Funded by
the European Union

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

KAZAKHSTAN

PILOT TRACER STUDY

TECHNICAL REPORT

October 2024

Funded by the European Union

Survey name/Title: Tracer Study	
Country/region: Kazakhstan/Central Asia	**Leading Country Expert**: Ina Pietschmann
Fieldwork implementation period: June 2024 – September 2024	**Parties responsible and contact details:** • Ministry of Education: Algazinova Kalamkas Magauovna: • TALDAU: Kussainova Aigul Dzhambulovna, kusainova.a@iae.kz • TALAP: Nigmetzhanova Maral Kudaibergenovna, alunur-07@mail.ru and Tleubergenova AknurZhumagatovna

Glossary of acronyms

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
MoE	Ministry of Education
TALAP	Техникалық және кәсіби білім беру
TALDAU	Талдау
TVET	Technical Vocational Education and Training
VET	Vocational Education and Training

Funded by the European Union

Contents

Executive Summary

This report outlines the design, implementation process, and methodology of the Pilot Tracer Study conducted as part of the DARYA project in Kazakhstan, aimed at enhancing vocational education and training (VET) systems in Central Asia. The study, implemented under Module 1 of the project, focuses on strengthening skills anticipation tools to support evidence-based TVET. Fieldwork for the Tracer Study took place from June to September 2024, specifically assessing the relevance and effectiveness of VET programs within the railway freight sector.

The Tracer Study was designed through close collaboration between the Ministry of Education, TALAP, TALDAU, and the European Training Foundation (ETF), following a structured, multi-phase approach. Stakeholder consultations were conducted to align the study's objectives and expectations, leading to the development of a research plan that covered sampling design, data collection methods, and survey tools. The study targeted VET graduates from 2022 and 2023, with a focus on both conventional and dual programs across 12 regions of Kazakhstan.

The study faced several challenges, including difficulties in obtaining contact information for some graduates due to restrictions on data sharing between VET institutions and survey administrators. This limited the completeness of the graduate listings. Furthermore, some graduates were reluctant to participate in the surveys, which negatively impacted the initial sample size and required adjustments. Despite these challenges, the study managed to achieve a response rate of 25.3%, which met the expected target for tracer surveys in this context.

The report offers several key recommendations for future tracer studies:

- Improving data-sharing mechanisms: Strengthening the collaboration between VET institutions and survey administrators is crucial to ensure that graduate listings are more complete and up to date. This would allow for more accurate tracking and follow-up of graduates.
- Increasing graduate engagement: To address reluctance among graduates, it is recommended that future studies better communicate the importance and value of their participation. This could include highlighting how survey results directly contribute to improving the quality and relevance of VET programs.

By addressing these recommendations highlighted, future studies can enhance the robustness and reliability of the data collected, ultimately supporting more informed decision-making for VET programs in Kazakhstan and beyond.

1. Introduction

1.1. Background

This Pilot Tracer Study was initiated by the Ministry of Education in Kazakhstan in close collaboration with TALAP[1] and TALDAU[2] and with the technical support of the European Training Foundation's (ETF) DARYA (Dialogue and Action for Resourceful Youth in Central Asia) project[3]. This EU funded project is the first of its kind in Central Asia to focus exclusively on vocational education, training, and skills development. Launched in 2022, DARYA aims to create better employment prospects for young people across Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan by developing skills that align with today's rapidly transforming labour markets, emphasizing the importance of green, digital, and entrepreneurial competencies.

The DARYA project is a five-year initiative concentrating on three key areas: developing future-oriented skills, creating adaptable and regionally recognized qualifications, and promoting more inclusive and flexible teaching and learning approaches. Within this broader DARYA framework, Module 1, which covers the Pilot Tracer Study, aims to strengthen the evidence base needed to monitor training provision and its impact on graduates and labour markets, guiding the implementation of skills development programs that are responsive to labour market demands.

Module 1 engages in various data-gathering activities such as graduate tracer studies and establishment, employer sectoral studies to support VET effectiveness and relevance This comprehensive approach will raise awareness, facilitate peer learning, and promote an evidence-based understanding of the T/VET system's effectiveness across Kazakhstan and the wider Central Asian region. With data-driven decisions, policymakers can ensure that vocational education stays relevant and beneficial for both current and future students. The work is based on ETF/ILO/Cedefop guidelines and standards to overall support the establishment of active skills anticipation and training systems in partner countries.[4]

1.2. Rationale and purpose

This technical report aims to document the design and implementation process of the Pilot Tracer Study for Kazakhstan, highlighting the bottlenecks encountered along the way. It serves as a blueprint for future tracer surveys.

