

# Tracer Study

of the graduates  
in Heating, Gas and Ventilation Systems specialty

Republic of Moldova

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## 1. BACKGROUND

The Construction College from Chişinău is one of the two educational institutions from Moldova (along with the college of Construction from Hânceşti) that trains technicians for the field of „Heating, Gas and Ventilation Systems” (HGVS). The college offers two study programs:

- 4-year program for people graduating from the 9<sup>th</sup> class (lower secondary school) with the possibility to take the bacalaureate exam;
- 2-year program for people graduating from the 12<sup>th</sup> class.

Beginning with the academic year 2014/15 the college also offers a program for part-time studying, where the requirements for being present in the college are considerably reduced. Graduates of the college have access to higher education, i.e. university.

## 2. TARGET GROUP

The target group of this study were the two groups of graduates the college had in June 2013 for the specialty „Heating, Gas and Ventilation Systems”. One group graduated from a 4-year course and one group graduated from a 2-year program. Totally there were 52 graduates, out of whom 49 were male and 3 female. The data collection was undertaken in September 2014, i.e. 14 months after graduation.

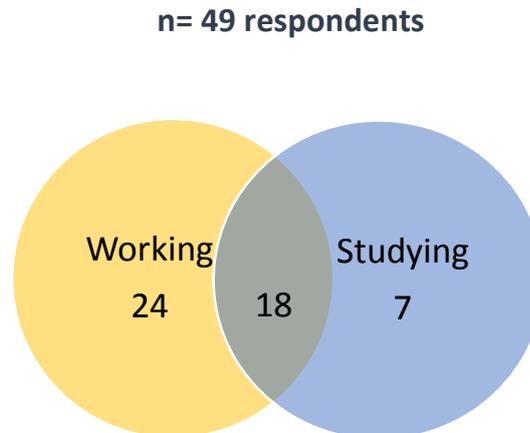
| 4 year course |          | 2 year course |          |
|---------------|----------|---------------|----------|
| 29 graduates  |          | 23 graduates  |          |
| 26 male       | 3 female | 23 male       | 0 female |

## 3. METHODOLOGY

The college administration provided the lists containing names, addresses and phone numbers of the graduates. Since the total number of graduates (52) is rather small, LED decided not to create a sample but to contact all graduates. We started with semi-structured phone interviews. Unfortunately, this approach did not lead to an acceptable response rate, even if we made calls during working hours, in the evening and on weekends. It seemed that since they graduated from the college, a lot of people either changed their address and phone number or left abroad. Therefore, we had to use alternative methods to get as many respondents as possible, one of which was the social network platform "odnoklassniki". However, there were still people we could not contact. So, we decided to call once again some of those whom we succeeded to contact initially and asked them to provide us with information about their colleagues. Finally we managed to get information on 49 out of 52 graduates.

## 4. PRESENTATION AND DISCUSSION OF THE RESULTS

Figure 1: General findings



Unemployed: 0

Army: 0

From the total number of 49 respondents, 42 were working and only 7 respondents were not working. A relatively high number of respondents (18) were both working and continuing their studies.

1 out of 49 respondents reported that he became an entrepreneur, but he was working in sales which was not connected to heating, gas or ventilation systems. None of the respondents were unemployed or serving in the army.

It is important to discuss the term "work/working" before proceeding with the analysis of the emergent results. 18 respondents reported working occasionally or working on short term projects, which makes us cautious to label them as "employed". This also refers to the respondents who travelled periodically abroad (predominantly to Russia), whose length of stay abroad is restricted by the work permit, and in case they do not have a work permit, they cannot remain longer than 90 days at the end of which they are bound to return home. And of course, when they went back they had to look for a new job. From this perspective, we were careful about using the term "employed" in this report to refer to the respondents who were active in remunerated work and decided to consider them simply to be people who had a job at the moment of the survey. This seems to be a specific issue for the construction sector. A lot of people get hired on short-term contracts, i.e. for a specific construction project only. Often they do not have a long-term contract with a particular company. Construction is also the sector, where the outflow of workforce mainly to Russia is very significant.

