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PHASE 2
OF SKILLS ANTICIPATION TOOLS
AND PEER LEARNING PROGRAMME IN CENTRAL ASIA

UZBEKISTAN

TRACER STUDY

TECHNICAL REPORT

Survey name/Title: Tracer Study	
Country/region: Uzbekistan / Central Asia	**Leading Country Expert**: Olha Lysa
Fieldwork implementation period: June – September 2024, November – December 2024	**Parties responsible and contact details:** • Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan (MoHESI): Farrukh Azimov, farruxa@mail.ru • Almalyk Mining and Metallurgical Technical Vocational school in Tashkent region: Mansur Sattorov, mansur.sattorov.80@mail.ru • Samarkand City Polytechnic No. 1: Shuhrat Talibov, talibovsuhrat154@gmail.com • Syrdarya District Polytechnic school: Muhiddin Zaripov, zaripovm805@gmail.com • Tashkent Transport Technical Vocational school: Zhamshid Tuychiyev, jtoychiyev@umail.uz

Glossary of acronyms

CATI	COMPUTER-ASSISTED TELEPHONE INTERVIEWS
DARYA	DIALOGUE AND ACTION FOR RESOURCEFUL YOUTH IN CENTRAL ASIA
EPRD	OFFICE FOR ECONOMIC POLICY AND REGIONAL DEVELOPMENT
ETF	EUROPEAN TRAINING FOUNDATION
EU	EUROPEAN UNION
ILO	INTERNATIONAL LABOUR ORGANIZATION
MoHESI	MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION OF THE REPUBLIC OF UZBEKISTAN
VET	VOCATIONAL EDUCATION AND TRAINING

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Contents

Executive Summary

This report outlines the design, implementation process, and methodology of the Pilot Tracer Study in Uzbekistan conducted within the framework of the ETF's DARYA project, aimed at improving the vocational education and training (VET) systems in the countries of Central Asia. The study, implemented under Module 1 of the project, focuses on strengthening skills anticipation tools to support evidence-based VET.

The Pilot Tracer Study was designed in accordance with the standards for this type of surveys and based on ETF/ILO/Cedefop methodology and guidelines[1]. The Ministry of Higher Education, Science and Innovation of Uzbekistan initiated this process with the European Training Foundation (ETF) support and in cooperation with VET schools and other members of the stakeholder working group.

Stakeholder consultations were conducted to align the objectives and expectations of the survey, leading to the development of a research plan that covered sampling design, data collection methods, and survey tools. The pilot survey focused on VET schools graduates from 2023 and 2024 and covered four pilot VET schools from different regions of Uzbekistan.

The fieldwork stage for the Pilot Tracer Study was carried out in two phases: the first phase took place from June to September 2024, targeting graduates from 2023 and students graduating in 2024, while the second phase was conducted between November and December 2024, targeting graduates of 2024 only. The pilot provided valuable insights into VET effectiveness, graduate satisfaction, transitions to the labour market, and the relevance of skills for the labour market. These findings could assist Uzbekistan's Ministry of Higher Education, Science, and Innovation in enhancing training programmes, improving the return on investment of the VET system, and supporting the strengthening of feedback loops relevant to quality assurance at both the system and provider levels.

[1] European Training Foundation.2026. Carrying out tracer studies - Guide to anticipating and matching skills and jobs Vol. 6
https://www.etf.europa.eu/en/publications-and-resources/publications/carrying-out-tracer-studies-guide-anticipating-and-matching

1. Introduction

1.1. Background

This Pilot Tracer Study was initiated by the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan (MoHESI) working together with four VET providers[2]:

- Almalyk Mining and Metallurgical Technical Vocational school in Tashkent region[3]
- Samarkand City Polytechnic No. 1[4]
- Syrdarya district Polytechnic school[5]
- Tashkent Transport Technical Vocational school[6]

Technical support was provided throughout the process by the European Training Foundation's (ETF) DARYA (Dialogue and Action for Resourceful Youth in Central Asia) project[7]. DARYA, an EU-funded initiative, is the first regional program in Central Asia dedicated to strengthening vocational education, training, and skills development. Introduced in 2022, the project is designed to improve employment opportunities for youth in Uzbekistan, as well as its neighboring countries - Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan.