[1] Talap under the Ministry of Education of the Republic of Kazakhstan is a key company in the development of the system of technical and vocational education (TVET) and post-secondary education in Kazakhstan. Their mission is to create and implement innovative approaches that improve the quality of education and training, as well as active participation in international initiatives such as WorldSkills International (WSI). Available at: https://talap.edu.kz/o-nas-2/?lang=en

[2] TALDAU is the Information and Analytical Platform of the Bureau of National statistics designed to support strategic planning and reforms of the Republic of Kazakhstan. https://taldau.stat.gov.kz/en/Search/SearchByKeyWord

[3] See: 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

[4] See: https://www.etf.europa.eu/en/publications-and-resources/publications/carrying-out-tracer-studies-guide-anticipating-and-matching

The overarching goal of this specific Pilot Tracer Study is to establish and clearly map out the process of designing and conducting a tailored tracer study, utilizing all relevant technical tools to effectively monitor Vocational Education and Training (VET) effectiveness and relevance. Furthermore, all involved stakeholders will be equipped with the knowledge and practical experience necessary to design and conduct future tracer studies of this nature.

1.3. Structure of the Report

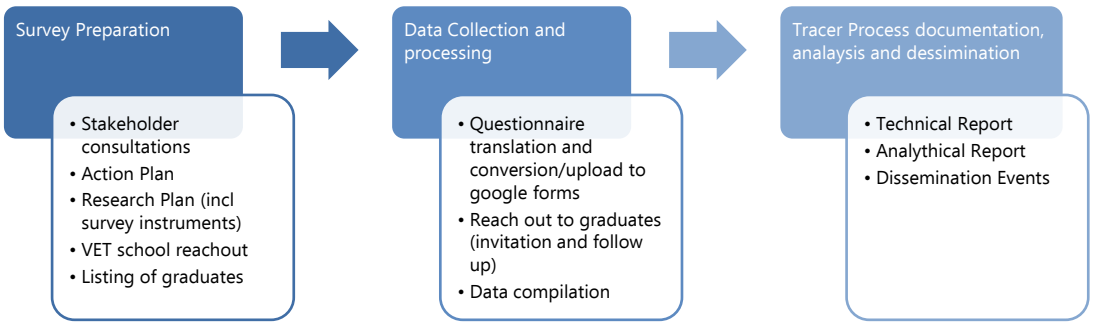
The report begins with an introduction and explanation of the survey purpose, followed by a detailed description of the survey approach, its design, objectives, scope and methodology. The report then provides a comprehensive overview of the profile of the survey respondents before concluding with a discussion of the quality assurance measures applied and challenges encountered during the survey design and implementation.

2. Survey design and implementation process

The design of this tracer study is cross-sectional rather than longitudinal, as it primarily focuses on assessing the effectiveness and relevance of the Vocational Education and Training (VET) system at a specific point in time, instead of tracking its impact on graduates' labour market transitions and employment outcomes over an extended period. However, the pilot methodology and questionnaire have been structured to allow for easy adaptation into a longitudinal study in the future, should ongoing tracking of labour market outcomes become a priority.

A three-staged approach was implemented to design and implement the tracer survey, as shown in Figure 1. The overall whole tracer study process spanned over the period from October 2023 to May 2024, with the actual data collection taking place between June and September 2024.

Figure 1 – Tracer Study Process



Source: Author

2.1. Survey preparation

At the initial stage of designing the Pilot Tracer Study, stakeholder consultations were conducted with the Ministry of Education, TALAP, TALDAU, and ETF technical experts to clarify the specific needs and expectations for the study. These consultations culminated in the creation of an Action Plan aimed at coordinating efforts among the Ministry of Education, TALAP, TALDAU, and the European Training Foundation (ETF). The Action Plan specified the responsibilities of each stakeholder, outlining who would do what, when, and how, while also addressing funding and resource allocations. To ensure active communication and collaboration among all parties involved, a Working Group was established to support the design and implementation of the Pilot Tracer Study.

A Research Plan was developed by the Working Group members with support from ETF, detailing the survey design and methodology. This included defining the research objectives, determining the sample size, identifying the courses to be covered, and outlining data collection methods, as well as developing the questionnaire and guidelines to ensure effective information gathering.