#### 4.1. WORKING

VET is about preparing people to find a suitable job or to get self-employed. The most interesting question of any tracer study is therefore, what percentage of the respondents is actually working and what are these respondents working?

Figure 2: Overall number of graduates, respondents and respondents working in HGVS

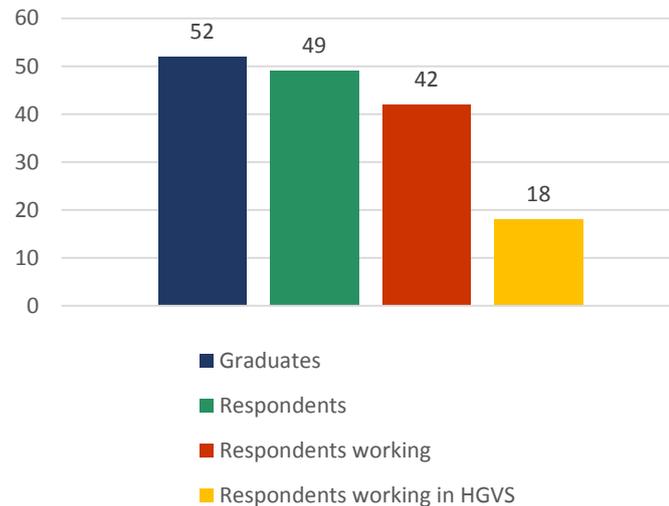
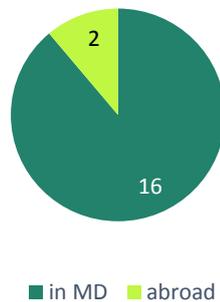


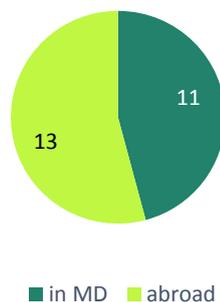
Figure 3: Respondents working



From the total number of 52 graduates and 49 respondents, 42 were working. Of the 42 respondents who were working, 18 of them reported working in their field (HGVS) and 24 in other domains. All in all, it is encouraging to see that a large number of graduates (86%) were working. Yet, a closer look at the data shows that only 18 were working in the domain of HGVS (37% of the total number of respondents), which is less than half of the people being in work. 27 respondents remained in Moldova and 15 left the country.

*Figure 4: Respondents working in HGVS***n=18 respondents**

As a next step, we wanted to see where exactly the people working in HGVS were working. Out of 18 graduates who were working in HGVS, 16 were doing so in Moldova and, respectively, 2 abroad. 1 of those 2, who were working abroad, previously also worked within the field of HGVS in Moldova, but left his job because of the low salary.

*Figure 5: Respondents working in other domains***n=24 respondents**

As mentioned above, the number of respondents working in other domains than HGVS is bigger than the number of respondents working in HGVS. 24 respondents changed the field of their work. Less than half of them (11) are working in Moldova and 13 went abroad for work.

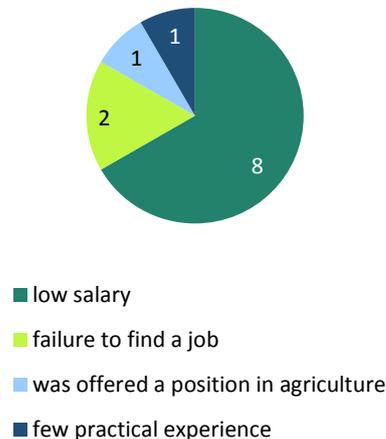
The respondents who chose to work in other domains, worked as follows:

- in constructions (13- all those who left abroad for work), which is indeed a worrying indicator: it's obviously more profitable to work as untrained workforce on construction sites abroad than working according to the specialty in Moldova!
- as a firefighter (1)
- as a waiter (2)
- as a warehouse assistant (1)
- as a driver (1)
- in an international transport company (1)
- in agriculture (1)
- in commerce (1)

These numbers are in line with the tendency of young men going for work on the construction sites abroad (mainly to Russia). Unfortunately, it seems that they have difficulty to work abroad in their specialty, i.e. working in HGVS.

