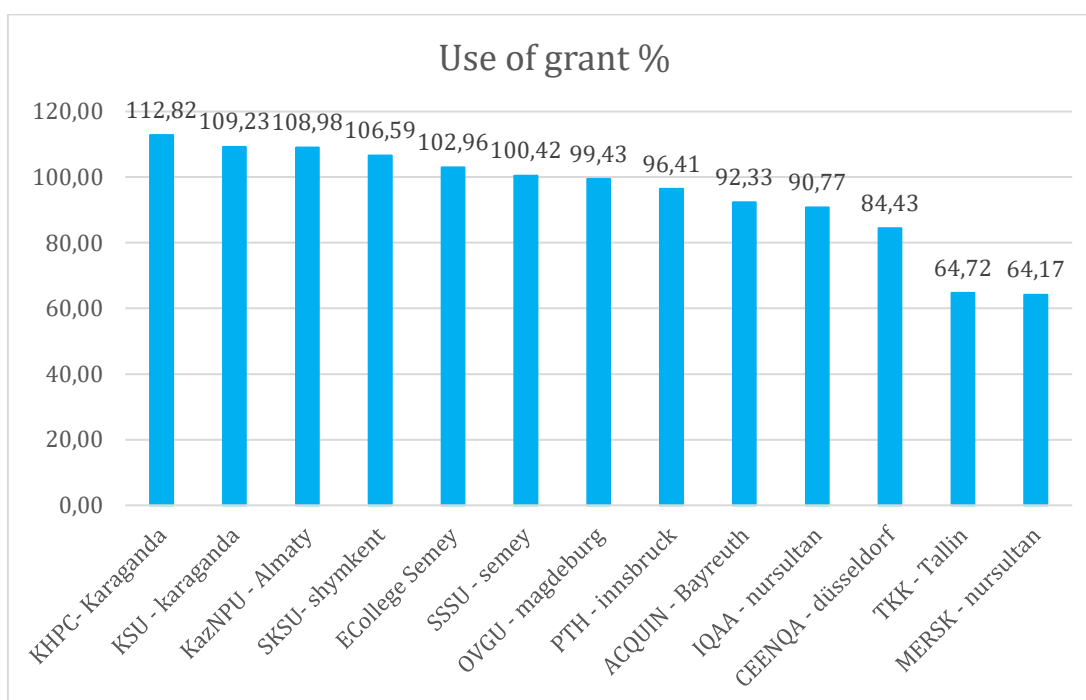
CALL FOR PROPOSALS 2020 – EAC/A02/2019 – Erasmus+ Programme (2019/C 373/06)										
Programme guide and instructions for applicants										
Action	Structural Project									
Duration number of months	36									
Project Acronym	KAZDUAL									
Project Title	Implementing Dual system in Kazakhstan									
EU GRANT REQUESTED FROM THE EUROPEAN UNION (in EUR)										
1. Staff Costs	369 110,00 <small>Cannot exceed 40% of total Grant requested</small>									
2. Travel Costs	166 975,00									
3. Costs of Stay	187 200,00									
4. Equipment Costs	130 000,00 <small>Cannot exceed 30% of Total Grant requested</small>									
5. Subcontracting Costs	69 490,00 <small>Cannot exceed 10% of Total Grant requested</small>									
6. Exceptional Costs	0,00									
<b>Total Grant requested from the European Union</b>	<b>922 775,00</b> <small>Should be equal or above EUR 500.000,00 and cannot exceed EUR 1.000.000,00</small>									
DISTRIBUTION OF THE GRANT BY ORGANISATION (in EUR)										
Partner N°	Name of Partner	Country	PR/PA	1. Staff Costs	2. Travel Costs	3. Costs of Stay	4. Equipment Costs	5. Subcontracting Costs	6. Exceptional Costs	Total Costs (in EUR)
P1	SKSU - shykent + SKSU college	Kazakhstan	Partner Countries	31 137,00	22 435,00	31 200,00	52 500,00	33 990,00	-	171 262,00
P2	OVGU - magdeburg	Germany	Programme Countries	78 722,00	14 490,00	9 840,00	-	-	-	103 052,00
P3	TKK - Tallin	Estonia	Programme Countries	14 190,00	6 890,00	6 240,00	-	-	-	27 320,00
P4	PTH - innsbruck	Austria	Programme Countries	44 478,00	13 395,00	6 840,00	-	-	-	66 613,00
P5	ACQUIN - Bayreuth	Germany	Programme Countries	42 058,00	6 835,00	4 320,00	-	-	-	53 181,00
P6	CENQA - dusseldorf	Germany	Programme Countries	41 910,00	9 295,00	5 760,00	-	-	-	56 965,00
P7	KazNPU - Almaty	Kazakhstan	Partner Countries	20 475,00	20 510,00	27 240,00	27 500,00	23 000,00	-	118 725,00
P8	KSU - karaganda	Kazakhstan	Partner Countries	17 202,00	17 395,00	22 080,00	25 000,00	1 500,00	-	83 177,00
P9	SSSU - semey	Kazakhstan	Partner Countries	17 202,00	16 040,00	23 160,00	25 000,00	1 500,00	-	84 902,00
P10	MERSK - nursultan	Kazakhstan	Partner Countries	14 466,00	6 265,00	6 240,00	-	-	-	26 971,00
P11	IQAA - nursultan	Kazakhstan	Partner Countries	15 894,00	2 985,00	3 840,00	-	9 500,00	-	32 219,00
P12	KHPC - Karaganda	Kazakhstan	Partner Countries	15 714,00	14 220,00	19 320,00	-	-	-	49 254,00
P13	ECollege Semey	Kazakhstan	Partner Countries	15 714,00	14 220,00	19 320,00	-	-	-	49 254,00