After finalizing the Research Plan, the Ministry of Education sent official letters to the selected VET schools, formally requesting their support and asking them to share graduate information. However, the sample size (see 3.3) for the tracer study had to be significantly reduced and adjusted because several VET schools declined to participate or share information, citing legal restrictions. Specifically, the schools referred to Kazakhstan's Law on Personal Data[5], which prohibits sharing private information with third parties without consent. This necessitated adjustments to the original survey plan and consideration of alternative strategies for collecting the necessary data.

TALAP, in close collaboration with nine VET schools that provide training in the field of 'Organization of Transportation and Traffic Control in Railway Transport' and agreed to participate in the Tracer Study, prepared listings of graduates. The VET schools communicated with the graduates to explain the purpose of the survey and ensure confidentiality, thereby encouraging participation. Consent letters were sent to graduates to verify their contact information and obtain formal permission to share their details. Once consent was received, the contact information of graduates who agreed to participate was handed over to TALAP, enabling the creation of a comprehensive graduate database for effective outreach and participation in the survey.

In parallel, the questionnaire and guidelines were translated into Russian and Kazakh, and TALDAU, with support from Atameken, adapted them for online use. TALDAU further adjusted the questionnaire by providing appropriate coding schemes, such as regional codes, VET school names, and other relevant categories. The questionnaire and guidelines were then uploaded to Google Forms, a platform familiar to TALDAU staff and free of charge.

A trial run of the survey was conducted to identify and resolve any potential issues with the guidelines and questionnaire. Fortunately, no additional adjustments were needed. TALDAU was also responsible for sending the invitation letter and links to the questionnaire and guidelines to graduates via WhatsApp. By following this structured approach, the groundwork for the Pilot Tracer Study was effectively established, setting the stage for successful implementation and meaningful data collection

2.2. Data collection and processing

Data collection occurred over a three-month period from June to September 2024. The survey was conducted online using Google Forms, a platform familiar to local stakeholders. Participants were invited via personalized messages sent through WhatsApp, ensuring ease of access. TALAP and TALDAU closely monitored the progress of survey respondents, tracking participation and sending reminders to encourage both engagement and the completion of survey questionnaires.

[5] See: https://online.zakon.kz/Document/?doc_id=31396226&doc_id2=31396226#pos=15;-106.33332824707031&pos2=259;-56.33332824707031

The data collection phase concluded on the 15th of September 2024, with 201 completed questionnaires. While Google Forms proved to be a convenient tool for this survey, it is important to note that it is not a dedicated statistical platform and might not be suitable for larger-scale qualitative surveys due to limitations in handling complex data structures and advanced analytics. The compiled data was downloaded in MS Excel format, containing non-numeric string variables and values. With support from ETF, the data was manually converted into numeric codes in accordance with the coding scheme established during the questionnaire design phase. This meticulous process involved recoding responses, checking for inconsistencies, and ensuring alignment with pre-defined categories to maintain data uniformity and accuracy. Errors in the data were corrected carefully without altering the integrity of the original data, ensuring that the analysis will remain accurate and unbiased.

To prepare and analyze the data, STATA was employed for its robust capabilities in managing large datasets, automating processes, and performing complex statistical analyses beyond what tools Excel offer. The STATA Do-File streamlined the transformation of raw numeric data into a structured statistical format, applying variable and value labels to ensure data quality and integrity. (Annex 2)

As part of data processing, a rigorous cleaning procedure was applied to ensure accuracy and consistency across the dataset. Once cleaned, the dataset was prepared for analysis in STATA.

2.3. Tracer process documentation, analysis and dissemination

Thorough analysis of challenges and refinement of survey methodology and tools are based on feedback from the pre-survey testing and from its actual implementation. The challenges and adjustments are documented in this report to create a systematic feedback loop.

Throughout the data collection process, all parties involved maintained close contact with the National Facilitator and Technical Lead to provide regular updates on the survey's implementation progress. This facilitated effective coordination and allowed for real-time troubleshooting of any emerging issues. Monthly monitoring reports were produced to track response rates closely and document any implementation challenges, enabling timely adjustments and improvements to the data collection strategy.

In parallel to the technical report, an analytical report was developed by the ETF Technical Lead to analyse the pilot survey findings. STATA was used to generate rich descriptive statistics, extracting meaningful insights from the survey responses. This approach facilitated a structured and efficient interpretation of the data collected.

Given the relatively small sample size of the tracer study and its specific sector focus, the analytical report serves to not only address the specific results but will also emphasize outlining the analytical process and advocating larger, more comprehensive tracer studies in the future.

The analysis begins with a thorough review of the data. This will be followed by the calculation of summary statistics, such as frequencies, means and medians, to identify patterns and insights relevant to VET and labour market dynamics. The analytical report presents findings using visualizations, such as charts and tables, to offer clear and structured interpretations. This process highlights the importance of tracer studies in enhancing TVET governance and ensuring its responsiveness to labour market realities. The analytical report also provides actionable recommendations and serves as a critical reference for stakeholders on how to offer evidence-based guidance for shaping policies and strategies that can better address the challenges and opportunities in the TVET system through more extensive future tracer studies.

For dissemination, the study findings were shared with all key stakeholders, including the Ministry of Education, VET schools, TALAP, TALDAU, and other relevant organizations. A series of dissemination and peer-sharing activities were organized, such as workshops, presentations, and the distribution of summary reports, to ensure that the findings and lessons learned are effectively communicated to decision-makers and the wider public in a clear and concise manner.

3. Methodology

3.1. Objectives and scope

The study's technical objectives were structured around three key areas: the effectiveness and relevance of VET programs, career paths and employment outcomes, and graduate satisfaction. These objectives aimed to inform evidence-based policies and improvements to enhance the overall quality, alignment, and impact of VET programs.

Objective 1 - Assessment of Training Program Effectiveness and Relevance (VET Quality)

This objective evaluated how well the current VET curriculum aligned with the evolving demands of the railway freight sector and the broader job market in Kazakhstan. The study sought to understand the extent to which VET courses matched industry needs and identified specific strengths and weaknesses in this alignment. The findings provided actionable insights for enhancing the quality and relevance of VET programs, ensuring that graduates were equipped with skills in demand in the railway freight sector, thereby contributing to economic growth and job creation.

Objective 2 - Career Path and Employment Analysis

The second objective focused on analyzing the employment status, job positions, and career trajectories of VET alumni within the railway freight sector after graduation. It identified the sectors graduates worked in, the types of positions they held, and the time it took them to secure employment after completing their training. These insights helped in developing targeted strategies to enhance employability, improve program effectiveness, and ensure the VET system remained responsive to the needs of the railway freight sector and its evolving labor market demands.

Objective 3 - Graduate Satisfaction with VET

The third objective measured the level of satisfaction among VET alumni with their overall learning experience and preparation for careers in the railway freight sector. By identifying program strengths and areas needing improvement from the graduates' perspective, the study provided insights for enhancing VET programs to ensure they remained responsive to student and labor market needs in this critical industry.

Scope:

The Pilot Tracer Study covered VET schools across 12 regions in Kazakhstan that offered courses relevant to the railway freight sector, particularly in the field of 'Organization of Transportation and Traffic Control in Railway Transport.' The decision to conduct the Pilot Tracer Study in the railway freight transportation sector was strategic for several reasons:

1. The transport sector is rapidly growing in Kazakhstan, and employers in the railway freight sector have expressed concerns about the ill-preparedness of VET system graduates for sector requirements.

2. The pilot tracer study complemented an Establishment Skills Survey that was also conducted in the transport sector.
3. The sector had a limited number of courses and graduates, spread over most of the regions in the country, making it manageable for the pilot initiative.
4. Both conventional and dual courses were provided in 'Organization of Transportation and Traffic Control in Railway Transport.'
5. This sector-specific focus allowed for a more in-depth understanding of the skills and competencies required in railway freight and how well the current VET system aligned with industry needs.

If implemented on a larger scale in the future, insights from a tracer study with this same design would offer a glimpse into the efficiency of VET training processes and the market relevance of training curricula from the graduate perspective. The results would guide evidence-based policies and improvements in Kazakhstan's VET sector, with a particular emphasis on enhancing skills development for the railway freight industry.

3.2. Target Group

The Tracer Study targeted VET graduates from the years 2022 and 2023, as these recent cohorts provide the most current insights into the effectiveness and relevance of the training programs in relation to the evolving demands of the transport sector. Focusing on these years enables the study to capture the immediate post-graduation experiences of alumni, offering timely data that can inform actionable improvements in VET program design and delivery.

3.3. Sampling and weighting

The survey employed a stratified random sampling method to ensure representation from both conventional and dual VET programs within the field of "Organization of Transportation and Traffic Control in Railway Transport." No weighting procedures have been applied, as the sample includes the entire cohort of graduates in this specific field.

Weighting adjustments are typically applied to address differences in response rates across subgroups, enhance representativeness, or adjust for sampling discrepancies. In this case, the survey was designed to capture data from the entire population of graduates within a specific field of study, ensuring comprehensive representation without reliance on weighting. The stratified sampling method further reinforces balanced representation by capturing variations between conventional and dual VET program graduates across regions. Thus, applying weights is unnecessary and would not improve the accuracy or reliability of the findings.

Initially, the tracer study targeted a sample of 1,799 graduates from the 'Organization of Transportation and Traffic Control in Railway Transport' program, spanning 12 regions in Kazakhstan.

The original sample included 1,115 graduates from traditional courses and 222 graduates from dual training programs, with 1,337 graduates from the 2022 cohort and 462 from the 2023 cohort. (Annex 3 and 4)

However, due to data-sharing restrictions, as some VET schools cited legislation prohibiting the sharing of personal information of graduates with third parties, compiling a complete listing of graduates

proved challenging, and the sample had to be significantly reduced. Consequently, TALAP conducted a new round of sampling to accommodate these limitations, expanding the coverage to include graduates from 12 regions. The adjusted sample ultimately comprised 792 graduates, with 270 from traditional courses and 101 from dual training programs within the "Organization of Transportation and Traffic Control in Railway Transport" programs. This revised sample included 371 graduates from 2022 and 421 from 2023. (Annex 4)

Despite the significant reduction from the original sample size, the adjusted sample was designed to retain a representative overview of the VET graduates from the targeted programs and regions, providing a solid foundation for the pilot study.

3.4. Questionnaire

The Pilot Tracer Study questionnaire was developed in alignment with the latest tracer study guidelines from the International Labour Organization (ILO) and the European Training Foundation (ETF).[6]

Drawing on the lead expert's experience in designing tracer studies and conducting labor market research across various countries, the questionnaire was crafted to capture comprehensive insights into graduates' perceptions of VET efficiency, relevance, and labour market outcomes while remaining concise. Its streamlined design makes it easy for graduates to complete digitally, encouraging higher response rates and more accessible online participation.

For future surveys, some minor adjustments to the questionnaire are recommended. These modifications would enable monitoring of graduates from different cohorts, ensuring comparability over time. Additionally, it is advised to align occupational titles and sectors with international and/or national classification standards, while also tailoring occupations and job titles to the specific sectors that the tracer study focuses on. This will enhance the questionnaire's coherence with global practices and ensure relevance to the targeted fields.

Including pre-selected reasons for graduates' satisfaction or dissatisfaction with their VET experience is also recommended, as it would add consistency to the responses and simplify analysis. A slightly adjusted version of the questionnaire, along with suggested coding schemes, is provided in Annex 6.

3.5. Response rate

The study team implemented proactive measures to enhance participation in the pilot survey, following up with graduates at least twice during the data collection process. Given that response rates in tracer studies are notoriously low, a target response rate of 20–30 per cent was established from the outset.

With an adjusted sample of 792 graduates and 201 graduates completing the questionnaire, the study achieved a response rate of 25.3 per cent, which falls within the proposed target range.

[6] European Training Foundation. International Labour Organization and Cedefop. 2016. Carrying out tracer studies - Guide to anticipating and matching skills and jobs Vol. 6. Available at: https://www.etf.europa.eu/en/publications-and-resources/publications/carrying-out-tracer-studies-guide-anticipating-and-matching

4. Quality Assurance and Limitations

Throughout the survey process, several specific quality assurance protocols were implemented to maintain data integrity and reliability. Initially, a testing phase was conducted, during which the questionnaire was distributed to ten graduates to assess its clarity and effectiveness. This phase allowed the Working Group to identify ambiguities, confusing questions, and technical issues. For example, feedback from the pilot led to small adjustments in the coding scheme, as well as the rephrasing of some questions in Kazakh language to improve the meaningfulness of the questionnaire. This ensured that the final version of the questionnaire accurately reflected the study's objectives and was comprehensible to respondents.

To further ensure data accuracy, validation checks were embedded throughout the survey. These included regular consistency checks within the online survey platform, where responses that fell outside expected ranges (e.g., implausible data related to employment outcomes) were flagged for review. Additionally, duplicate entries were identified and removed. Anonymity measures were also crucial in minimizing response bias. To encourage candidness, the survey was designed to collect data anonymously, with no personally identifiable information being linked to specific responses. This approach reassured participants that their answers could not be traced back to them individually.

However, despite these efforts, several serious limitations emerged during the survey preparation and data collection phase, which affected the survey's overall effectiveness, and the comprehensiveness of the data obtained.

1. One primary challenge was the general reluctance of VET schools to participate in the study. The Ministry of Education had to send an official letter with follow up to the VET schools selected for the tracer study, formally requesting their support and asking them to share graduate information. However, several VET schools declined to participate in the tracer or to share graduate information, referring to legal restrictions related to Kazakhstan's 'Law on Personal Data'[7], which prohibits the sharing of private information with third parties without explicit consent. This led to a significant reduction of the original sample size for the tracer study from 1799 to 792 graduates.
2. In addition to the participation challenges, there were complications regarding the requirement for graduates to provide formal consent for their personal information to be shared by VET schools. Hence, VET schools needed to obtain individual consent before proceeding with any contact verification and sharing which increased the administrative burden significantly. As a result, the survey implementation was slowed down, affecting the timeliness of data collection.
3. Complicating matters further, obtaining accurate contact information for graduates proved difficult. Many graduates had changed their phone numbers, email addresses, and other forms of communication after completing their studies, making it challenging for colleges to maintain

[7] See: https://online.zakon.kz/Document/?doc_id=31396226&doc_id2=31396226#pos=15;-106.33332824707031&pos2=259;-56.33332824707031

contact. This issue was compounded by a general reluctance among some alumni to stay in touch with their colleges or participate in follow-up interactions.

4. Broader concerns about data security also played a role in the study's limitations. Increased cases of phone fraud have made many graduates wary of unknown calls or messages. The growing prevalence of scams led to heightened suspicion among graduates, many of whom chose to avoid engaging with survey requests sent from unfamiliar sources, reducing response rates.

5. Moreover, although many graduates had given general consent to participate in the survey, some were difficult to reach or hesitant to answer all questions freely. The involvement of teachers or college representatives in contacting them may have contributed to their reluctance, as some graduates felt uncomfortable sharing candid responses with individuals they associated with their former institutions. Additionally, many graduates cited busy schedules as a reason for not engaging with the survey.

6. Lastly, there was a widespread lack of interest among graduates in participating in the survey. Many viewed surveys as time-consuming and did not see the value in answering questions, believing their feedback would not significantly impact improving educational processes or conditions at their former colleges. This attitude hindered efforts to collect a comprehensive dataset that reflected the perspectives of a broader group of alumni.

These limitations posed significant challenges to the Tracer study implementation process. Addressing these challenges will be crucial for improving the efficiency and accuracy of future surveys. Strategies could include exploring alternative methods of data collection, enhancing direct engagement with graduates, and raising awareness about the importance and impact of alumni feedback on enhancing VET programs.

5. Profile of Survey Respondents

The Tracer Pilot Survey captured the characteristics of 201 VET graduates, distributed across twelve regions of Kazakhstan. Respondents were all from the railway transport sector and included graduates from both conventional and dual VET programs.

The data reveals a clear age and gender distribution among the graduates. Notably, 21-year-olds constitute the largest group of pilot survey participants, with 90 graduates (50 males and 40 females). Overall, the study surveyed 113 males and 88 females, suggesting a male dominance in this sample.

In terms of transport sector qualifications obtained, the most common qualification among the interviewed graduates is the Transportation Organizer Technician, held by 131 graduates (65.2 per cent). Other qualifications, such as 'Centralized Station Post Dispatcher' and 'Dispatcher of the 4th and 5th Class Railway Station', also have significant representation but to a lesser extent. This distribution highlights the graduates' focus on roles critical to railway logistics.

The regional distribution of graduates indicates diverse geographic representation, with the Ulytau Region having the highest proportion at 28.9 per cent of survey participants. Other significant regions include Atyrau (19.9 per cent) and Karaganda (14.9%). However, some regions, like Zhambyl and Turkestan, are underrepresented, suggesting potential disparities in access to vocational education or challenges with tracing graduates from VET schools in these regions.

Table 1 – Profile of graduates that participated in the tracer study.

A1.1- A1.2 Gender by age			
Age	Male	Female	Total
21	50	40	90
22	39	28	67
23	14	12	26
24	10	8	18
Total	113	88	201
A 1.3 Qualification obtained			
	Freq.	Percent	Cum.
1203012 (3W10410201) - Dispatcher of the 4th and 5th class railway station	22	11.0	11.0
1203022 (3W10410202) - Centralized station post dispatcher	30	14.9	25.9
1203062 (3W10410203) - Cargo and baggage receiver	10	5.0	30.9
1203082 (3W10410204) - Transportation document operator	8	4.0	34.8
1203093 (4S10410205) - Transportation organizer technician	131	65.2	100
Total	201	100	
A 1.4 Which region are you from?			
	Freq.	Percent	Cum.
Abai Region	5	2.5	2.5
Akmola Region	26	12.9	15.4
Aktobe Region	13	6.5	21.9
Atyrau Region	40	19.9	41.8
Zhambyl Region	1	0.5	42.3
Karaganda Region	30	14.9	57.2

Kostanay Region	2	1.0	58.2
Pavlodar Region	15	7.5	65.7
North Kazakhstan Region	5	2.5	68.2
Turkestan Region	2	1.0	69.2
Ulytau Region	58	28.9	98.0
Astana City	4	2.0	100
Total	201	100	
A 1.5 Did you have to go to another region to study?			
	Freq.	Percent	Cum.
Yes	53	26.4	26.4
No	148	73.6	100
Total	201	100	
B 1.1 What is the name of the VET institute you graduated from?			
	Freq.	Percent	Cum.
Electrotechnics College	5	2.5	2.5
Burabay College	38	19.0	21.5
Aktobe College of Transport, Communications, and New Technologies	14	7.0	28.5
Atyrau Agrotechnical College named after O. Koshekov	13	6.5	35.0
Atyrau Polytechnic Higher College named after S. Mukashev	16	8.0	43.0
Atyrau Business and Law College	13	6.5	49.5
Karaganda Railway College	27	13.5	63.0
Higher College of Electronics and Communications	13	6.5	69.5
Zhezkazgan Business and Transport College	61	30.5	100
Total	200	100	
B 1.2 What was the nature of your study?			
	Freq.	Percent	Cum.
Full-time	198	98.5	98.5
Part-time	3	1.5	100
Total	201	100	
B 1.3 Did you study under the dual program?			
	Freq.	Percent	Cum.
Yes	167	83.1	83.1
No	34	16.9	100
Total	201	100	
B 1.4 Did you complete an internship at an enterprise?			
	Freq.	Percent	Cum.
Yes	194	96.5	96.5
No	7	3.5	100
Total	201	100	

Source: Pilot Tracer Study Kazakhstan

The data indicates that 26.4 per cent of graduates that participated in the pilot had to relocate to another region for their studies, reflecting a notable level of mobility among students. This relocation may be driven by the scarce availability of vocational programs in the railway transportation sector in

different regions. Such mobility highlights the importance of access to VET in addressing skill shortages and aligning workforce capabilities with regional economic demands.

The VET institutes attended by graduates vary significantly, with Zhezkazgan Business and Transport College being the most popular, attended by 30.5 per cent of respondents. Other notable institutions include Burabay College (19.0 per cent) and Karaganda Railway College (13.5 per cent). An overwhelming majority of graduates, 98.5 per cent, pursued their studies full-time. This preference for full-time education suggests a commitment to intensive training and skill development. The small percentage of part-time students may indicate that full-time programs are more aligned with the vocational training objectives.

Additionally, participation in dual study programs is high, with 83.1 per cent of graduates indicating they engaged in such programs. This model combines theoretical learning with practical application, effectively preparing students for the labour market. The prevalence of dual programs underscores the importance of hands-on experience in vocational training, enhancing graduates' employability.

Finally, internship completion rates are notably high among the graduates interviewed, with 96.5 per cent of graduates having completed an internship at an enterprise. It highlights the critical role of practical experience in dual vocational education, providing graduates with the skills and insights necessary for successful employment.

The STATA log-file for generating the profile of graduates is attached in Annex 5.

6. Conclusion

The pilot tracer study served as a valuable initiative, laying the groundwork for understanding the complexities of survey preparation, data collection, and analysis in assessing vocational education and training (VET) programs in Kazakhstan. The preparation and implementation process highlighted critical bottlenecks that must be addressed, including legal requirements surrounding data privacy, the need for strong collaboration among stakeholders, and the capacity-building needs for personnel involved in data collection and analysis.

To create a conducive environment for tracer studies, the following recommendations are proposed:

1. Engage Legal Advisors: Collaborate with legal experts to assess the implications of Kazakhstan's Law on Personal Data and identify feasible options for compliance. This proactive approach will help navigate legal complexities more effectively. Additionally, advocate for changes to restrictive data-sharing laws or regulations that hinder tracer studies by building a case for the benefits of such studies on skills development.

2. Establish Clear Data Sharing Protocols: Develop standardized protocols for obtaining explicit consent from graduates for data sharing, ensuring compliance with existing laws. These protocols should clearly communicate to graduates how their data will be used and the measures taken to protect their privacy, while also considering any potential legal limitations.

3. Foster Collaboration Agreements: Develop collaboration agreements between the Ministry of Education, VET schools, TALAP, and TALDAU that outline the roles and responsibilities of all parties involved in the tracer study process. These agreements should emphasize the mutual benefits of sharing graduate information for research and improvement of VET programs, while being mindful of legal constraints. Additionally, VET colleges can play a proactive role in raising awareness about the survey among graduates or last-year students, encouraging their future participation. By actively promoting the survey's importance, VET colleges can help increase response rates, which will lead to more robust data and insights to inform program development.

4. Identify Funding Sources: Seek potential funding sources to support the logistical and technical needs of future tracer studies, ensuring that financial constraints do not hinder effective data collection and analysis.

To enhance the methodology for future tracer studies, the following recommendations are proposed:

1. Sampling Enhancements: Engage More VET Schools. Proactively reach out to a broader array of VET institutions, emphasizing the importance of their participation in the study. Hosting workshops or informational sessions can clarify the study's goals and the value of alumni feedback.

2. Diversify Sample Size: Utilize a stratified approach to ensure diverse representation across different courses, regions, and demographics. This will provide a more comprehensive understanding of graduate outcomes and experiences.

3. Data Collection Process: Utilize Multiple Channels for Outreach. Given the challenges in obtaining accurate contact information, employ a variety of communication methods, including emails, text messages, and social media platforms, to reach graduates effectively and encourage participation.

4. Implement Engagement Incentives: Consider offering incentives, such as participation in a raffle or small rewards, to motivate graduates to complete the survey fully and provide candid feedback.

5. Ensure Anonymity: Design the survey process to guarantee anonymity, allowing graduates to feel comfortable sharing their responses without fearing repercussions from former teachers or college representatives.

6. Implement Mixed-Methods Approaches. Also employ qualitative methods (e.g., interviews, focus groups) to gather insights on graduate experiences. These can often be conducted without stringent data-sharing requirements and can provide rich context. Also, develop case studies of specific programs or cohorts that can illuminate broader trends while protecting individual identities.

To enable the conducting of future tracer studies without external technical support, the following recommendations are proposed:

7. Enhance Statistical Tools and Processes Training. Provide training workshops for personnel involved in the tracer study process, focusing on statistical principles, tools, and processes required for effective data management and analysis. This training should cover data cleaning, analysis techniques, and best practices for tracer study implementation. Additionally, integrate the use of online platforms and artificial intelligence (AI) into the training. Explore how online survey tools can streamline data collection, facilitate real-time data entry, and improve response rates. Incorporate AI-driven analytics to assist with data interpretation and predictive modeling, enhancing the overall efficiency and effectiveness of tracer studies.

8. Promote Continuous Learning: Encourage ongoing professional development opportunities for staff to stay updated on emerging tracer methodologies and techniques in data collection and analysis. This will help ensure that personnel are well-equipped to handle the complexities of future tracer studies.

By applying these recommendations, future tracer studies can achieve greater data integrity and yield more accurate insights into the effectiveness of VET programs. These improvements will not only support evidence-based policymaking in Kazakhstan's vocational education sector but will also enhance the overall impact of VET initiatives, ultimately contributing to a more skilled and responsive workforce.

References

European Training Foundation. International Labour Organization and Cedefop. 2016. Carrying out tracer studies - Guide to anticipating and matching skills and jobs Vol. 6. Available at: https://www.etf.europa.eu/en/publications-and-resources/publications/carrying-out-tracer-studies-guide-anticipating-and-matching

European Training Foundation. Skills Anticipation and Matching Systems. 2012. in Transition and Developing Countries. Available at: https://www.etf.europa.eu/sites/default/files/m/84E964F6CBD16532C1257AAD0038EC27_Skills%20matching%20systems.pdf

EU – VET Toolbox. 2022. Tracer studies for VET: supporting their creation and implementation. Available at: https://vettoolbox.eu/publications/tracer-studies-for-vet-supporting-their-creation-and-implementation/

Appendices

Annex 1. Master Dataset Tracer Study

Annex 2. STATA-Do File: Full code used for data coding.

Annex 3. Original Sample Frame

Annex 4. Adjusted Sample Frame

Annex 5. STATA-Log File: Generating profile of survey respondents

Annex 6. Adjusted Questionnaire