The key reasons for changing their occupation are diverse, for instance:

Figure 6: Main reasons for not working in HGVS



- Low salary, which was mentioned by 8 respondents and who ultimately either worked in constructions (roof-maker, glazier, tiler), or as a driver, as a waiter, in an international transport company and by 1 graduate who became an entrepreneur in sales;
- Not succeeded to find a job related to their specialty (mentioned by 2 respondents);
- No need to search for a job, as in the case of one respondent who was offered a position in agriculture immediately after graduation;
- Insufficient professional preparation (few practical experience) for working confidently in the field – stated by 1 person.

The reasons mentioned above indicate that 3 persons would accept jobs in HGVS if they found workplaces or if they felt better prepared. On the other hand, there are 4 respondents whose current jobs had nothing to do with their completed degree and who reported working previously in HGVS:

- 1 person worked for 6 months in a firm that installed ventilation systems, but left the job because of the low salary. At the moment of the interview, he was working abroad.
- 1 person worked in a firm that installed ventilation systems, but at that moment the person was working in the USA (through Work & Travel programme)
- 1 person worked 9 months in the field but left the job because of the low salary. At the time of data collection he worked in constructions in Moldova as a roof-maker.
- 1 person worked for a period of 7 months, but also resigned due to low salary and went abroad to work in constructions.

We ask ourselves whether the salary of a worker who, for instance, installs windows or makes roofs is indeed higher than the salary of a worker who installs heating and ventilation systems. One thing is certain, according to the statements of our respondents, the low salary was the key reason to explain why many respondents did not work in the HGVS or left their jobs in this field to find a better-paid job. Confronted with this question, construction practitioners and entrepreneurs mentioned that the crucial explanation might simply be the amount of work. There is much more other construction work to be done than the works related to HGVS. This means that people do get more work as general construction workers than as HGVS specialists. The addressed construction practitioners also mentioned that companies often do not pay young specialists well as they do not have any work experience. We also

assume that a lot of works related to HGVS are done by not specialised people, further diminishing the need for specialists in this field. Like so often in Moldova, there might be strict regulations on who is allowed to do installation work for heating and ventilation systems, but in reality, we assume, these tasks are done by people not having the relevant certificate. This factor is a general issue and an obstacle in getting a specialisation. Why should one care to get a specialisation, if this does not pay off in the labour market because the respective work is done by people without a relevant certificate? The problems in VET are often a problem of a skill mismatch. This has been stated in many analyses of the VET system. But there might also be an issue with the labour market not respecting regulations, which reserve certain tasks for people with particular qualifications only and thus leading to a devaluation of these qualifications.

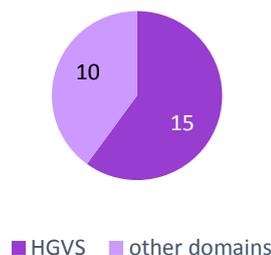
This succinct study suggests that there are specialists in HGVS, who would like to work in their profession but are not doing so because of the low salaries.

#### 4.2. Studying

A considerable number of respondents are studying. For us it was therefore the most important question to ask what the fields of their studies were.

Figure 7: Graduates studying

n=25 respondents



From the total number of 25 students continuing their studies, 15 respondents continued their studies at TUM following the same specialty (Engineering of HGVS). This is 60% and therefore well above half of the respondents who continued their studies. One can assume that people graduating from the college in HGVS and continuing their studies in this domain are eager to stay in this field. This is indeed a positive result and partly contradicts the vague assumption that people attend college only for getting the baccalaureate and to continue their studies in something completely different. 60% of the respondents continuing their studies in their specialty and therefore can build on the prior learning. This means the resources spent for their vocational related education are being used.