## Declared budget

ANNEX VI - FINAL FINANCIAL STATEMENT											
Project Number	618835-EPP-1-2020-1-Z-EPPKA2-CBHE-SP	Co-financing (for information only)	49 048,43								
Budget Headings	1. Grant Awarded (in EUR)	2. Budget Spent (in EUR)									
1. Staff Costs	369 110,00	380 342,00									
2. Travel Costs	167 085,00	148 015,00									
3. Costs of Stay	187 080,00	192 120,00									
4. Equipment Costs	134 500,00	132 396,09									
5. Subcontracting Costs	65 000,00	69 442,29									
6. Exceptional Costs	0,00	0,00									
<b>Total Grant requested from the European Union</b>	<b>922 775,00</b>	<b>922 315,38</b>									
DISTRIBUTION OF THE GRANT BY ORGANISATION (in EUR)											
Partner N°	Name of Partner	Country	Role Code	Programme Country / Partner Country	1. Staff Costs	2. Travel Costs	3. Costs of Stay	4. Equipment Costs	5. Subcontracting Costs	6. Exceptional Costs	Total (in EUR)
P1	SKSU - shykent + SKSU college	Kazakhstan	Coord	Partner Countries	31 291,00	27 315,00	34 680,00	52 783,76	36 471,82	-	182 541,58
P2	OVGU - magdeburg	Germany	Partner	Programme Countries	79 842,00	10 660,00	11 760,00	-	-	-	102 462,00
P3	TKK - Tallin	Estonia	Partner	Programme Countries	14 306,00	1 335,00	2 040,00	-	-	-	17 681,00
P4	PTH - innsbruck	Austria	Partner	Programme Countries	44 478,00	11 485,00	8 160,00	-	-	-	64 123,00
P5	ACQUIN - Bayreuth	Germany	Partner	Programme Countries	43 076,00	3 010,00	3 000,00	-	-	-	49 086,00
P6	CENQA - dusseldorf	Germany	Partner	Programme Countries	44 081,00	2 095,00	1 920,00	-	-	-	48 096,00
P7	KazNPU - Almaty	Kazakhstan	Partner	Partner Countries	27 075,00	21 560,00	29 880,00	28 580,59	22 275,32	-	129 381,91
P8	KSU - karaganda	Kazakhstan	Partner	Partner Countries	17 202,00	18 745,00	26 880,00	25 243,23	981,64	-	90 851,87
P9	SSSU - semey	Kazakhstan	Partner	Partner Countries	17 259,00	16 160,00	25 080,00	25 778,51	981,64	-	85 259,15
P10	MERSK - nursultan	Kazakhstan	Partner	Partner Countries	14 466,00	1 640,00	1 200,00	-	-	-	17 306,00
P11	IQAA - nursultan	Kazakhstan	Partner	Partner Countries	15 894,00	2 700,00	1 920,00	-	8 731,87	-	29 245,87
P12	KHPC - Karaganda	Kazakhstan	Partner	Partner Countries	15 714,00	17 175,00	22 680,00	-	-	-	55 569,00
P13	ECollege Semey	Kazakhstan	Partner	Partner Countries	15 657,00	13 935,00	21 120,00	-	-	-	50 712,00
<b>Total (in EUR)</b>					<b>380 342,00</b>	<b>148 015,00</b>	<b>192 120,00</b>	<b>132 396,09</b>	<b>69 442,29</b>	<b>-</b>	<b>922 315,38</b>