The five-year DARYA initiative aims to prepare the region for future labour demands by concentrating on three primary goals: cultivating forward-looking skills, establishing flexible and regionally aligned qualifications, and promoting inclusive and innovative teaching methods. Within this broader context, the Pilot Tracer Study, a component of Module 1, seeks to build a solid foundation of evidence for assessing vocational training systems. Through graduate tracer studies and employer-focused research, Module 1 evaluates the relevance and effectiveness of vocational education and training (VET) programmes. These efforts promote a deeper understanding of how VET systems function, encouraging data-driven policy decisions that align training with labour market demands. The study also aims to foster collaboration and peer learning across the region of Central Asia.

1.2. Rationale and purpose

The pilot of the VET Tracer Study in Uzbekistan was designed as a dedicated information source to support the Ministry of Higher Education, Science, and Innovation in monitoring vocational education and training (VET) outcomes. It aimed to provide reliable data on VET graduates, complement existing efforts, and highlight the necessity of such monitoring for informed decision-making and quality assurance at both system and provider levels.

By designing and testing a dedicated tool, the study lays the foundation for future tracer surveys and evidence-based VET policy development. Ultimately, this instrument can enhance VET quality, better align vocational education with labour market needs, and maximize the impact of VET investments on labour market outcomes.

[2] Vocational Education and Training (VET) providers at different levels will be consolidated into VET technicums. The names of pilot VET providers mentioned in this report refer to their original names at the beginning of the pilot preparation.
[3] https://www.okmkollej.uz/en/site/index
[4] https://www.samcli.uz/
[5] https://maktab.sirdaryoktrmhb.uz/
[6] https://www.uzttts.uz/
[7] https://www.etf.europa.eu/en/what-we-do/darya-dialogue-and-action-resourceful-youth-central-asia/darya-dialogue-and-action-resourceful-youth-central-asia/module-1

1.3. Structure of the Report

This report covers various aspects including survey preparation, data collection and processing, tracer process documentation, analysis and dissemination. It also outlines the survey objectives and scope, target group, sampling, response rate, quality assurance and limitations, profile of respondents, and recommendations for future survey methodology improvements.

2. Survey Design and Implementation Process

2.1. Survey preparation

The data collection procedures for this pilot VET tracer study were performed jointly by MoHESI and pilot VET providers (selected directly by MoHESI) with methodological support of the ETF. The process was designed in such a way as to ensure accuracy, consistency, and ethical standards.

The exercise was preceded by a series of consultations with MoHESI, VET providers administration as well as other members of the Working Group[8] to clarify the specific needs and expectations from the study. As a result, a comprehensive Action Plan was developed, detailing the responsibilities of each of the stakeholders, timeline, and required resources.

Next, a comprehensive Research Plan was created by the Working Group, with technical guidance from the ETF. This plan outlined the survey's design and methodology, including clearly defined research objectives, sampling strategy, and data collection method. It also encompassed the development of a detailed questionnaire and accompanying guidelines to facilitate accurate and effective information gathering.

During the preparatory stage, in the last week of February, the ETF experts, with the support of MoHESI staff, organised and conducted capacity building workshops as well as bilaterial meetings with the main stakeholders to build the system for pilot survey implementation and ensure its quality. Participants were briefed on the objectives, features of the pilot tracer survey, methodological approaches and its organisation and conduction.

Training of data collectors:

For data collection, a team 27 of interviewers was appointed from amog the staff of the VET providers involved in the survey. A group of 5-7 teachers, curators, social workers, youth workers or psychologists from every VET provider attended a series of off-line and on-line training sessions conducted by ETF experts. Two onsite capacity building workshops were organized and conducted:

1. **Capacity building workshop 1** was directed at the main stakeholders, members of the working group. It was held on 27th – 29th of February 2024 and covered:
    - Skills anticipation tools.
    - Familiarization with Tracer studies, its objectives, main principles and requirements for their execution.
    - Features of Methodology of Tracer study in Uzbekistan
    - Familiarization with the questionnaire and guidelines.

[8] The working group included the representatives of MoHESI, pilot VET providers, Ministry of employment and social reduction, Chamber as well as the Uzbekistan Statistics Agency.

2. **Capacity building workshop 2** was directed at the staff of VET providers involved in the data collection. It was held in every VET school on 4th, 6th – 7th of May 2024 and covered:
    - Familiarization with Tracer studies, its objectives.
    - Methodological features of conducting the VET Tracer study in Uzbekistan.
    - Familiarization with the questionnaire and guidelines.
    - Principles of interviews performance.
    - Step-by-step online questionnaire completion using its trial version, coded in the survey online platform SurveyMonkey[9].

2.2. Data collection and processing

The pilot survey design was implemented in two phases:

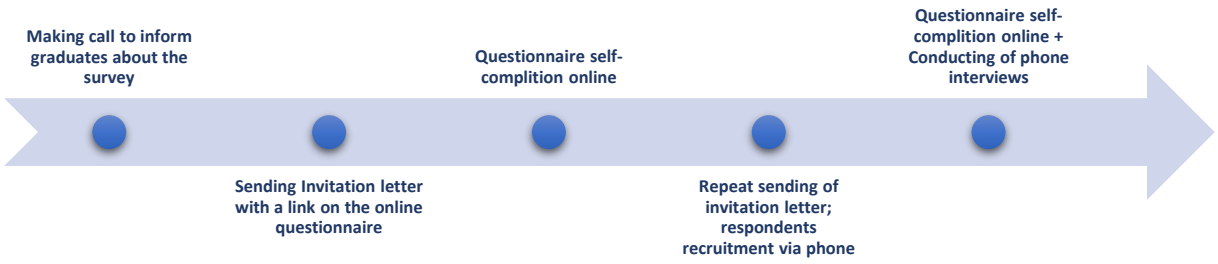
1. During the 1st phase (June - September 2024) both types of respondents (graduates of 2023 and graduates of 2024) were surveyed. Different questionnaires had been developed for each group of respondents: a full version for graduates 2023 and a short version for graduates 2024. The shortened version excluded questions about their experience related to the transition onto the labour market and employment outcomes.
2. After 6 months from graduation (November - December 2024), graduates of 2024 were surveyed again with the full version of the questionnaire.

Two different data collection processes were designed:

a) Graduates of 2023 – pilot survey implemented between June – September 2024

The process for **graduates 2023** involved the following steps (see Figure1):

Figure 1: Data collection for the graduates of 2023



First, the survey tool was tested in a trial phase, allowing for necessary adjustments. Next, the survey questionnaire was coded to ensure accurate data processing. Once the list of graduates' contacts was compiled and survey preparations were completed, interviewers from each VET provider reached out to their graduates to inform them about the survey, emphasizing its importance, and also to update key contact details. This included selecting the most appropriate communication channel, such as email or Telegram, for sending the invitation letter while avoiding duplication, and recording graduates' Telegram nicknames (see Figure 2).

[9] https://www.surveymonkey.com/

Figure 2: Graduates contact list

#	VET school	Name and Surname	Date of birth	Year of graduation	Specialty	Job	Job positi	Номер тел.	Электронная почта	Gender: 1 - male, 2 - female	Send letter to: 1 - email, 2 - Telegramm	Nickname in Telegramm	Status: 1 - well done, 2 - unavailable	Comments:
1	Xxxxx	Xxxxx	dd/mm/yy	YYYY	Xxxxx	Xxxxx	Xxxxx	111111111	xxxxx@xxx.xxx					
2	Yyyyy	Yyyyy	dd/mm/yy	YYYY	Yyyyy	Yyyyy	Yyyyy	222222222	yyyyy@yyy.yyy					

The pilot survey process involved multiple steps to ensure effective data collection and analysis.

First, the finalized and verified graduate contact lists were handed over to the Ministry of Higher Education, Science, and Innovation (MoHESI). Then, an MoHESI IT specialist sent invitation letters containing the survey link via email or Telegram, based on graduates' preferred communication channels. Alumni were expected to complete the online questionnaire independently, while IT specialists and ETF technical experts monitored the data collection process.

To improve response rates, reminder messages were sent to graduates who had not yet completed the survey. Additionally, a task list of non-responding graduates was created and shared with VET providers for follow-up. Interviewers from these schools then conducted phone calls to encourage participation, allowing graduates to either complete the survey online or respond via phone interviews. Once data collection was completed, the gathered information underwent compilation and cleaning before proceeding to data analysis and reporting.

b) Graduates of 2024 - pilot survey implemented between June – December 2024

The **process for graduates 2024** was realized in two phases and involved the following steps (*see Figure 3*):

Figure 3: Data collection for the graduates of 2024 (phases 1 & 2)

PHASE 1: June – September 2024

In the first phase, graduates of 2024 were surveyed at the end of their studies through a structured process. As for the pilot survey of graduates from 2023, the survey tool underwent trial testing, allowing for necessary adjustments, and the questionnaire was coded to ensure efficient data processing. Once the graduates' contact lists were prepared, interviewers from each VET provider reached out to their final-year students through phone calls or classroom announcements to inform them about the survey, highlighting its importance. This was also the moment used to update key contact details and to determine the most suitable communication channel, such as email or Telegram.