10 respondents changed the domain and opted for further studies in other universities or have chosen other faculties:

- ASEM (Business Administration) (3 persons)
- USM (Law)
- ULIM (Biomedicine and Ecology, Cosmetology)
- Medicine in Sweden
- USEFS (Security and Firebrigade)
- UASM (Automotive Engineering)
- UTM (Construction Materials)
- UTM (Railway and Road Construction)

Among the reasons why they continued their studies at non-related HGVS programmes were:

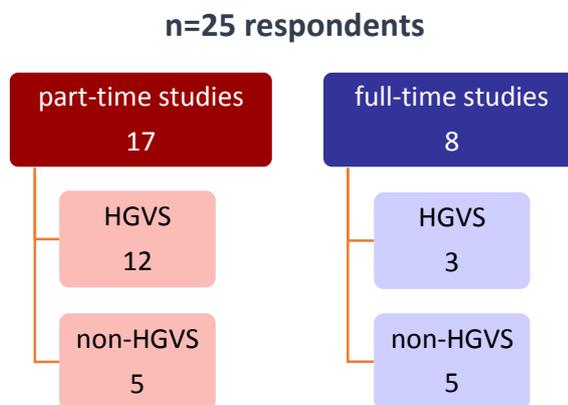
- Did not like HGVS (3 respondents)

- To obtain a higher education degree, which will increase his chances of getting a job (1 respondent)
- Have got a state-funded scholarship for particular study programmes (2 respondents)
- To get to the USA through the Work & Travel programme, which requires participants in the programme to be a student at a higher education institution (1 respondent)
- Specific circumstances (2 respondents)

We didn't find out about 1 respondent's reasons for choosing a non-related HGVS programme, as we couldn't talk directly to him and asked his colleagues to tell us about what he was doing at the moment of the survey.

Coming back to the assumption that a lot of students just go to the colleges to get the baccalaureate independent of what the specialisation is, one can see that at least for the HGVS programme this does not hold true. Only 3 respondents clearly said that the reason for having chosen other specialties was that they did not like HGVS (and one of them was still working in this field).

Figure 8: Types of studies



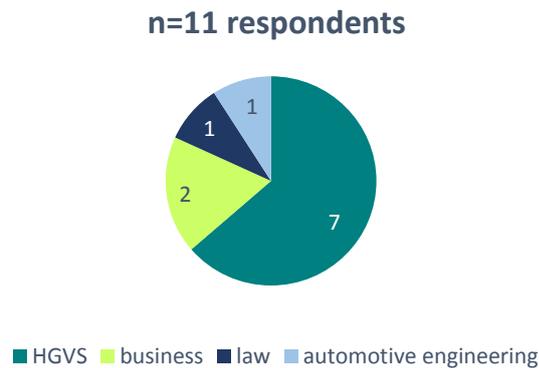
From the total number of 25 graduates who decided to continue their studies, 17 were studying part-time and 8 were full-time students. Out of 17 part-time students, 12 were studying Engineering of HGVS, while 5 have chosen other specialties. Out of 8 full-time students, 3 were studying Engineering of HGVS and 5 were studying other specialties. 18 graduates were working and studying at the same time:

Figure 9: Both working and studying respondents

**n=18 respondents**

|                         | Studying HGVS | Studying non-HGVS |
|-------------------------|---------------|-------------------|
| <b>Working HGVS</b>     | 7             | 4                 |
| <b>Working non-HGVS</b> | 5             | 2                 |

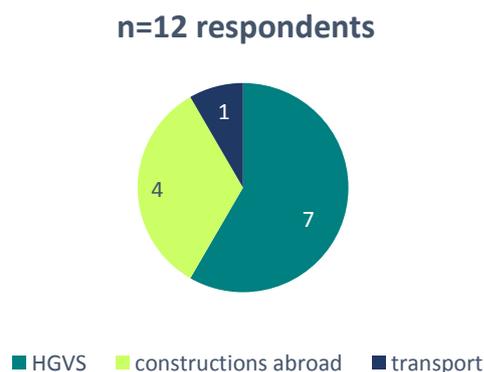
After looking at the fields of study of all the respondents who continued their studies, it was interesting for us to see what exactly were studying those who were at the same time working in HGVS. We assume that the field of study indicates what further career plans these people are pursuing.