70% of the budget was distributed among Kazakh partners and 30% among European ones. By categories except travel costs all the resources for the rest of budget categories were fully spent.

Looking at the distribution by partners, 3 partners spent less than 90% of their allocated budget with particularly 2 institutions underspending considerably less than their share as shown in the graph below.



Another way of gauging the efficiency of a project is looking at the activities planned and the activities conducted. Due to covid-19 several of the activities and trainings took place online instead of physically based. However, the number of activities exceeded the number of activities planned which is considered very satisfactory.

Activities accounted:

32 online meetings

16 trainings

10 meetings with companies, stakeholders

5 joint conferences

15 seminars/webinars

6 accreditations conducted

Pilot Nr.	Educational Institution	Study Program	Responsible agency	Dates
Pilot 1	M. Auezov South-Kazakhstan University	Electric Power Engineering	ACQUIN-IQAA	25 May, 2023
Pilot 2	Shakarim University of Semey	6B07103 Heat power engineering	CEENQA-IQAA	5 May, 2023
Pilot 3	Abai Kazakh National	B01303 - Primary education with information	ACQUIN-IQAA	24 May, 2023

	Pedagogical University	and communication technologies		
<b>Pilot 4</b>	Buketov Karagandy University	6B07103-Heat power engineering	CEENQA-IQAA	3 May, 2023
<b>Pilot 5</b>	Electrotechnical college	4S07130202 Technician-Electrician	ACQUIN-IQAA	5 May, 2023
<b>Pilot 6</b>	Karaganda Higher Polytechnic College	Thermal Power Plants of Thermal Power Plants (Boiler Equipment Operator or Turbine Equipment Machinist)	ACQUIN-IQAA	5 May, 2023

The information on each of the trainings was provided in WP2. The workshops have been well organized and productive, overall speaking. The accumulated experience during the trainings have allowed for better communication and organization within the consortium, particularly in second half of the project. Satisfaction with the workshops and pilots seems to be relatively high and has fed into better understanding of the participating institutions. A good practice is that every HEI hosted a training, and thus shared equal responsibilities. The relevance of the content of workshops to developing the different dual systems models was also considered very satisfactory by the interviewed participants.

## 2.4 IMPACT OF THE PROJECT

Impact is one of the six evaluation criteria used by the OECD DAC Network on Development Evaluation to assess the effectiveness of development assistance. Impact, herein, refers to the positive and negative changes produced by the intervention, whether directly or indirectly, intended or unintended. It encompasses the main effects resulting from the activity on local social, economic, environmental, and other development indicators. Essentially, impact assesses the real-world consequences of the intervention.

We can perceive the impact of the project at three levels:

- Policy supporting level. There were many challenges in the KAZDUAL project realisation and one of them was defining the legal framework for the introduction of flexible model of dual education system at universities in Kazakhstan. The regulation on dual studies could not be passed without the support of the state. The Government of the Republic of Kazakhstan has recognized the importance of the dual education system for the further overall economic development of the country. The MESK was really dedicated to supporting reform of dual study programs, especially taking into account that lot of foreign investors in Kazakhstan comes from EU countries - specially Germany - where the dual education system is well accepted and one of the pillars of until now its strong economy. This was the main reason why Kazakh academic community applied for funding and started the KAZDUAL project – supported by the Erasmus+ program, as well as the MESK.

- Institutional level. The impact of this project at institutional level can be summarized as follows:

**Capacity Building:** KAZDUAL acts as a catalyst for action, focusing on building capacity among teachers, administrators, students and employers in Kazakh vocational and tertiary education. By enhancing understanding of professional programs and dual systems it empowers educators, employers and learners alike.

**University-Enterprise Network:** The project establishes stronger and closer relationships and cooperation between HEIs and colleges and industry and enterprises, one of the priorities of the Erasmus+ program.

**Multidisciplinary Materials:** Kazakh partners work on creating protocol and teaching materials and equipment applied to different fields of study, namely Electric Power Engineering, Heat power Engineering, Technician-Electrician studies, Thermal Power Plant operations and primary education with ICT. These resources enhance teaching and learning experiences, bridging professional gaps within academia.

**Sector-Wide Synergies:** Outreach activities extend to national and regional levels, fostering a broader embrace of dual system. The establishment of an Observatory for best practices is expected to produce regular publications and collect data for private and public use. Ultimately, this creates sector-wide synergies around dual system education and professional teaching.

According to Kazakh coordinators, one of the major impacts is that KAZDUAL has contributed significantly to the improvement and sustainability of practice-oriented education within Kazakh higher education institutions, fostering a more entrepreneurial academic environment. Towards this end, the project benefits from the participation of Austrian and German institutions with long-term experience in delivering dual system.

- Individual level. Allegedly, one of the impacts of the project at individual level is that KAZDUAL enables students in the piloted program to access practical oriented skills in function of the needs of partner enterprises and thus facilitating their insertion into the labour market. When education is delivered combining theoretical concepts with internships, giving priority to practical-oriented education it enhances educational attainment and may contribute to individual well-being.

The workshops, study visits and trainings have benefitted the participation of Kazakh partner members in areas such as:

- flexible approaches to dual system in function of field of study,
- dual system policy and implementation in HEIs,
- terminology development,
- accreditation protocols for professional education,
- teaching standards for professional education in HEIs and VET centers,
- use of STEM technology and digital resources
- involvement of employers in defining curriculum and skills needed for students

We expect the project to have a positive impact in partner institutions and higher education and vocational education system in the medium term provided adequate financial and capital resources are employed to sustain the project results.

## 2.5 SUSTAINABILITY

Sustainability, for our sake, is concerned with measuring whether the benefits of an activity are likely to continue after EACEA funding has been withdrawn. Projects need to be environmentally as well as financially sustainable. When evaluating the sustainability of the KAZDUAL project, it is useful to consider the following elements mentioned in the project proposal: dissemination, international cooperation and networking, joint initiatives and also its contribution to increasing awareness of the project/program.

The dissemination strategy and actions identified for this project have been selected because of their capacity to ensure that disseminated to as extensive and comprehensive a range of target stakeholders in the field of dual education. The selected strategies aim to facilitate KAZDUAL partners to raise awareness about the project and its purposes and to promote the engagement and active involvement of key actors and main stakeholders during the lifetime of the project.

The following main channels for dissemination identified are:

<http://kazdual.kz/>

FACEBOOK: <https://www.facebook.com/kazdual.kz>

INSTAGRAM: <https://www.instagram.com/kazdual/>

Due to Covid-19 there was a problem to invite the stakeholders and to carry dissemination in 2021 and beginning of 2022.

The partners motivate the stakeholders with the advertisement of participation of EU partners at the events like online Conferences, Webinars. There were lot of events within the project with participation KZ and Central Asia, other countries that were not including as partners countries and institutions.

At institutional level, the activity of informing the public about the partners and the dual educational program is organized within the framework of the general information policy of the college and is aimed at constantly informing the public about educational programs, through:

- web-site of the colleges like <http://eko-edu.kz>;
- social networks e.g. [https://www.instagram.com/eko\\_semey/](https://www.instagram.com/eko_semey/),  
<https://vk.com/ekokollege>, <https://www.youtube.com/channel/>;
- publications in mass media;
- publications in regional and city publications "Applicant", "Graduate", "Education";

information stands and screen;  
 published booklets, brochures;  
 organization of socially significant events;  
 charitable actions;  
 organization of joint seminars, a festival in the profession "MyPRO", events with social partners;  
 holding scientific and practical conferences with the participation of representatives of social partners;  
 placement of information on television, billboards and banners;  
 holding meetings with schoolchildren and applicants, their parents;  
 Placing information in the mobile application "Wertafon", "Resurs.kz".

The local websites provide the official presentation of information about the partners on the Internet in order to promptly familiarize users with various aspects of the activities of the college and the engineering and teaching staff, improve the efficiency of interaction between the college departments and the target audience. A link between the official project website and the partner website is offered in most cases.

One of the main elements for sustainability is the KazDual Observatory under KazNPU. The university has committed to maintain the observatory for at least 5 years.

Other factor observed for sustainability of the project is through the network of enterprises and HEIs and colleges involved in the project – which should continue in order to foster enterprise-university collaboration after the lifetime of KAZDUAL. By the end of the project a formal trilateral agreement between the employers-institutions-students was signed which guarantees the functionality of these networks.

Last but not least is the bilateral agreements signed between Kazakh and EU partners to continue its international cooperation. In this sense, PhT and KazNPU have been particularly active. KazNPU has an Agreement with ACQUIN as an external expert and Karaganda University has a ongoing project financed by MES RK and visited the PHT to exchange, the Project "Integration of new forms of corporate training in the implementation of dual education programs in engineering and science". Also, all of Kazkah partners are involved in different ERASMUS + CBHE project as to continue the project idea with different titles of project and waiting for the results.

Kazakh/ EU	SKU	KazNPU	KSU	KHPC	SSU	ECS
<b>OVGU</b>		New project	New project			
<b>PHT</b>	X	X	In progress			
<b>TKK</b>						
<b>ACQUIN</b>		X				
<b>CEENQA</b>						

A good practice to maintain the sustainability of a project is through new proposals. In this sense, KSU got a dual education project financed by MES RK and 36 teachers of each partner HEIs and VETs has Certificates of Dual Education Experts and each Kazakh partner institutions have Certificates from ACQUIN and CEENQA as a participants of Dual Accreditation. KaNPU received a Certificate from CEENQA for professional work.



### 3. SWOT ANALYSIS

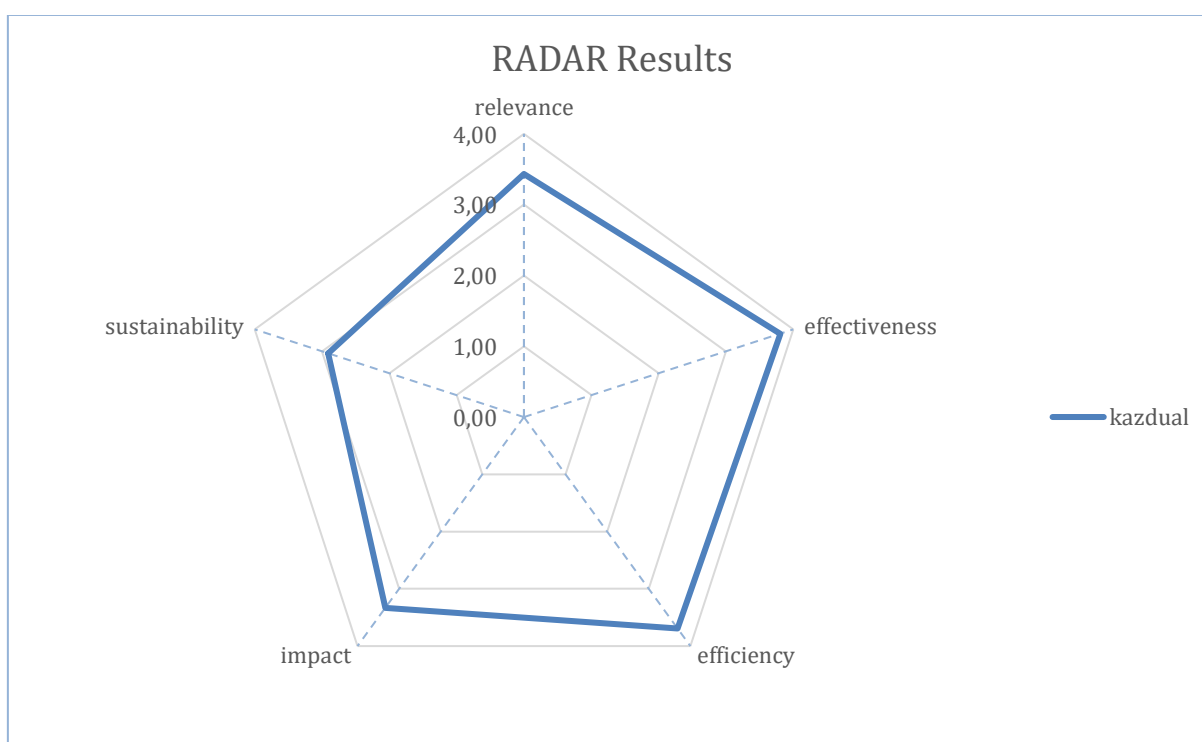
As result of the desk research and information obtained from the conversations held with the partners during the final conference at KazNPU, the following SWOT analysis has been elaborated which is broader than the one developed in several internal reports.

Key strenghts	Challenges/Areas for improvement
<b>CURRICULUM</b>	
Very active participation in the preparation of accreditation procedures.	Undertake real accreditation during timespan of project, not just pilot accreditation.
Enhnce quality aspects of dual programs. It exceeded expectations of EU partners	Translations in advanced to be considered in future to enhance communication among partners
Establishment of large number of models in short period of time	Missing work progress analyses
Global perspective/intercultural perspectives and understanding	
Impact of curriculum implementation at legal level (new regulations)	
<b>OPERATIONAL</b>	
Learning from different EU systems	Language problems
Transfer of know how/lessons learnt and sharing of experiences	Cultural differences
All recommendations considered	Budget of external experts should be considered for accreditation procedures
Motivation to implement dual system	
<b>MANAGEMENT</b>	
Very committed partners and coordinator	Internal project documentation and control could be better organised
Ensuring alignment of activities and outcomes with the proposal	Management board not well established at the beginning
Transparent management	Short note announcement for meetings
Achievement according to the timeline	
Good balance in partnership	
<b>FINANCES</b>	
	Delays in payment distribution
	More budget for translations and involvement of experts for pilot accreditations needed
	more workload than calculated
	Real travel costs increased

#### 4. CONCLUSIONS AND RECOMMENDATIONS

The illustration of our final assessment can be reflected in the following RADAR graph with the 5 DAC criteria analyzed (graph below). Overall speaking, the project attains the level of quality expected for the Erasmus+ program although with some aspects to consider, which could have increased our appraisal.

As reference, we consider a good benchmark for each category the value of 3.



It is important to stress that the involvement of the MERSK from the outset of the project contributed greatly to the acceptance of the Erasmus+ contribution to delivering dual system in Kazakhstan. However, Kazakh partners felt that more involvement from IQAA would have brought better results to the project.

It is worth emphasizing the improvement of communication and cooperation among partners during the last year of the project. The progress of the KAZDUAL project in sum is highly satisfactory although there are some areas that need adjustments and attention.

It is suggested that the website be updated with all the final versions of project deliverables. We still find the necessity of reorganization of google drive for internal communication. At times, data is not easy to find. Additional resources to further equip

the labs with more advanced technology and teaching tools that simulate workplace is recommended.

The dual programs are implemented following the original plan and a larger number of participants have been involved. The teams shown to be committed and enthusiastic to continue with the programs piloted. The materials that have been produced thus far can contribute greatly to mentoring training and professionalization of dual system programs. It is recommended more involvement of employers in training process on how to monitor students.

In addition to project requirements for deliverables, the establishment of the Observatory can support shared projects and publications. It has a prominent role to maintain and enlarge a community of practice devoted to analysing educational and socio-economic impact of dual system through experts and researchers who can collaborate in order to produce publications on the subject.

The project is highly relevant for the Erasmus+ program attaining very satisfactory level of effectiveness as well as efficiency in the use of resources. It has the conditions to produce a sustainable impact in the medium-long term.