In the next phase, the finalized and verified graduate contact lists were handed over to the Ministry of Higher Education, Science, and Innovation (MoHESI). An MoHESI IT specialist then sent invitation letters containing the survey link via email or Telegram, based on graduates' preferred communication channels. Throughout the process, IT specialists and ETF technical experts monitored data collection, while VET provider staff sent reminders. Once data collection was completed, the gathered information underwent compilation and cleaning. Finally, the survey data was analyzed, and the results were compiled into a final report for further action.

PHASE 2: November – December 2024

Interviewers from each VET provider first re-established contact with 2024 graduates by making phone calls to inform them about the follow-up survey. This process involved verifying phone numbers, confirming email addresses, and determining the preferred method for receiving the Invitation Letter, whether via email or Telegram.

As for the first phase of the pilot survey, graduates were expected to complete the online questionnaire independently, while IT specialists and ETF technical experts monitored the data collection process. To increase participation, reminder messages were sent to those who had not yet responded. A task list of non-responding graduates was then compiled and distributed to VET providers, whose interviewers followed up with phone calls to recruit and interview these graduates. During this phase, some graduates completed the questionnaire online, while others were surveyed by phone. Once data collection was finalized, the gathered information underwent compilation further cleaning.

Data collection implementation

2023 Graduates Survey

The data collection for the 2023 graduates survey occurred from July 15th to September 30th 2024. In total, 542 responses were collected, of which 333 were fully completed. About 41 graduates were contacted via email. In addition, 127 graduates were reached through phone calls. Many graduates were located outside the country, which made it challenging to connect with them effectively. The most successful method was through Telegram, where 374 graduates were contacted. This platform proved effective, especially given the geographical barriers faced with phone calls.

2024 Graduates Survey

The data collection for the 2024 graduates survey (Phase 1) was conducted from July 15th to September 23rd 2024. A total of 804 responses were collected, 489 were fully completed. A total of 55 graduates were contacted via email. While this method allowed for direct communication, challenges such as incorrect email addresses limited its effectiveness (as in case of the 2023 Graduates survey). Moreover, 199 graduates were reached through phone calls. The most effective channel was Telegram, where 550 graduates were contacted.

It is important to note that there was a significant delay in the preparation of the questionnaire, which resulted in the Phase 1 survey being launched only in July. Initially, the plan was to administer the survey and reach out to students while they were still completing their studies. However, due to the delay, this was not possible, and graduates were contacted only after their graduation, once they had already left the education system.

The follow-up survey (Phase 2) among the 2024 graduates was conducted from December 9th till December 31st, 2024, following the same data collection strategy as for the previous round. A total of 1,235 responses were collected, 1,050 were fully completed.

2.3. Tracer process documentation, analysis and dissemination

Throughout all stages of the data collection process, all parties maintained close communication, which was crucial for ensuring smooth implementation, real-time troubleshooting and prompt adoption of corrective measures when needed. The progress of data collection (both on-line and CATI-based) was monitored on an on-giong basis by the ETF's technical lead.

At the conclusion of the pilot project, an analytical report was produced, presenting specific findings in a clear and comprehensive manner, while also providing structured interpretation. Consequently, a set of actionable recommendations was formulated to offer evidence-based guidance for shaping strategies aimed at better addressing the challenges and opportunities within the VET system through more extensive future tracer studies. Additionally, the findings and lessons learned from the pilot exercise were shared during a series of regional peer learning events, and a national dissemination event was organized.

3. Methodology

3.1. Objectives and scopes

The primary aim of the pilot tracer study in Uzbekistan was to develop and test the methodology, identify effective data collection strategies, and demonstrate how the collected data can support the Ministry's work while strengthening quality assurance feedback loops in educational institutions.

The questions the tracer study was designed refer to three key objectives:

Objective 1: VET Program Quality: Evaluating graduates' perspectives on the quality and effectiveness of the VET programs, including aspects such as, teaching methods and job search support

- How do graduates perceive the overall quality and effectiveness of the VET received?
- How satisfied are graduates with the services received by the institution?
- Was the training perceived as useful for their career path?

Objective 2: Labour Market Integration: Assess the alignment of their VET training with their current job roles, and the applicability of the skills learned during training.

- What is the labour market status and positions held by graduates after graduation?
- What are the employment outcomes of VET graduates?
- Are there differences in the career path and employability of VET graduates depending on study programmes/qualifications?

Objective 3: Skills Relevance: Gathering insights into graduates' perception on the relevance of acquired skills to their current employment and professional development.

- To what extent do graduates feel qualified for the jobs they perform based on the skills acquired during their education?
- How do employers perceive the qualifications and competencies of graduates in relation to job requirements?
- What factors influence the alignment (or misalignment) between graduates' qualifications and the demands of their current job roles?

3.2. Target Group

The target population for the pilot VET tracer study in Uzbekistan consisted of two cohorts of graduates (irrespective of their specialisation) from pilot VET providers in the years 2023 and 2024. This selection was made to evaluate various methodologies and data collection strategies.

Four VET institutions were selected to participate in the pilot survey: Almalyk Mining and Metallurgical Technical Vocational school in Tashkent region; Samarkand City Polytechnic No. 1; Syrdarya district Polytechnic school; and Tashkent Transport Technical Vocational school.

The choice of these VET institutions was justified by several reasons:

- They represented different kinds of VET institutions: schools and colleges.

- They were located in different regions of Uzbekistan and in settlements of different sizes.
- Both traditional and dual study programmes were provided by them. However, the type of programme was not taken into account for sampling, since in the respective years, the dual education system covered only a small group of students.

3.3. Sampling

For the pilot survey, a comprehensive census design was developed, where all graduates were contacted, consisting of two modules: a cross-sectional survey of 2023 graduates and a panel survey of 2024 graduates. This design was implemented in two phases, as outlined in Section 2.2.

The decision to use a panel design for the 2024 graduates was driven by several factors. First, administering a limited set of questions to final-year students allowed them to become familiar with this type of survey tool, while also providing an opportunity to inform them about the follow-up process and reconfirm their contact details. Additionally, this approach offered valuable initial feedback on the study programs, which was requested as part of the Ministry's efforts to enhance quality assurance mechanisms, including feedback loops and self-assessment processes. It is important to note that although the same students (and later graduates) were surveyed twice, the design did not permit merging the two datasets, requiring independent analysis of the data.

It was decided to survey all graduates from the pilot VET providers using thus a census approach. To do that, a contact database of all graduates 2023 and graduates 2024 from four selected VET providers was created from the lists provided by each institution, including graduates's contact information (e-mail addresses and phone numbers).

Table 1: No. of graduates by VET providers

VET provider	Graduates 2023	Graduates 2024	Total
Almalyk Mining and Metallurgical Technical Vocational school	371	289	660
Samarkand City Polytechnic No. 1	257	354	611
Syrdarya District Polytechnic school	390	359	749
Tashkent Transport Technical Vocational school	510	444	954
Total	**1,528**	**1,446**	**2,974**

A mixed-mode of data collection that combines on-line and CATI approaches was used. On-line is the most cost-effective way for conducting a survey, with the widespread, global access to the Internet. Most of the population can be reached not only via e-mails but also via social medial like Telegram etc., which is why recently on-line surveys have become widely used. However, despite its unquestionable advantages, on-line data collection mode has a significant weakness, which is low response rates. To address this limitation, computer assisted telephone Interviews (CATI) approach was also implemented.

The online questionnaire was sent via email and Telegram and the telephone interviews were conducted by specially trained staff of VET providers. In total, 21 interviewers out of 27 that received training made calls to graduates who did not respond online and conducted interviews with them.

3.4. Questionnaire and other data collection documents

Two types of questionnaires were developed:

- **Graduates 2023** – full version that consists of 10 sections and 33 questions
- **Graduates 2024 (Phase 1)** – short version that consists of 7 sections and 23 questions
- **Graduates 2024 (Phase 2)** – refined version of the full questionnaire

In addition to the questionnaires, an invitation letter and consent form were developed.

At the start of the data collection phase, each graduate listed in the database received an invitation letter to participate in the pilot survey. The letter provided information about the primary implementor, goals and the reason of their selection as well as a guarantee of confidentiality. The invitation letters were distributed via email or Telegram.

The invitation letter included a link that directed recipients to the online version of the questionnaire, where the formal consent form was integrated. The main language of the survey is Uzbek with Russian version also available. The online form were coded using SurveyMonkey platform that allows to realize dual language surveys.

For CATI, the Interviewers Guidance was additionally developed. This document described the main issues the interviewers should know to execute successful data collection: general information about the survey, features of the interviewers performance, survey tools and techniques for conducting interview, instructions for completing the questionnaire by every question.

3.5. Response rate

The response rate is an indicator to measure the survey success and the engagement level of the respondents. The study team was monitoring the questionnaire completion and response rate throughout the data collection period. In tracer studies response rates could be affected by various factors, such as the quality of graduates's contacts list; the access to the Internet; labour migration, especially abroad; the employment status of respondents; or the level of connection between graduates, their classmates, class supervisor, or VET institution in general. Recognizing all challenges, the complex sample design and mix-mode data collection approaches were used to enhance the participation and response rate.

To reach respondents, their contact information was thoroughly verified. Although few graduates of pilot VET providers have and use emails, they are active users of social media platforms such as Telegram. Therefore, invitation letters with the link to the online questionnaire were also sent as a personal message to the Telegram accounts of the graduates. Additionally, to prevent low response rates, the CATI approach for data collection was employed, significantly increasing the response rate.

The implementation of all these measures ensured response rate on level 22% for graduates 2023, 35% for graduates 2024 (phase 1) and 73% for graduates 2024 (phase 2) (see Table 2).

Table 2: Response rate summary

VET School	Graduates 2023	Graduates 2024 (Phase 1)	Graduates 2024 (Phase 2)
Almalyk Mining and Metallurgical Technical Vocational school	18%	61%	80%
Samarkand City Polytechnic No. 1	42%	24%	97%
Syrdarya District Polytechnic school	24%	59%	77%
Tashkent Transport Technical Vocational school	12%	9%	45%
Total	**22%**	**35%**	**73%**

The lower response rate for graduates in 2023 was expected due to several factors. One major issue was the poorer quality of contact information, as many phone numbers had changed or were unavailable, and very few email addresses were accessible. Additionally, the limited availability of respondents during the working day further contributed to the challenge of collecting responses.

In contrast, the response rate improved in 2024, particularly in Phase 2. This increase was largely driven by greater familiarity with the survey tool and the data collection process, making it easier to reach and engage participants.

4. Quality assurance and limitations

Multiple measures were implemented to ensure the reliability of the data collected during the Pilot Tracer Study and the high quality od its results. The process was preceded by careful planning conducted during a 8-month-long preparatory phase, which resulted in the development of a comprehensive implementation process design. A detailed Action Plan and Research Plan were developed in close collaboration with the Working Group, specifying objectives, methodology, stakeholder responsibilities, and timeline for the pilot implementation. Comprehensive training sessions were organized for stakeholders, survey coordinators, and data collectors. Additionally, detailed guidelines on conducting the interviews and online questionnaire completion were developed.

Data collection tools were pre-tested and refined to ensure maximum clarity, relevance and reliability. A mixed-mode data collection approach combining online surveys and CATI was employed to enhance data coverage. Ongoing monitoring and technical assistance of an international expert was provided throughout the process. Data cleaning and validation were performed using standardized procedures, including handling missing data and removing duplicates.

Despite these efforts, the exercise encountered several challenges both during the survey preparation and the data collection phase, i.e.:

- Incorrect Contact Information: Many graduates had outdated or incorrect email addresses, which limited the ability to reach them effectively.
- Geographical Barriers: A significant number of graduates were located outside the country, making phone contact difficult and necessitating a greater reliance on digital communication methods.

- Disconnection from Institutions: Some graduates reported limited contact with their colleges and expressed a lack of interest in participating in the surveys, which impacted overall engagement.
- Some graduates who were in employment, especially those based in urban areas like Tashkent, refused to answer the survey due to limited availability during their working hours.

Addressing these challenges in future studies of a similar nature would enhance their efficacy and accuracy, building on the current lessons learnt. Examples of effective measures to minimize these limitations could include enhanced graduates tracking systems, expanded outreach efforts, and more flexible survey timing.

5. Profile of survey respondents

For the Pilot Tracer Study in Uzbekistan the sample of 2,974 respondents that represent 4 VET providers was selected where 1,528 are graduates 2023 and 1,446 are graduates 2024 (see the table below). As a result of contacting respondents using all three methods (email, Telegram, and CATI), the final datasets consist of 334 cases from 2023 graduates, 512 cases from 2024 graduates (Phase 1), and 1,056 cases from 2024 graduates (Phase 2).[10]

Table 3: Summary of pilot survey participation

	Graduates 2023	Graduates 2024 (Phase 1)	Graduates 2024 (Phase 2)
Total contacted	1,528	1,446	1,446
Participated	542	804	1235
Responsed Fully	333	489	1050
Responsed Partially	209	316	185
Final no. of respondents (after data cleaning)	334	512	1056

In every survey round, the proportion of male respondents exceeded that of female respondents (see Table 4.1), which also mirrors the overall gender distribution within the VET system. In addition, the distribution of respondents varied significantly across educational institutions in each survey round, also reflecting the enrolments within the selected providers (see Table 4.2). For 2023 graduates, the Samarkand City Polytechnic No. 1 was the most represented, accounting for 33% of respondents, while Tashkent Transport Technical Vocational school had the least representation at 19%. In 2024, Phase 1 saw the Syrdarya District Polytechnic school with the highest proportion of respondents at 42%, while Tashkent Transport Technical Vocational school again had the smallest share at 8%. In Phase 2 of 2024, the Samarkand City Polytechnic No. 1 returned to 33%, matching its 2023 level, while Tashkent Transport Technical Vocational school had the least representation at 19%.

[10] The final datasets include respondents who answered all questions or at least 75% of them.

Tables 4.1 – 4.6: Distribution of respondents by selected characteristics

4.1 Gender by age (%)						
	2023 graduates		**2024 graduates (phase 1)**		**2024 graduates (phase 2)**	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
17-18	36	40	53	58	34	32
19-20	39	41	28	19	40	38
21+	25	19	19	23	26	30
Total	100	100	100	100	100	100

4.2 Education institution from which respondents graduated (%)			
	2023 graduates	**2024 graduates**	**2024 graduates**
Almalyk Mining and Metallurgical Technical Vocational school	20	34	22
Samarkand City Polytechnic No. 1	33	16	33
Syrdarya District Polytechnic school	28	42	26
Tashkent Transport Technical Vocational school	19	8	19
Total	100	100	100

In both 2024 rounds, the most represented specializations among respondents from Almalyk Mining and Metallurgical Technical Vocational school were Crushing and screening of minerals (28% of respondents) and Preparation of mineral resources for enrichment (19%) in Phase 1 (see Table 4.3). In Phase 2, Welder (electric welding) and Equipment and technology for mineral exploration (both 12%) were the fields with most respondents, while Crushing and screening of minerals remained notable at 10%. Other specializations, including Electrician for repair and maintenance of electrical equipment (15% in Phase 1) and Equipment and technology for mineral exploration (12% in Phase 2), also had significant representation among respondents.

At the Samarkand City Polytechnic No. 1, the most represented specializations among respondents in 2024 were Seamstress (32%) in Phase 1 and Diagnostics and repair of car engines (23%) in Phase 2 (see Table 4.4). In Phase 1, Computer graphics and design operator (27%) was also notable, though its representation decreased in Phase 2 to 20%. Other fields such as Car mechanic (17% in Phase 1) and Hairdresser (fashion designer) (8% in Phase 1, 13% in Phase 2) were also represented, while Seller, controller-cashier (13% in Phase 1) and Master of operation and installation of sewerage and water supply (7% in Phase 2) showed a more modest presence among respondents.

At the Syrdarya District Polytechnic school, the most represented specializations among respondents in 2024 were Master of Digital Information Processing (26%) and Salesperson, cashier-controller (20%) in Phase 1 (see Table 4.5). Seamstress (16%) also had a notable share in Phase 1. In Phase 2, Diagnostics

and repair of car engines became the most represented field at 25%, while Master of Digital Information Processing decreased to 22%.

For the 2024 graduates of Tashkent Transport Technical Vocational school, the most represented specializations in Phase 1 were Accounting and auditing and Maintenance of radio or wired communication systems in railway transport (18%) (see Table 4.6). In Phase 2, the fields with the most respondents were Customer service in railway transport and Electrification and power supply in railway transport (both 15% of respondents), followed by Auditing and accounting (12%).

4.3 Qualification obtained - Almalyk Mining and Metallurgical Technical Vocational school (%)			
	2023 graduates	**2024 graduates**	**2024 graduates (phase 2)**
Car repair mechanic	4	2	8
Welder (electric welding)	4	4	12
Turner	15	0	6
Locksmith	16	0	1
Repair of power plants and electrical equipment	1	1	5
Electrician for repair and maintenance of electrical equipment	1	15	11
Assistant locomotive driver	7	3	6
Preparation of mineral resources for enrichment	9	19	6
Installation of technological equipment	0	1	2
Metallurgical crane operator	6	6	6
Metallurgy of non-ferrous metals	0	7	9
Geology	1	7	5
Equipment and technology for mineral exploration	1	6	12
Crushing and screening of minerals	10	28	10
Other	21	0	0

4.4 Qualification obtained - Samarkand City Polytechnic No. 1 (%)			
	2023 graduates	**2024 graduates (phase 1)**	**2024 graduates (phase 2)**
Seamstress	10	32	10
Computer graphics and design operator	48	27	20

Seller, controller-cashier	5	13	7
Hairdresser (fashion designer)	22	8	13
Car mechanic	3	17	7
Diagnostics and repair of car engines	4	2	23
Master of operation and installation of sewerage and water supply	6	0	7
Welder (electric-gas welding)	3	0	6
Banking supervision	0	0	6

4.5 Qualification obtained - Syrdarya District Polytechnic school (%)

	2023	2024 graduates	2024 graduates
Diagnostics and repair of car engines	17	11	25
Turner	3	10	10
Welder (gas-electric welding)	14	8	10
Electrician	0	2	3
Master of Digital Information Processing	31	26	22
Seamstress	7	16	15
Salesperson, cashier-controller	0	20	8
Wine production operator	0	6	7
Other	28	0	0

4.6 Qualification obtained - Tashkent Transport Technical Vocational school (%)

	2023 graduates	2024 graduates	2024 graduates
Accounting and auditing	5	18	12
Electrification and power supply in railway	3	5	15
Automation and telemechanics in railway	6	15	8
Organization and traffic management	3	5	7
Maintenance of railway bridges and tunnels	0	3	7
Maintenance and repair of locomotives	2	5	8
Maintenance and repair of railway cars	0	0	8
Maintenance of radio communication systems in railway transport	16	18	5

Maintenance of wired communication systems in railway transport	0	18	5
Electronic systems and equipment in railway transport	29	5	3
Construction of railways, track and track facilities	3	0	6
Customer service in railway transport	0	8	15
Other	33	0	0

6. Concluding remarks and recommendations

The Technical Report provides a comprehensive overview of the Pilot Tracer Study conducted in Uzbekistan under the EU-funded DARYA project. This pilot aimed to evaluate strategies for implementing this specific data collection instrument, which allows to provide an important input to vocational education and training (VET) systems through gathering insights into graduate satisfaction, transitions to the labour market, and the alignment of VET programmes with labour market needs. The report describes the research design as well as the implementation process, which involved collaboration between the Ministry of Higher Education, Science and Innovation of Uzbekistan (MoHESI), VET providers, and other stakeholders. Despite facing challenges such as outdated contact information and geographical barriers, the study successfully collected data that can provide information relevant for quality assurance both at the system and provider levels.

In conclusion, the Pilot Tracer Study has demonstrated the importance and potential of systematic monitoring of VET graduates' outcomes. The findings highlight the need for enhanced graduates tracking systems, expanded outreach efforts, flexible survey timing, and improved engagement strategies to ensure higher response rates and more accurate data collection in future studies. By addressing these recommendations, future tracer studies can build on the lessons learnt of the current pilot, providing even more robust evidence to inform vocational education and labour market policies.

The following recommendations can be drawn based on the lessons learnt from the pilot exercise:

- Improve the quality of graduate contact database: Establishing a more effective graduate contact database can significantly improve response rates. This includes regular updates and verification of contact information to ensure its accuracy and reliability.
- Schedule surveys appropriately during the academic year: The survey of 2024 graduates (Phase 1), originally planned for May 2024, was delayed because the questionnaire was not ready in time, resulting in data collection being pushed to June-August after students had graduated. This made it difficult to locate respondents and ensure full questionnaire completion. Additionally, many interviewers were on vacation or abroad. To prevent this in the future, it is important to plan this specific survey well in advance if two-stage data collection is maintained, to reach respondents right before their graduation.
- Ensure flexible survey timing: Offering more flexible survey timing, especially for graduates who are employed, can improve participation. This includes conducting surveys – in case of interviews conducted via phone - outside of regular working hours to accommodate respondents' schedules.
- Refine engagement strategies: To reconnect with graduates who have lost contact with their institutions, personalized communication that emphasizes the value of their participation can be effective. Alumni networks can play a key role in strengthening engagement, encouraging peer-to-peer participation and improving response rates.
- Address geographical barriers through digital communication: Using digital communication methods to overcome geographical barriers faced by graduates located outside the country can improve connectivity and response rates, as demonstrated by this pilot. It is crucial to use the most effective tool – in this case, Telegram was found to be a significant and useful way of connecting with former students.

- Centralise data collection in the long-run: To increase the reliability of respondents' answers over time, especially in CATI, the survey process could be centralised to reduce personal connections between graduates and former teachers. Alternatively, if practical, CATI could be replaced with a fully online questionnaire in future rounds to ensure objective evaluations of the educational experience.
- Maintain quality assurance measures: Continuing to implement comprehensive quality assurance measures, including detailed planning, training sessions, and ongoing monitoring, can maintain high data quality and enhance the study's representativeness.