*Figure 10: Fields of study of graduates who were working in HGVS (18)*

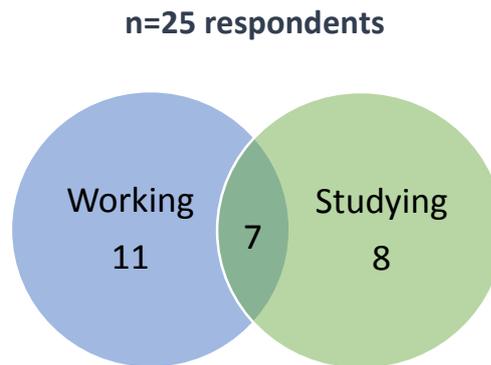
Out of 18 graduates who were working in HGVS, 11 were studying at the same time. 7 of them followed the same specialty – Engineering of HGVS, 2 of them chose Business Administration, 1 was studying law and 1 was studying automotive engineering.

We cannot exclude the possibility that some of these students were studying simply because they had the baccalaureate and for some people, one has not fulfilled the education as long as one does not have a university degree. It is also not excluded that the respondents continuing their studies in Business Administration will use both their competence in HGVS and business in the future.

What were working the respondents who continued their studies in HGVS? This implies of course only the respondents who were working and studying at the same time. This question is also of particular interest for this study. People who after graduating from HGVS continued their studies in HGVS are most probably interested to work also in HGVS.

*Figure 11: Fields of work of graduates who were studying HGVS (15)*

Out of 15 graduates who were studying HGVS, 12 were working at the same time. 7 of them were working in HGVS, 4 respondents in constructions abroad and 1 respondent in a transport company. One interpretation of this fact could be that 40 % (5 out of 12) are most probably interested to work in HGVS but cannot do so either because they do not find a corresponding workplace or the salary in other jobs (although unqualified) is higher. This would once again indicate that there might be issues with the labour market.

*Figure 12: People who remained in the field*

After the completion of their training programme at the Construction College, 18 respondents stated to have been working according to their specialty, 15 continued their studies at the Technical University of Moldova following the same specialty (Engineering of HGVS). 7 respondents were working according to their specialty and simultaneously studying Engineering of HGVS.

From those 15 respondents who decided to continue their studies in the same field, we have heard the following reasons for doing so:

- To start-up their own company at some point in the future (listed by 3 respondents)
- To learn more about this specialty as they really enjoyed it (2 persons)
- To gain a sense of self-fulfilment (to enhance his skills, not to be just a worker - 1 person)
- To get a state-funded scholarship (1 person)
- Has been influenced by his friends (1 person)

Taken all together, 53% of the respondents (25 out of 49) are still in HGVS. There are indications that this number would be even higher, if the labour market were more attractive. Of course, one of the factors could very well be the skill mismatch, i.e. that the graduates have trouble to get decent paid employment because they do not bring the right set of competence. The fact that a considerable part of the respondents prefer to work as unqualified workers than in their specialty, indicates that there are also issues in the labour market. This might be related to the peculiarities of the construction sector, e.g. the high ratio of informality and the possibly low level of inspection so that often, works are done not by qualified workforce.

## Annex

### Questionnaire

- 1) Living
  - a) Where? [Country, Raion]
  - b) If abroad: Country? Planned duration?
  
- 2) What are the graduates doing 15 months after graduation?
  - a) Job/employed:
    - i) in the respective sector, related to the study?
      - (1) Since when?
      - (2) How long did it take to find a job?
      - (3) How did you find a job?
      - (4) Full-time or part-time employed?
  
    - ii) in another sector?
      - (1) Which?
      - (2) Why?
  
  - b) Further education:
    - i) In a related field, i.e. related to the college study?
      - (1) Where?
      - (2) What exactly?
      - (3) Full-time or part-time student?
      - (4) Why did you decide to go to university once you already had a college diploma?
  
    - ii) In another field?
      - (1) What exactly?
      - (2) Where?
      - (3) Why?
  
  - c) Unemployed:
    - i) Looking for a job in which sector?
    - ii) Did you work previously?
  
  - d) Self-employed:
    - i) In business related to the VET study?
    - ii) In business not related to the college study? Why?
  
  - e) Other: