Equal class

Alumni Survey Results

Comparing graduates' labour market experience

Full Report

Engineers Qualified in Higher Non-University VET Institutions – Providing Arguments and Evidence for NQF/EQF Classification

This project has been funded with support from the European Commission and the Austrian Federal Ministry of Education and Women's Affairs (BMBF). The content of this publication reflects the views only of the author, and neither the Commission nor BMBF can be held responsible for any use which may be made of the information contained therein.

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Lifelong Learning Programme

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Executive summary

This document is the report on the Alumni Survey that was carried out within the EQUAL CLASS project. The main aim of the survey was to increase the understanding of and to compare the occupations and positions of graduates in the fields of mechatronics, electronics and/or electrical engineering in the European labour market, in order to gain insight on the following aspects:

- *What is the current job status of graduates?*
- *What job level & level of responsibility do they have?*
- *How effectively did their qualification equip them with the skills and competences required to succeed in the labour market?*

The survey was carried out through the use of a web-based questionnaire developed in four different languages (English, Portuguese, Lithuanian, and German).

The survey was carried out in Austria, Germany, Switzerland, Lithuania, and Portugal in collaboration with selected local schools. A country overview was developed for each of the survey countries in order to better understand the results and the context in which they were obtained.

Survey results

More than 500 graduates were contacted in the survey countries, and a total of 102 completed the questionnaire. This is a response rate of 20.4%. A minimum of 40 responses was anticipated, and therefore the 102 completed questionnaires represent a more than satisfactory result.

A full comparative analysis was developed on the basis of the results, taking into account the fact that from the inception of the project the partnership team was aware that it would not be possible to survey a representative sample. The findings should therefore be seen as qualitative and not quantitative.

Some of the major conclusions are outlined below:

- The majority of respondents did not have a job at the time of enrolment in the course, and they did not have one when they graduated. One of the reasons for this is that many of the qualifications investigated in this study are IVET, wherein individuals are typically not employed prior to enrolment. The evidence from further investigation of the employment situation suggests that respondents found it relatively easy to secure a job.

- In terms of the respondents' first job after graduation, there is a great deal of variation between the type of jobs in which graduates were

employed, e.g. experienced non-managerial, entry-level jobs, project manager (team leader), trainee, intern, and assistant roles. This finding is interesting because if the types of jobs, and the responsibilities those jobs entail, can differ so widely it may indicate that previous experience and qualifications are taken into consideration.

- In terms of mobility across borders, almost all respondents are employed in the same country in which they received their qualification. This suggests, therefore, that these qualifications have a very low mobility factor.

- With regard to the level of autonomy in their first job after graduation, this seems to vary depending on the area. For instance, the overall findings suggest that the level of autonomy is high in that graduate jobs entail many responsibilities. However, when the results are analysed in detail, it becomes clear that in terms of individual responsibilities, for example budget or management skills, the respondents believe that they had a low level of autonomy.

- In relation to the respondents' current professional status, the majority indicated that they have a permanent contract, while a minority have fixed-term contracts or other temporary agreements.

- In terms of career progression, the majority of the respondents indicated that their current job is also their first job after graduation, and in some cases it was the job respondents had prior to enrolment in the qualification programme.

- When asked whether the respondents had experienced change to their professional life as a result of taking the qualification, the majority indicated that their professional life was 'unchanged' or had changed 'positively'.

- With regard to the relevance of skills acquired during the qualification process to the individual's professional life, the overall response of respondents was positive, indicating that the learning outcomes effectively match the expectations of employers.

<u>Selective findings from the schools/courses are presented below:</u>

- The majority of respondents completed their qualification between 2 and 3 years ago. It is interesting to note that the majority of respondents from the German school were employed upon enrolment in the qualification. This may be explained by the fact that the qualification offered in this school is CVET, whereas many of the other courses are IVET and it is more common for those that are unemployed (or have yet to obtain their first job) to participate in IVET courses.

- In terms of the number of graduates that had employment upon completion of the qualification, the Austrian and German schools appear to have most graduates with job offers. The overall results indicate that there is a variety of different experiences in relation to the ease with which graduates find work upon graduation.

- Some graduates are employed as a project manager or a higher position, but it is clear that the individuals with these jobs were those that had worked or were in employment prior to enrolment.

- The most common types of job profiles within the sample include building construction, engineering, and installation/maintenance.

- Within a European context, it is interesting to note that the majority of respondents from all schools stated that they worked in the same country as that in which they obtained their qualification. Only the Austrian school had graduates that sought employment across borders.

- The majority of the respondents stated that they performed relatively simple tasks. However, a significant proportion of the graduates from the Grundig Akademie and ABB Technikerschule schools indicated that they possess a higher level of autonomy in terms of tasks, probably due to the CVET nature of the qualification they obtained.

- The majority of the graduates indicated that their current job is also their first. This seems logical as the majority of the graduates only received their qualification two to three years ago.

- The respondents were questioned about the relevance of skills taught during their participation in the qualification programme. The results indicate that respondents felt that they were not taught all of the skills necessary to the performance of their jobs, but they were taught all of the necessary technical skills.

The survey findings and analysis serve as an important component in the overall execution of activities within the EQUAL CLASS project. The data collected will also be used in the formulation of recommendations at the conclusion of the project, and feed into the development of an improved understanding of the selected qualifications in the partner countries.

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1. Introduction

1.1. Introduction to the project

The European strategic framework for cooperation in education and training ('ET 2020') calls for coherent and comprehensive lifelong learning strategies. This should include the establishment of more flexible learning pathways (Council of the European Union, 2009) combining different learning venues and provision modes. In its third strategic objective, the Bruges Communiqué (2010) calls for the promotion of flexible pathways between VET, general education, and HE. The widespread use of learning outcomes to define and describe qualifications – promoted by the Bologna and Copenhagen processes – is calling into question the traditional distinctions between higher education (HE) and vocational education and training (VET). The Copenhagen process specifically seeks open pathways and parity of esteem between vocational education and training, and general/higher education.

The introduction of new style qualifications frameworks based on learning outcomes, such as the European qualifications framework for lifelong learning (EQF) and those being developed in higher education, is urging authorities and stakeholders to reconsider the relationship between the separate frameworks and educational offers utilised for general education, vocational education and training (VET), and higher education (HE). The use of learning outcomes as a paradigm for changes in education and training goes beyond the traditional dividing lines that follow institutional anchorages, level assignments, or qualifications types. **1**

The EQF for lifelong learning provides a common reference framework which enables comparison between national qualifications systems, frameworks, and their levels. It serves as a translation tool, making qualifications more readable and understandable across different countries and systems in Europe. It therefore promotes lifelong and life-wide learning, and the mobility of European citizens in their study or work endeavours. In order to allow the EQF to function, European countries are invited to relate their national qualifications levels to the appropriate levels of the EQF.**2**

Practical difficulties with qualifications frameworks have emerged at the interface between VET and HE. In several countries there has been a heated debate on the classification of VET qualifications on the EQF, e.g. in relation to

1 Cedefop research paper: Vocational education and training at higher qualification levels: http://www.cedefop.europa.eu/EN/Files/5515_en.pdf
2 http://ec.europa.eu/eqf/home_en.htm

engineering qualifications provided at higher non-university VET institutions. The question of how to value work experience after completion of such a higher VET programme in the context of NQF classification has caused heated debates. Divergent classification of similar qualifications in EU countries could lead to discrepancies and thus constrain the success of the EQF. Failing to value work experience in an appropriate manner may lead to an underestimation of professional - technological - human capital and potentially reduce the attractiveness of such VET programmes. Therefore, the EQUAL-CLASS project focuses on the professional experience graduates of technical qualifications have gained while working in their jobs.

1.2. Aims of the EQUAL-CLASS project

- comparing selected qualifications in the field of mechatronics and electrical engineering/electronics in relation to their learning outcomes in the emerging National Qualifications Frameworks (NQFs) and their links to EQF levels;
- adapting, testing, and further developing an overall methodology for describing qualifications (based on the template developed in the ZOOM project - http://www.zoom-eqf.eu/);
- using 'Remote Labs' as a 'reality check' for the classification decision (reality check 1);
- analysing and comparing occupations and positions of graduates of selected qualifications in several countries (reality check 2);
- elaborating how relevant professional experience gained following completion of a corresponding VET programme justifies the allocation to a higher level of qualification;

1.3. Aims of Work Package 6

The primary objective of this work package was to develop and implement Reality Check 2 through the use of an alumni survey in order to increase our understanding of the occupations and positions of the graduates in mechatronics, electronics/ electrical engineering. The aim was to collect and analyse data on the tasks which graduates are required to undertake in their jobs and to gain insight into the mechatronics, electronics/electrical engineering areas of the European labour market.

This aim was accomplished by collecting data on the tasks which graduates are required to undertake in their jobs and other relevant information about their qualifications and work life.
The survey was carried out in Austria, Germany, Switzerland, Lithuania, and Portugal.

1.4. Main activities of the Work Package:

- Designed questionnaire on the basis of the results of the second meeting
- Identified and invited possible respondents in the selected countries
- Implemented questionnaire online to maximise the number of respondents, with the use of Google Drive
- Data collection process
- Developed comparative analytical report

2. Methodology

The survey was implemented with the involvement of all partners and was divided into three main phases: 1) development of data collection tool; 2) data collection; 3) treatment of data and analysis.

1. Development of data collection tool

The partnership determined that the most suitable data collection tool for this project was a questionnaire, as it was the most appropriate research mechanism for the type of information that needed to be collected. In the initial phase of development a discussion took place on the concerning the target group of the survey. During the second meeting in particular, the target group, format, structure, and content of the questionnaire were discussed by the partnership. Following this discourse, SPI developed the draft version of the questionnaire in English, which was distributed among partners for comment. It was crucial to take into consideration that the questionnaire was to be applied in a range of different contexts. This was particularly important when it came to question design as the majority of the questions were of a close-ended multiple choice format. Therefore, the answer options had to be applicable and relevant to all of the countries in which the survey was conducted. This was also one of the reasons why the finalisation process for the questionnaire was extensive, as many drafts, including pilot test versions, were developed prior to the final version. The questionnaire was translated from English into German, Portuguese, and Lithuanian in order to allow graduates to complete the survey in their native language.

2) Data collection

The partners agreed that the questionnaire should be made accessible online, as this was considered to be a simple, quick, and accessible approach for the respondents that would allow for easy collation of results and overall data.

Google docs was selected as the online platform for the survey. Each language version had its own link for easy access to the questionnaire:

- http://web.spi.pt/Equal_class/pt/index_en.html
- http://web.spi.pt/Equal_class/pt/index_de.html
- http://web.spi.pt/Equal_class/pt/index_pt.html
- http://web.spi.pt/Equal_class/pt/index_lt.html

Potential survey participants had already been pre-defined in the application form, and were further defined by the partnership. The target group were graduates of the schools participating in the project who had graduated between two and five years ago. In order to be considered part of the target group, the graduates had to have received a qualification in mechatronics and/or electrical engineering at a level corresponding approximately to EQF 5-6.

The schools possessed the contact details of the graduates and the partners agreed that an e-mail invitation containing a questionnaire link would be the most suitable method through which to reach the target group. An additional challenge emerged at this stage because some partners were required to contact alumni in writing as they were unable to use their e-mail addresses due to data protection laws.

The response rate from the first invitation was unsatisfactory, with responses missing from entire countries - this therefore necessitated several follow-up actions. The partners made additional efforts and were able to achieve required number of responses. This did, however, extend, the time required to complete the data collection process beyond that originally anticipated. In the 3rd project meeting, which took place in Porto in January 2014, the partners agreed to extend the deadline in order to gather as much data as possible.

More than 500 graduates were contacted in the survey countries and 102 completed the questionnaire. This is a response rate of 20.4%. In the application form a minimum of 40 responses was anticipated, and therefore the 102 completed questionnaires represents a satisfactory response rate. The survey was carried out in Austria, Germany, Switzerland, Lithuania, and Portugal. The questionnaire is included in the annex of this report.

3) Treatment of data and analysis

Through use of the Google docs software, each time a respondent completed the questionnaire the raw data was automatically generated in an excel spreadsheet alongside the other responses. This raw data was then analysed and graphics produced to illustrate the results and findings, as shown in section 4 of this report. For each question, a table shows the number of responses and a figure outlines the results.

In the process of assessing the results and performing a comparative analysis, it became clear that there are limitations in the extent to which a

comparative analysis can be undertaken on the data. This is due to three primary factors:

- The different national realities of the school systems, different qualifications, and differing career progression paths prevent a detailed comparison, as do the different contexts which must also be taken into consideration.
- Not all of the 102 respondents answered all of the questions, which makes it difficult to make comparisons between respondents or to even make representative observations.
- Each country provided a different number of respondents. In order to perform a comparative analysis between countries and findings it would be necessary to have a similar response rate from all countries. It is possible, however, to break down the response rate per country, thereby facilitating some comparison.

3. The survey countries

When performing a survey and developing a comparative analysis across countries, it is important to understand the different national conditions and realities. Particularly relevant to this study is a country's respective vocational education system and training qualifications at EQF level 5-6 (or their equivalent). In this chapter a description is provided of the relevant key aspects of the vocational education and qualification systems of each country that participated in the survey.

Austria

The Austrian partner presented a vocational education/training qualification in the area of mechatronics called 'Absolvent/in der HTBLuVA' ('Reife-und Diplomprüfungszeugnis') – VET college qualification. This requires completion of a 5-year compulsory training programme that includes an internship of a minimum duration of 8 weeks. Upon graduation the graduates are approximately 19 to 20 years old. This qualification provides graduates with universal access to higher education (such as studies at universities and universities of applied sciences). If they instead opt to enter the labour market they are able to apply for jobs in engineering at an advanced level (graduates often work in similar jobs as graduates of Bachelor's degree programmes, performing similar tasks but less complex work).

In relation to its qualifications at EQF level 5, Austria can be described as having a long tradition of these types of qualifications. They are firmly embedded in the education and training system and attract a significant number of students.

The five-year programmes provided at full-time Austrian VET colleges are typically undertaken by 14 to 19 year-olds pursuing IVET. Austria, however, also has special forms of VET colleges which cater to different target groups:

- post-secondary VET courses (Kollegs) are targeted towards graduates from secondary academic schools who have already passed the Reifeprüfung exam, but have no IVET qualification;
- VET colleges for people in employment are targeted towards individuals who have successfully completed compulsory schooling and wish to obtain this VET qualification while continuing in employment.

VET qualifications in Austria differ to those of other countries, as the training is school-based but includes practical learning and work placements. VET college qualifications have been provisionally linked to EQF level 5 in Austria.

In some countries this level can also be linked to higher education, but in Austria it is mostly delivered only within IVET. VET college qualifications have a long tradition in Austria, and therefore in principle employers in the country tend to have a greater acceptance and understanding of the competences an individual with this level of qualification possesses.

The Austrian VET college qualification is often referred to as a 'double qualification', meaning that it grants access to both the labour market and to higher education. Interestingly, an equal proportion of graduates choose to enter the labour market and continue on to higher education. The shift to the learning outcomes approach in Austria remains work in progress but has been pursued very actively for several years now.

In terms of relevance to the EQUAL-CLASS project, it is interesting to note that the most popular (in terms of number of attending students) VET colleges in Austria are those that focus on engineering, arts and crafts, and business administration. Furthermore, VET colleges also have the opportunity to develop their own school specialisations to respond to regional needs.

Germany

The German partner presented a vocational education/training qualification in the area of electrical engineering called 'Staatlich geprüfte/r Techniker/n – Elektrotechnik' (EQF level 6). A 2 year full-time or 4 year part-time compulsory training programme leads to this qualification. Upon graduation, graduates are typically between 22 and 28 years old and if they wish to continue their studies completion of the course grants a university entrance certificate. If graduates choose to enter the labour market they are able to apply for jobs in the electrical engineering sector, programming, project and production planning, manufacturing and service industries, and the public sector and civil engineering industry.

The main feature of the German VET system is the close partnership between employers, trade unions, and the government. Management and labour organisations exert considerable influence on the content and form of VET to ensure that their requirements and interests are taken into account.

Switzerland

The Swiss partner presented one vocational education/training qualification in the area of systems engineering called 'Dipl. Techniker HF, Systemtechnik', and another in the area of mechanical engineering known as 'Dipl. Techniker HF, Maschinenbau'. 3 year compulsory training programmes with a minimum of 50% of time spent on practical training at a qualified company and regular guided training in laboratories lead to this qualification. Upon graduation the graduates are between 22 and 28 years old and if they wish to continue their studies the course grants them access to Bachelor's programmes at universities of applied sciences. If they choose to enter the labour market they are able to apply for jobs in the electrical engineering sector, programming, project and production planning, manufacturing and service industries, the public sector and civil engineering industry. In Switzerland most VET programmes are dual-track in nature (i.e. part-time classroom instruction at a VET school combined with a part-time apprenticeship at a host company).

The VET sector in Switzerland forms an integral part of the education system. Education and training begins at upper-secondary level and learners have the option to continue through to tertiary level. Typically, VET is very flexible: learners may pursue more advanced education and training opportunities and change the course of their working lives at a later date with relative ease. Continuing education and training (CET) options are also available at all levels.**3**

In 2011 the proposal for an NQF for vocational and professional qualifications was launched for public consultation (15 February to 15 May 2012). This framework is explicitly oriented to the EQF and suggests the introduction of an eight-level structure defined through knowledge, skills and competence.

Switzerland also sees referencing to the EQF as a part of efforts to align with the Copenhagen process on co-operation in VET. Whether, there will be a single comprehensive framework covering all levels and types of qualifications remains to be seen. As the framework for higher education has not been self-certified to the QF-EHEA, it is still possible that Switzerland will opt for a joint referencing/self-certification.

The shift to learning outcomes has been fundamental to reforming Swiss vocational and professional qualifications in recent years. This work has led to

3 http://www.sbfi.admin.ch/aktuell/medien/00483/01323/?lang=en

the gradual development of methods for writing learning outcomes (5). The use of learning outcomes for general and higher education is more limited but can also be observed in these areas.[4]

Lithuania

The Lithuanian partner presented two vocational education/training/higher vocational education qualifications in the area of Mechatronics known as 'Automatinių sistemų eksploatavimo mechatronikas, and Mechatroninių sistemų inžinierius'. The duration of the courses leading to these qualifications may vary depending on educational background of participants: the courses have a duration of two years for those entering with secondary education; three years for those entering with basic education; and four years if students choose to attend the university of applied sciences. Upon graduation, graduates are at least 22 year old and have a range of available options for the continuation of their studies: study for a vocational bachelor's degree at higher vocational education colleges / universities of applied sciences; bachelor's studies at universities; or continuing vocational training in enterprises. If graduates choose to enter the labour market they are able to apply for jobs in enterprises in the industrial, agricultural, and energy sectors, and communications, health care, and transport sectors, where they performs functions of assembly and operation of automated mechatronic systems and their subsystems (mechanical, pneumatic, hydraulic, electric, electronic, and IT). Lithuania currently does not have any qualifications corresponding to EQF level 5.

A recent edition of the Law on VET legitimises apprenticeship as a form of VET organisation. National and European structural funds have been allocated in recent years for special projects for the development of apprenticeships.

Social partners participate in shaping the content of new qualifications, qualification standards, and VET programmes. They assess VET programmes to ensure that they correspond to labour market needs and organise practical training. Social partners also take part in organising and implementing the assessment of qualifications.[5]

Portugal

The Portuguese partner presented a vocational education/training qualification in the area of mechatronics called 'Técnico Especialista em Tecnologia Mecatrónica'. A 1,560 hour compulsory training programme undertaken in an

4 http://www.cedefop.europa.eu/EN/Files/NQF_developments_2012-SWITZERLAND.pdf
5 http://libserver.cedefop.europa.eu/vetelib/2012/2012_CR_LT.pdf
http://www.cedefop.europa.eu/EN/Files/6123_en.pdf

institution and in a company (internship) typically leads to this qualification, which refers to EQF level 5. Upon graduation the graduate is between 21 and 23 years old and has the ability to apply for higher education courses via the special entry track, regulated by subparagraph b) of paragraph 2 of article 3 of the Decree-Law no. 393-B/99, of the 2nd of October. Should they wish to continue their studies the training graduates have already undertaken is accredited to whichever higher education course they enter. If graduates choose to enter the labour market they can apply for jobs in the area of electronics, electricity, mechanics, or automation.

Qualifications at EQF level 5 are progressively described in terms of learning outcomes. This description is, however currently still work in progress in Portugal. Although there is a focus on learning outcomes, the distinction between VET and higher education is not always clear-cut. For example, in Portugal the technological specialisation diploma (*diploma de especialização tecnológica*)(DET) is registered as an NQF/EQF level 5 VET qualification. However, the programmes leading to this qualification, the technological specialisation courses (*cursos de especialização tecnológica*) (CETs), are provided by public and private higher and non-higher education institutions.

The establishment of Level 5 qualifications in Portugal is a relatively recent development and as a result currently have little significance to the labour market in comparison to other countries.

In Portugal, the DET is linked to level 5, which is a special modality of VET offering learners the opportunity to achieve a double objective. While beneficiaries can update competences and develop new ones through practical training oriented to the labour market, DETs are also an alternative gateway to higher education, particularly relevant for those who have been removed from education and training for some time. Generally, it is a seen as a SCHE (short-cycle higher education), though it is also considered a post-secondary non-tertiary education programme. Even though it is included in the NCQ for VET qualifications, programmes leading to the qualification are provided by public and private higher and non-higher education institutions. The qualifications are also included in the qualifications framework for higher education.

The professional aptitude certificate, issued within the scope of the national system of professional certification, allows individuals over 25 years old and with at least five years of proven professional activity in a specific area, to receive a diploma based on an assessment of their professional skills.

The Portuguese NQF, like the EQF, also has an eight level, structure. Level 5 qualifications are complex in Portugal, where the qualification linked to level 5 must comply with regulations in both VET and in higher education. The qualification is registered as a VET qualification, but the courses leading to it are run by higher education and non-higher education institutions.[6]

6 http://www.cedefop.europa.eu/EN/Files/6123_en.pdf

4. Data analysis

The following section provides an overview of the responses to and findings of survey.

4.1 Questions addressed to all respondents

Table 1 – number of responses of identification of the school providing the qualification

Please select the qualification / programme you completed from the list below	
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	22
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	28
Kaunas College (Mechatronic of the exploitation of the automated systems)	7
Kaunas College (Engineer of mechatronic systems)	3
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	16
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	9
ATEC - Academia de Formação (Técnico de Mecatrónica)	17
Total	102

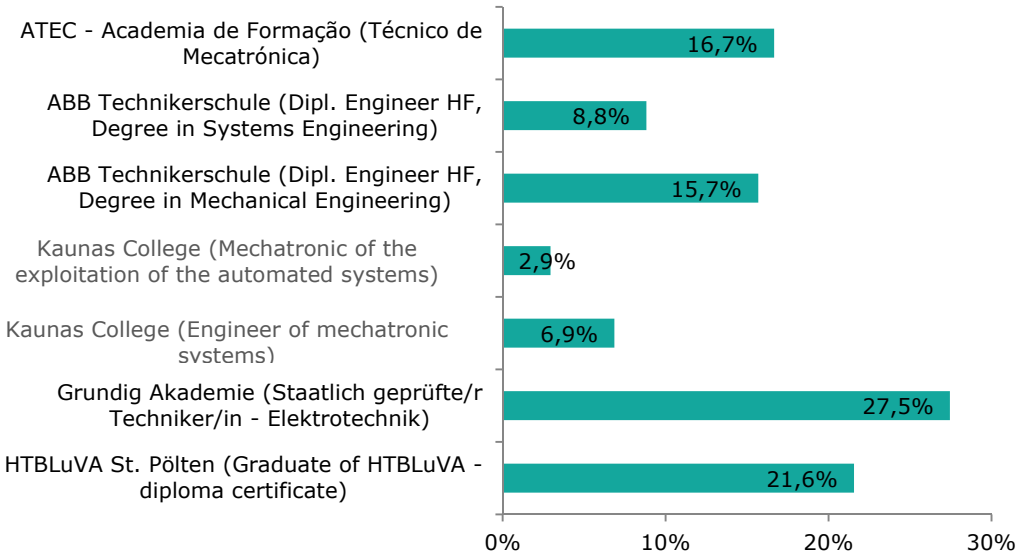

Figure 1 – percentage of respondents representing the schools

Table 1 and figure 1 show that the highest response rate for the survey was received from Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik) in Germany, followed by HTBLuVA St Pölten in Austria. A total of 102 responses were collected from the four participating countries. A minimum of 40 responses was initially anticipated and therefore the total number of achieved responses far exceeded these expectations.

Table 2 – Number of responses of years since graduation

How many years ago did you graduate?	
2 years	30
3 years	37
4 years	19
5 years	16
Total	102

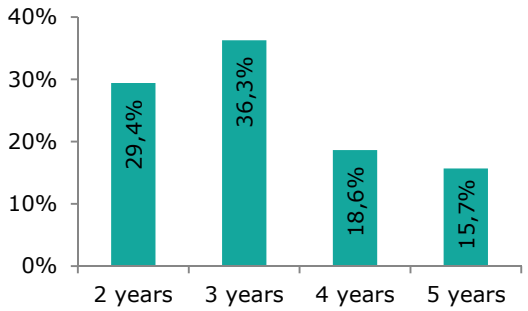

Figure 2 – percentage of years since graduation

Table 2 and figure 2 demonstrate that the majority of survey respondents completed their qualification between 2 and 3 years ago (36.3% and 29.4% respectively), while smaller proportions of participants graduated 4 (18.6%) and 5 years ago (15.7%).

Table 3 – Number of responses of if the graduate worked prior to enrolment in qualification

Did you already worked in a job prior to starting this programme/school?	
Yes	35
No	67
Total	102

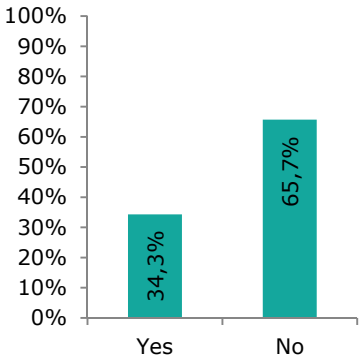

Figure 3 – percentage of overview of if the graduate worked prior to enrolment in qualification

As table 3 and figure 3 above show, when asked whether they were employed prior to their enrolment in the qualification, the majority of respondents (65.7%) stated that they were not, with the remaining 34.3% indicating that they were employed. However, the fact that some qualifications in the survey are considered IVET and some CVET must be taken into account in this

instance. Many individuals who participate in IVET do not have a job prior to enrolment – this is fairly typical. Yet it is interesting to note that quite a significant percentage of the respondents were employed. This is a positive finding especially considering the high general unemployment rates across Europe.

Table 4 – Number of responses of years worked prior to qualification

How many years had you worked in this job at the time of starting this programme/school?	
up to 1 year	12
1 to 2 years	10
2 to 5 years	16
6 to 10 years	18
more than 10 years	7
Total	12

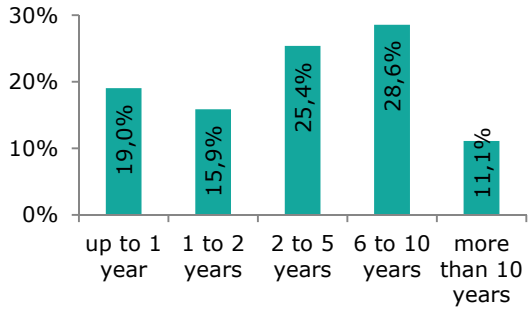

Figure 4 – percentage of years worked prior to enrolment

Table 4 and figure 4 indicate that most respondents had been in employment for between 6 to 10 years at the time of enrolment (28.6%). This suggests that participation in the qualification was some type of continuing learning undertaken to build upon already acquired qualifications. 25.4% of respondents indicated that they had been in employment for 2 to 5 years before enrolment, while 19% had only been in employment for up to 1 year. 15.9% had been in employment for 1-2 years, and only 11.1 % had been employed for more than ten years.

4.2 Professional pathway – information on respondents' FIRST job after graduation

Table 5 – Number of responses of possible employment upon graduation

Did you already have a job at the time of your graduation from this programme / school?	
Yes	35
No	67
Total	102

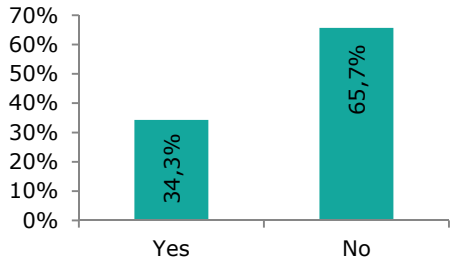

Figure 5 – percentage of possible employment upon graduation

The table and figure above show that the majority of respondents (65.7%) were not employed at the time of their graduation. The remaining 34.3% indicated that they did have a job at this time. These results appear to reflect the answers provided to the question of whether the respondents were employed prior to enrolment, the responses to which are shown in table 3 and figure 3 above.

Table 6 – Number of responses of finding a job upon graduation

Was it easy for you to find a job after graduation?	
it was very easy	19
it was moderately easy	32
no, it was not easy	22
I did not look for a relevant job	6
I already had a job while graduating	21
Total	100

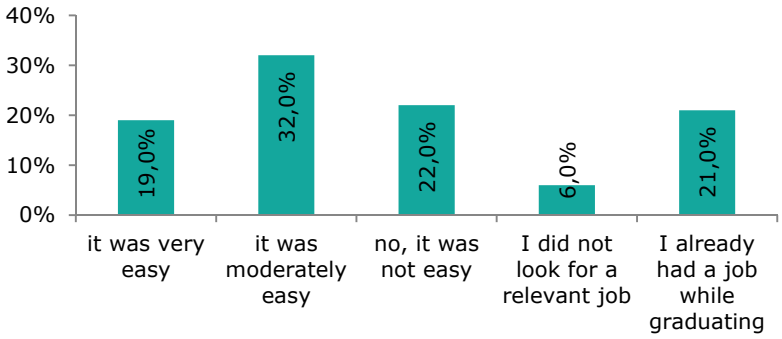

Figure 6 – percentage of finding a job upon graduation

In terms of job facilitation, table 6 and figure 6 indicate that the majority (32%) of respondents found it moderately easy to secure employment upon

graduation, while 19% considered it to be very easy. Approximately 22% stated that it was not easy, and 21% were already employed upon graduation. Broadly, these responses are fairly positive with regard to the ease with which graduates were able to find work.

Table 7 – Number of responses concerning job profile

Please indicate the job level of your first job after graduation	
Intern	4
Trainee	8
Assistant	4
Entry-level job	26
Experienced (non-manager)	44
Project Manager, team leader (supervisor of staff)	11
Executive Manager	0
Others	3
Total	100

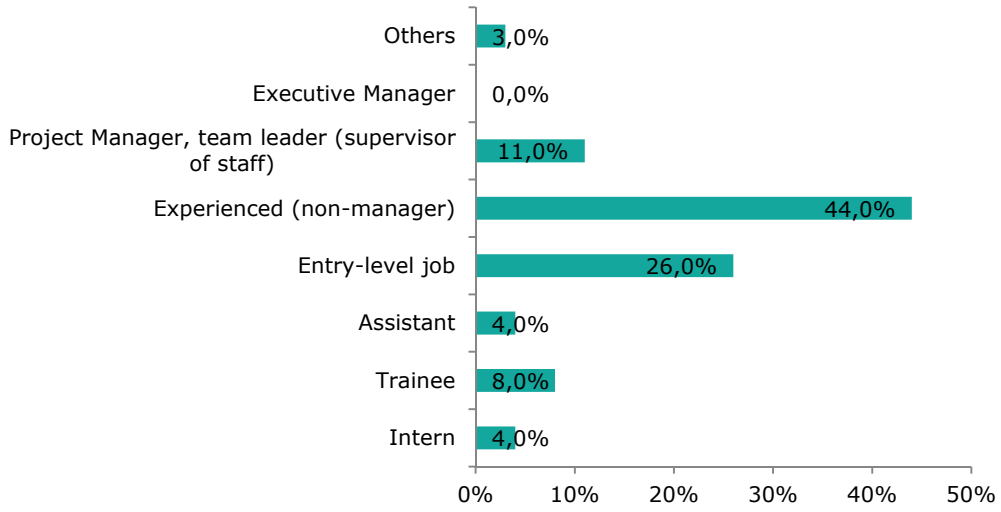

Figure 7 – percentage of job profile

Table 7 and figure 7 display the wide variety of roles that graduates obtained in first job after graduation. These range from intern to project manager. 44% of the respondents gained experienced non-managerial positions, while 26% obtained entry level jobs. 11% respondents had team leader positions, and 8% were trainees. 4% of respondents indicated that they were interns and 3% that they were assistants. 3% stated that had secured 'other' roles. These roles were quality management, student/self-employed and leasing workers.

Table 8 – Number of responses of job category

Please indicate the job category of your first job after graduation	
Biotech/R&D/Science	5
Building Construction	2
Engineering	33
IT / Software Development	16
Installation / Maintenance / Repair	19
Logistics / Transportation	2
Manufacturing / Production / Operations	17
Others	5
Total	5

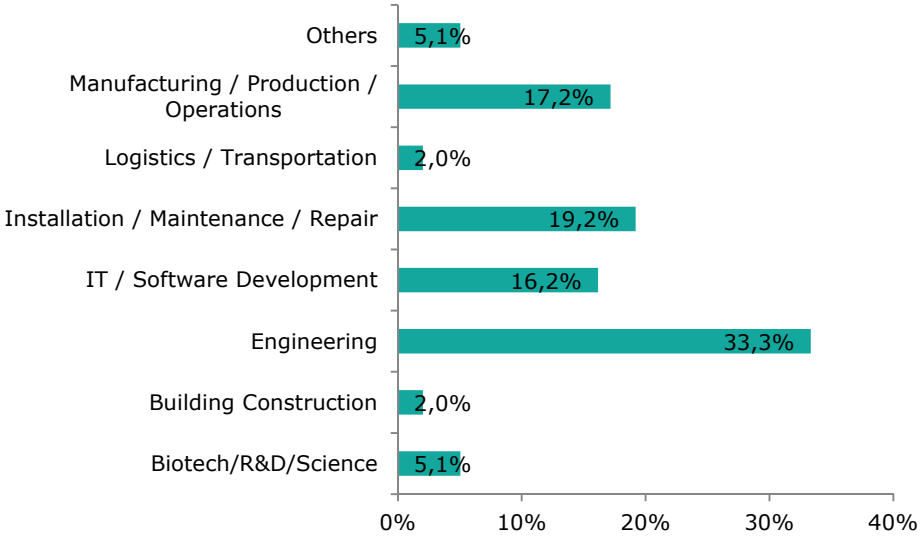

Figure 8 – percentage of job category

The majority of graduate respondents were employed within the engineering (33.3%) sector in their first job after graduation. Other sectors in which respondents were employed included: the installation, maintenance, and repair sector (19.3%); the manufacturing, production, and operations sector (17.2%); and the IT and software development sector (16.2%). 5.1% of respondents were engaged within the biotechnology, R&D, and science sector, and another 5.1% were employed in other sectors, which include quality management, product development, energy supply, and graphic design.

Table 9 – Number of responses: employment mobility

For your first job after graduation, did you work	
…. in the same country in which you completed your engineering/mechatronics qualification.	99
In another country	1
Total	100

The table above shows that a total of 99 respondents stated that they secured their first job in the same country in which they received their qualification. Only one individual indicated that they moved across national boarder to a foreign country (in this case the Netherlands) to secure employment, while 2 respondents did not answer this question.

Table 10 – Number of responses: complexity of tasks

What was your level of autonomy on your first job after graduation I do/did activities/tasks	
1 (simple tasks)	3
2	19
3	32
4	35
5 (very complex tasks)	11
Total	100

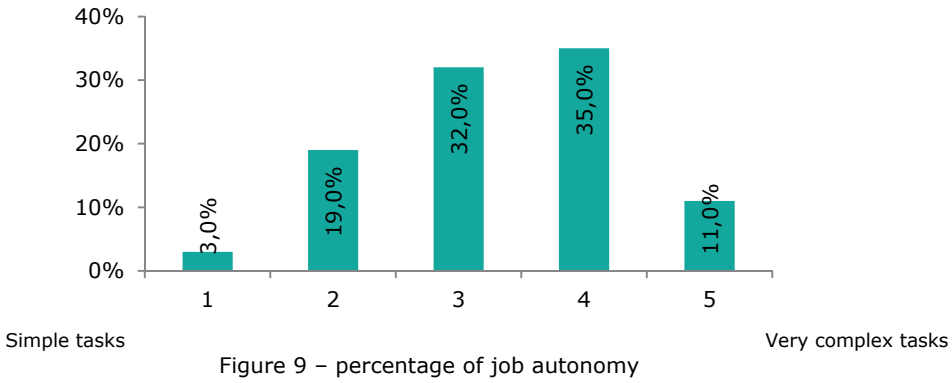

Figure 9 – percentage of job autonomy

With regard to the complexity of tasks carried out concerning their first job after graduation, participants were asked to rate their autonomy on a scale of 1 to 5, where '1' represents simple tasks and '5' very complex tasks. 35% of respondents indicated that they undertook tasks with a complexity corresponding to level 4. Level 3 tasks were the next most common responses accounting for 32% of the total, with level 2 tasks accounting for 19%, level 5 for 11%, and level 1 for 8%.

Please note: Level vs. EQF level
In several survey questions, we asked respondents to indicate their answer in relation to a scale from 1 to 5. When we refer to the term 'level' here, this does NOT refer to NQF/EQF levels but simply to the 5-point scale in the EQUAL-CLASS questionnaire.

Table 11 – number of respondents: autonomy of responsibilities

Accountability / Responsibilities	
1 (Employed with little responsibility)	5
2	23
3	27
4	31
5 (Fully responsible)	13
Total	99

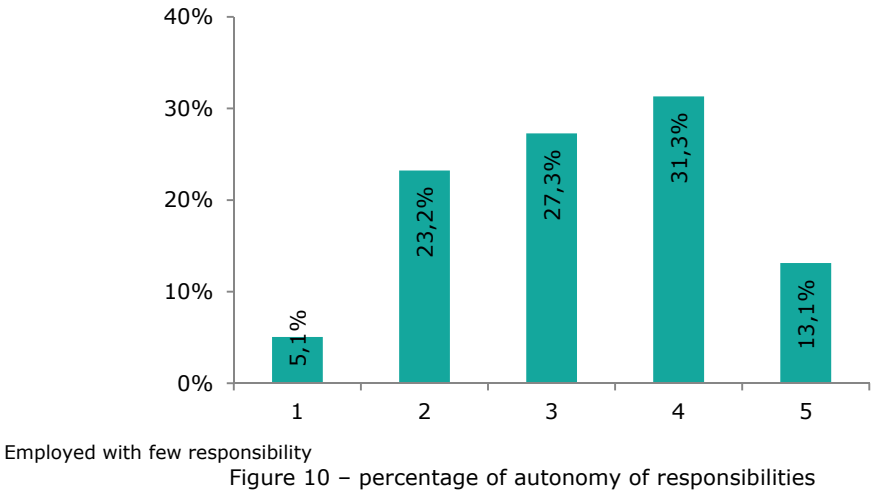

Figure 10 – percentage of autonomy of responsibilities

The questionnaire also asked respondents to rate their level of accountability and responsibility in their first job after graduation on a scale of 1 to 5, where level 1 represents little responsibility and 5 full responsibility. The table and figure above show that the majority of respondents (31.3%) indicated that they had a level of accountability and responsibility equivalent to level 4. The next most frequent response was level 3 (27.3%), followed by level 2 (23.2%), level 5 (13.1%), and finally level 1(5.1%).

Table 12 – number of responses: budget and financial accountability skills

Budget and financial accountability	
1 (Responsible for less than € 10,000)	33
2	21
3	23
4	12
5 (Responsible for more than € 100,000)	10
Total	99

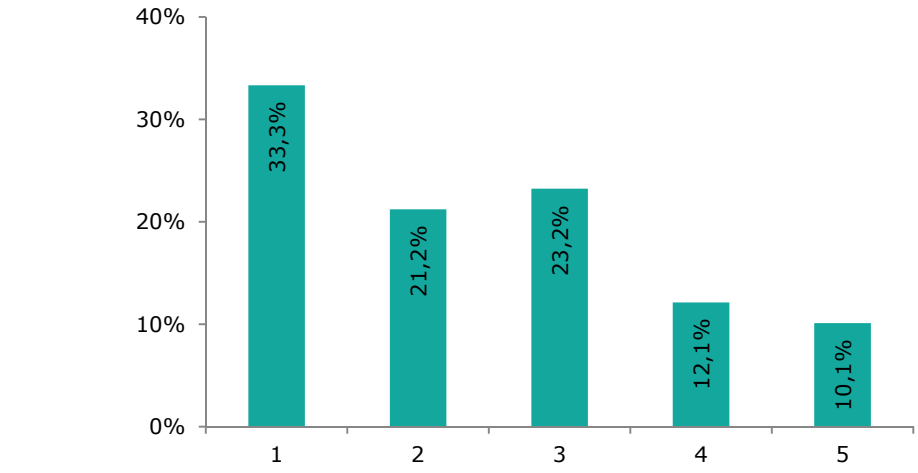

Figure 11 – percentage for budget and financial accountability skills

The table and figure above indicate participant response to the question of level of responsibility for budgets and financial accountability in their first job after graduation. The graduates selected their answers using a 5 point scale, where level 1 indicated they were responsible for less than €10,000, and level 5 that they were responsible for more than €100.000. 33.3% of respondents selected level 1, followed by 23.2% who selected level 3. 21.2% of respondents selected level 2, while 12.1% selected level 4, and 10.1% level 5. Three respondents did not answer this question.

Table 13 – number of responses: leadership skills

Leadership	
1 (No special management tasks)	44
2	31
3	18
4	5
5 (Lead more than 10 employees)	2
Total	100

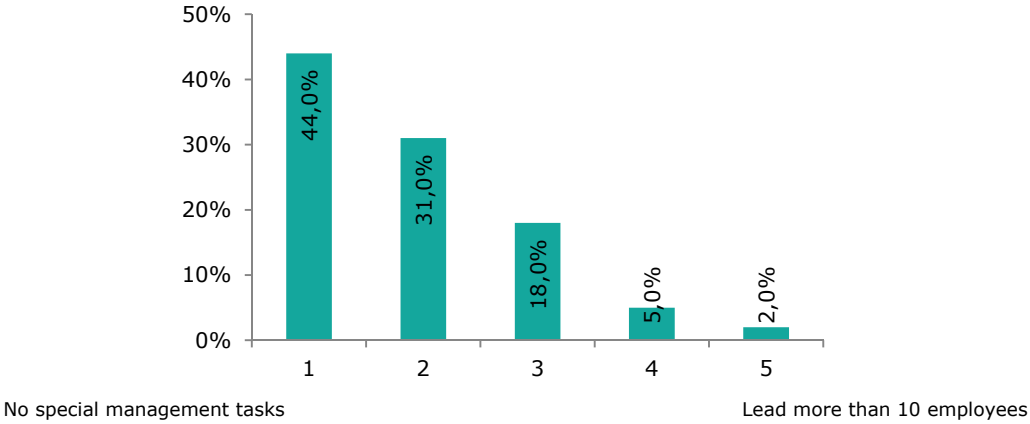

Figure 12 – percentage for leadership skills

Respondents also provided information on the extent of their leadership responsibilities in their first job using a 5 point scale. On this scale, level 1 indicates no special management tasks while level 5 indicates that the respondent was responsible for leading more than 10 employees.

Please note: Level vs. EQF level
In several survey questions, we asked respondents to indicate their answer in relation to a scale from 1 to 5. When we refer to the term 'level' here, this does NOT refer to NQF/EQF levels but simply to the 5-point scale in the EQUAL-CLASS questionnaire.

The table and figure above show that the largest percentage (44%) indicated that they had leadership responsibilities at level 1, with 31% indicating they had level 2 leadership responsibilities. 18% of respondents stated they had level 3 leadership responsibilities, 5% level 4 responsibilities, and only 2% indicated that they had level 5 responsibilities.

Table 14 – number of responses: total size of company

What is the total size of the company	
1 to 10 employees	8
11 to 20 employees	10
21 to 50 employees	17
51 to 250 employees	21
more than 250 employees	44
Total	100

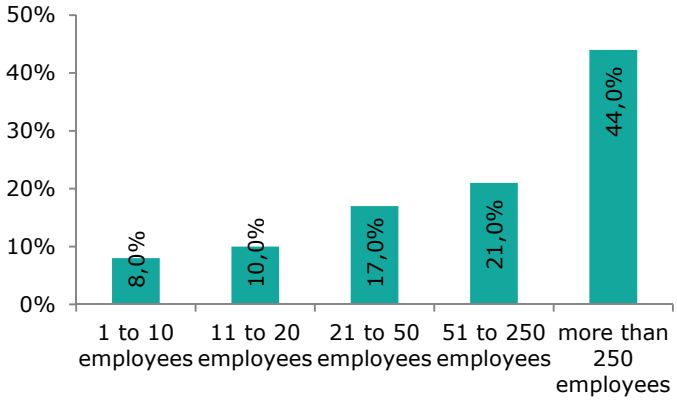

Figure 13 – percentage of size of company

The majority (44%) of the respondents stated that in their first job after graduation they worked in a company with more than 250 employees. 21% indicated that they worked in a company that employed between 51 and 250 individuals. 17% stated that they worked in a company that employed between 21 and 50 people, 10% indicated that the company they worked in had 11 to 20 employees. Only 8% of respondents stated they worked in a company with between 1 and 10 employees.

Table 15 – number of responses: current professional status

Please describe your current professional status	
Self-employed	2
Fixed-term contract	17
Temporary contract	7
Currently unemployed	3
Permanent contract	66
Other	5
Total	100

When asked about the type of contract they were currently working under, the vast majority of respondents (66%) stated that they had a permanent contract. 17% stated that they were on a fixed-term contract, while 7% were on temporary contracts.

4.3 Professional pathway – information on respondents' CURRENT job

The following set of questions was only addressed to those respondents who had switched jobs since graduation.

Table 16 – number of responses: first job after graduation

Is your current job still your first job after graduation?	
Yes	58
No	38
Total	96

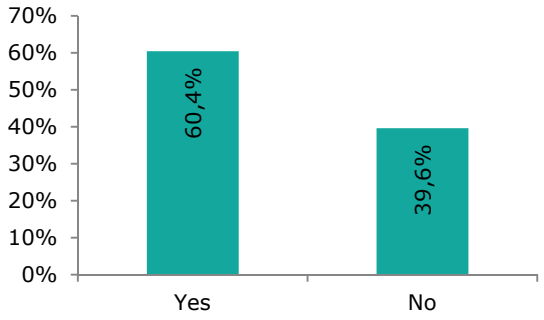

Figure 14 – percentage of first job after graduation

With regard to job change, 60.4% of participants responded that their current job was also the first job they obtained upon graduation. The remaining 39.6% indicated it was not their first job, as is shown in the table and figure above. 96 out of 102 total respondents answered this question.

Table 17 – number of responses: job level current job

Please indicate the job level of your current job after graduation	
Intern	0
Trainee	1
Assistant	0
Entry-level job	2
Experienced (non-manager)	15
Project Manager, team leader (supervisor of staff)	7
Executive Manager	4
Others	5
Total	34

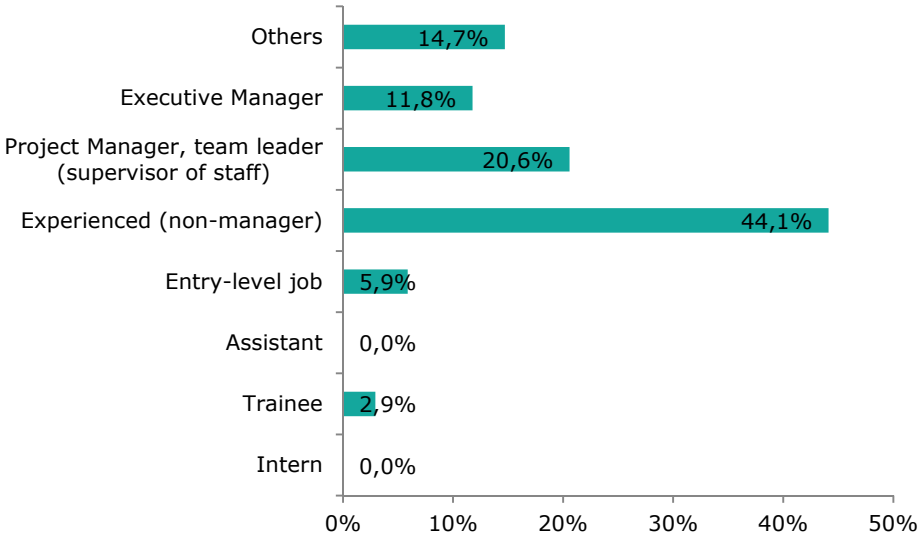

Figure 15 – percentage of job level current job

The table and figure above show participant responses to the question of their current job level: 44.1% of respondents indicated that they have experienced non-manager roles; 20.6% stated that they are project managers or team leaders; 14.7% responded that they have other roles; 11.8% stated that they have executive manager positions; and 2.9% indicated that they are trainees.

Table 18 - number of responses: sector of current job

Please indicate the sector of your current job	
Biotech/R&D/Science	1
Building Construction	0
Engineering	15
IT / Software Development	8
Installation / Maintenance / Repair	1
Logistics / Transportation	0
Manufacturing / Production / Operations	5
Others	4
Total	34

In terms of the sectors in which the respondents were currently employed, 44.1% indicated that they had jobs in engineering, while IT and software development accounted for 23.5% of responses. 14.7% of participants stated that they were employed in the manufacturing, production, and operations sector, and 2.9% of respondents each were employed in the installation, maintenance, repair, and biotech, R&D and science sectors.

Table 19 – number of responses: mobility in current job

In your current job, do you work	
…. in the same country in which you completed your engineering/mechatronics qualification.	32
In another country	3
Total	35

In terms of mobility, 91,4% or respondents indicated that their current job was situated in the same country as that in which they graduated, while only 8,6% worked in a different country, as the table above shows. The other countries in question were Germany, Luxembourg, and the Netherlands.

Table 20 – number of responses: complexity of tasks

What is your level of autonomy on Activities / Tasks	
1 (Simple tasks)	1
2	1
3	2
4	19
5 (Very complex tasks)	11
Total	34

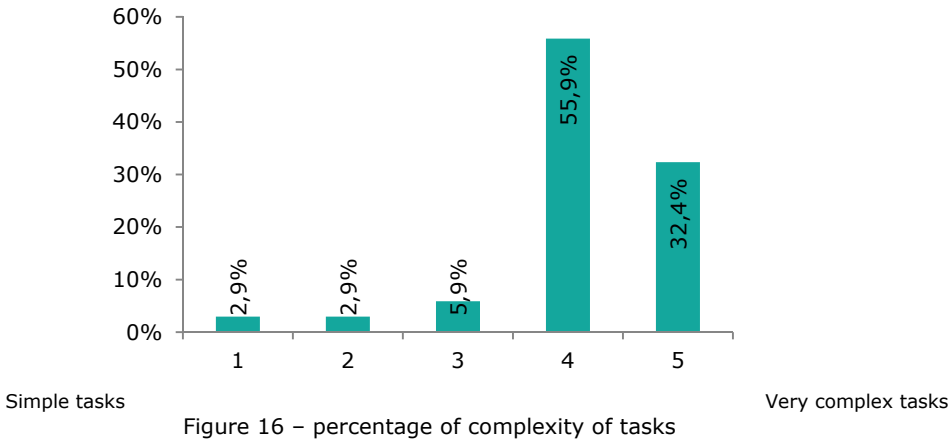

Figure 16 – percentage of complexity of tasks

Considering autonomy of activities and tasks, as shown in in the table and figure above, participants were asked to rate their level of autonomy in their current jobs on a scale of 1 to 5, where level 1 represents simple tasks and level 5 very complex tasks. 55.9% of respondents indicated that they

undertake tasks with a complexity corresponding to level 4. Level 5 tasks were the next most frequent responses accounting for 32.4% of the total, with level 3 tasks accounting for 5.9%, and levels 1 and 2 for 2.9% each. 34 out of 102 total respondents answered this question.

Table 21 – number of responses: level of accountability/responsibilities

Accountability / Responsibilities	
1 (Employed with little responsibility)	1
2	2
3	5
4	12
5 (Fully responsible)	14
Total	34

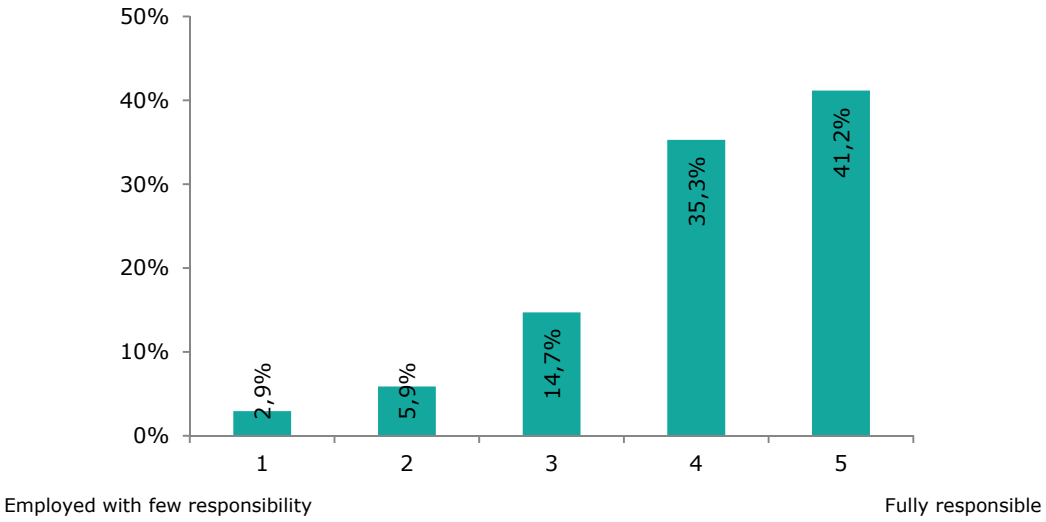

Figure 17 – percentage of level of accountability/responsibilities

The questionnaire also asked respondents to rate the level of accountability and responsibility in their current jobs on a scale of 1 to 5, where level 1 represents little responsibility and level 5 full responsibility. The table and figure above show that the vast majority of respondents indicated that they have a level of accountability and responsibility equivalent to levels 5 and 4 (41.2% and 35.3% respectively). The next most frequent response was level 3 (14.7%), followed by level 2 (5.9%), and finally level 1 (2.9%). 34 respondents provided an answer to this question.

Table 22 – number of responses: level of budget and financial accountability

Budget and financial accountability	
1 (Responsible for less than € 10,000)	10
2	7
3	5
4	4
5 (Responsible for more than € 100,000)	8
Total	34

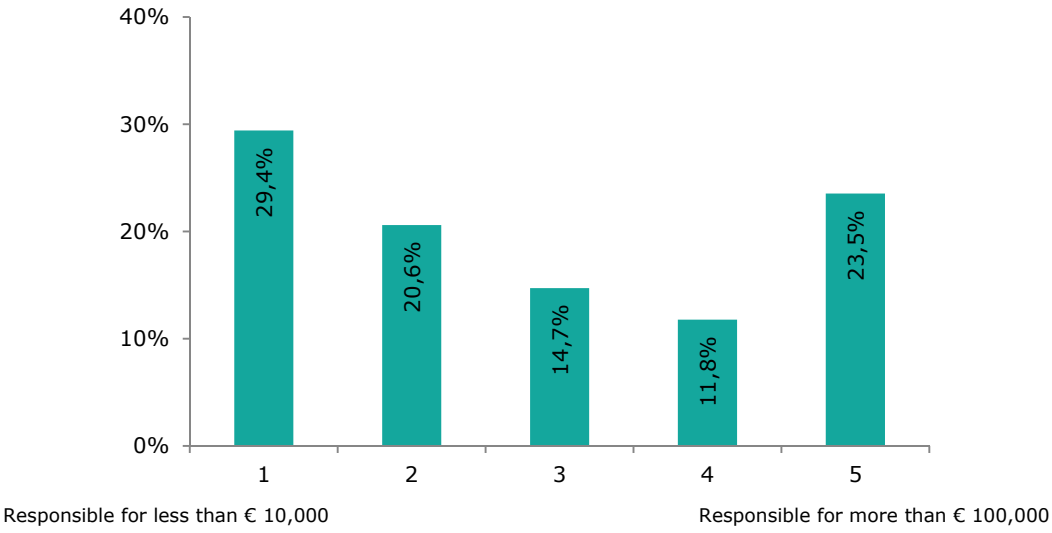

Figure 18 – percentage of level of budget and financial accountability

Please note: Level vs. EQF level
In several survey questions, we asked respondents to indicate their answer in relation to a scale from 1 to 5. When we refer to the term 'level' here, this does NOT refer to NQF/EQF levels but simply to the 5-point scale in the EQUAL-CLASS questionnaire.

The table and figure above indicate participant responses to the question of the level of responsibility for budgets and financial accountability in their current jobs. The graduates selected their answers using a 5 point scale, where level 1 indicates they are responsible for less than €10,000 and level 5 that they are responsible for more than €100.000. 29.4% of respondents selected level 1, followed by 23.5% who selected level 3. 20.6% of respondents selected level 2, while 14.7% selected level 3, and 11.8% level 4. This question was answered by 34 out of 102 respondents.

Table 23 – number of responses: leadership level

Leadership	
1 (No special management tasks)	11
2	10
3	8
4	3
5 (Lead more than 10 employees)	2
Total	34

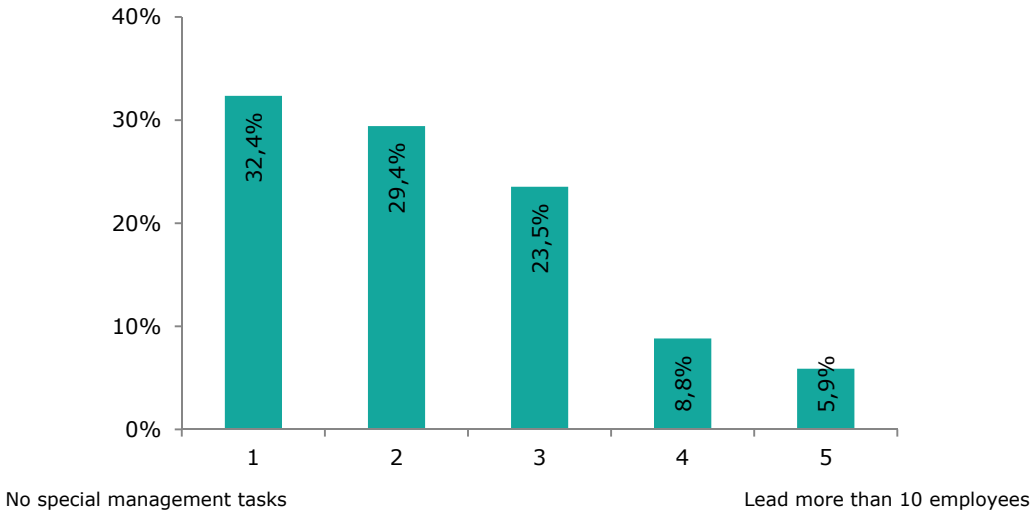

Figure 19 – percentage of leadership level

Respondents also provided information on the extent of the leadership responsibilities in their current jobs using a 5 point scale. On this scale, level 1 indicates they have no special management tasks while level 5 indicates that the respondent is responsible for leading more than 10 employees. The table and figure above show that the largest percentage (32.4%) indicated that they had leadership responsibilities at level 1, with 29.4% indicating they had level 2 leadership responsibilities. 23.5% of respondents stated they had level 3 leadership responsibilities, 8.8% level 4 responsibilities, and only 5.9% indicated that they had level 5 responsibilities. This question was answered by 34 of the 102 total respondents.

Table 24 – number of responses: size of current company

What is the total size of the company you currently work for	
1 to 10 employees	2
11 to 20 employees	1
21 to 50 employees	5
51 to 250 employees	7
more than 250 employees	19
Total	34

The majority (55.9%) of the respondents stated that they currently work in a company with more than 250 employees. 20.6% indicated that they work in a company that employs between 51 and 250 individuals. 14.7% stated that they work in a company that employs between 21 and 50 people, while 2.9% indicated that the company they work in has 11 to 20 employees. 5.9% of respondents stated that they work in a company with between 1 and 10 employees. This question was answered by 34 of the 102 total respondents.

Table 25 – number of responses: possible job change – salary

Between your graduation and today, how has your job changed in terms of...	
Compensation (pay)	
Very positively	2
Positively	5
Unchanged	16
Negatively	0
Total	23

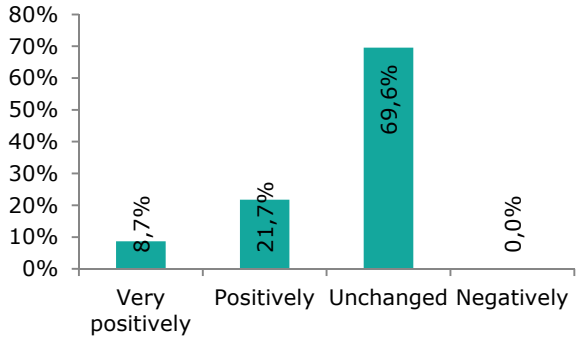

Figure 20 – percentage of possible job change – salary

The table and figure above show that 69.6% of respondents indicated that their level of pay has remained unchanged since graduation. 21.7% stated they had experienced positive change in this regard, and 8.7% had experienced very positive change. No respondents reported negative change. This question was answered by 23 of 102 total respondents.

Table 26 – number of responses: level of position

Level of your position	
Very positively	2
Positively	5
Unchanged	29
Negatively	0
Total	36

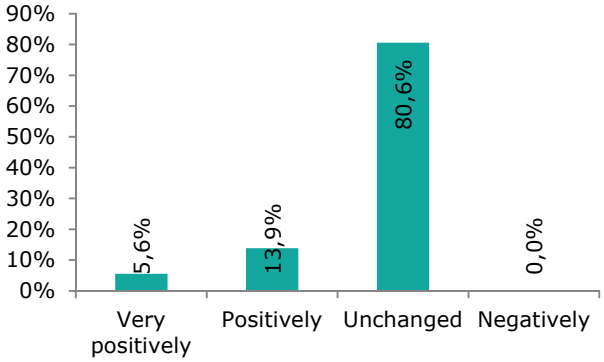

Figure 21 – percentage of level of position

In terms of changes in the level of job position since graduation, the table and figure above show that the position of the vast majority of respondents (80.6%) remained unchanged. 13.9% indicated they had experienced a

positive change, and 5.6% stated that they had experienced very positive change. No respondents reported that they had a negative experience in relation to changes in their position. This question was answered by 36 out of 102 respondents.

Table 27 – number of responses: degree of autonomy

Degree of autonomy	
Very positively	4
Positively	4
Unchanged	20
Negatively	0
Total	28

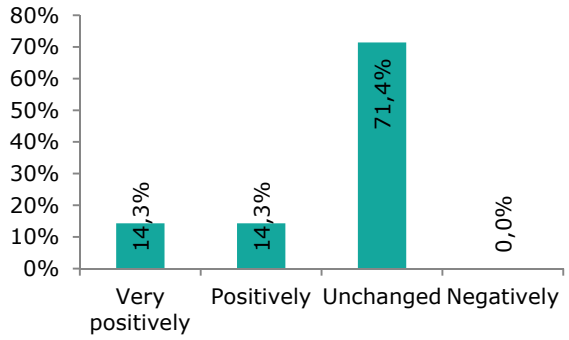

Figure 22 – percentage of degree of autonomy

The table and figure above show that 71.4% of respondents experienced no change in relation to the degree of autonomy in their jobs since their graduation. 14.3%reported a positive change, and another 14.3% indicated that there had been a very positive change. No respondents stated that they had experienced a negative change in their level of autonomy. 28 of the total of 102 respondents answered this question.

Table 28 – number of responses: size of projects

Size of projects	
Very positively	2
Positively	7
Unchanged	17
Negatively	0
Total	26

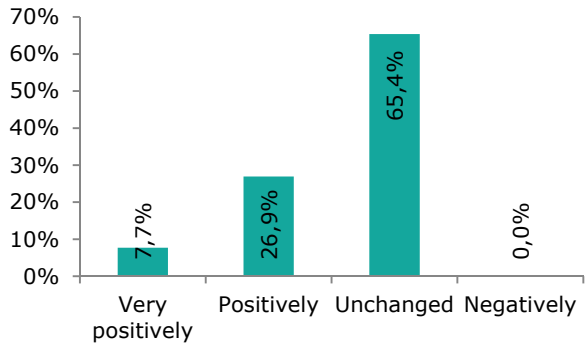

Figure 23 – percentage of size of projects

The majority of respondents (65.4%) stated that since their graduation there has been no change in relation to the size of projects they worked on. 26.9% reported that they had experienced positive change in this regard, and 7.7% stated there had been very positive change. No respondents reported negative change in terms of the size of projects. This question was answered by 26 of a total of 102 respondents.

Table 29 – number of responses: supervision of staff

Supervision of staff	
Very positively	1
Positively	6
Unchanged	48
Negatively	0
Total	55

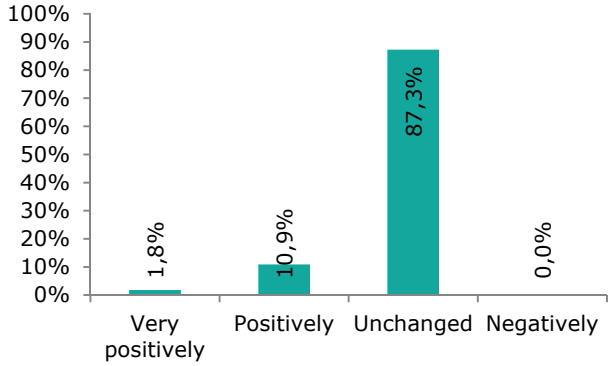

Figure 24 – percentage of level of supervision of staff

With regard to changes in relation to the supervision of staff since graduation, table 29 and figure 29 show that 87.3% of respondents have experienced no change in this regard. 10.9% reported they have experienced positive change, and 1.8% very positive change. No respondents reported negative change. This question was answered by 55 of 102 total respondents.

4.4 Information on the engineering qualification obtained

The following set of questions was addressed to all respondents.

Table 30 – number of responses: relevance of skills

On a scale from 1 to 5, how well do you think this programme equipped you with the relevant competences for your professional activity? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)	
1 (few or no necessary skills were taught)	1
2	8
3	30
4	49
5 (all the necessary skills were taught)	13
Total	101

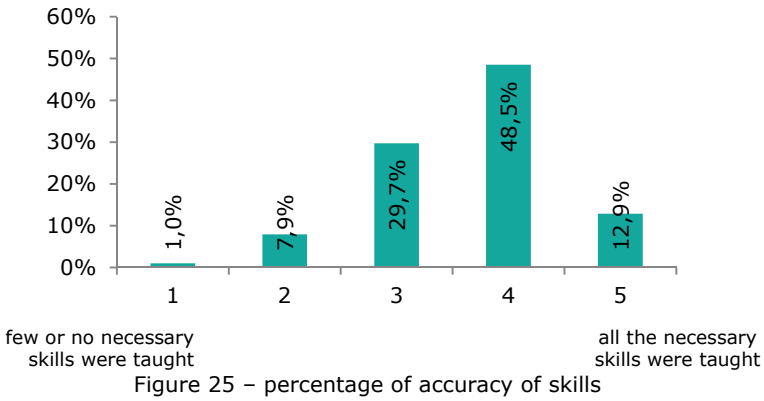

Figure 25 – percentage of accuracy of skills

Respondents were asked to rate the extent to which their study programme equipped them with the relevant competences for their professional activity, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. The table and figure above show that 48.5% of respondents selected level 4, 29.7% selected level 3, 12.9% selected level 5, 7.9% level 2, and 1% level 1. 101 of 102 total respondents answered this question.

Table 31 – number of responses: job requirements and qualification

On a scale from 1 to 5, could you please specify if the competences you acquired through the qualification where those required in your first job? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)	
Economic skills	
1 (few or no necessary skills were taught)	3
2	24
3	38
4	23
5 (all the necessary skills were taught)	12
Total	100

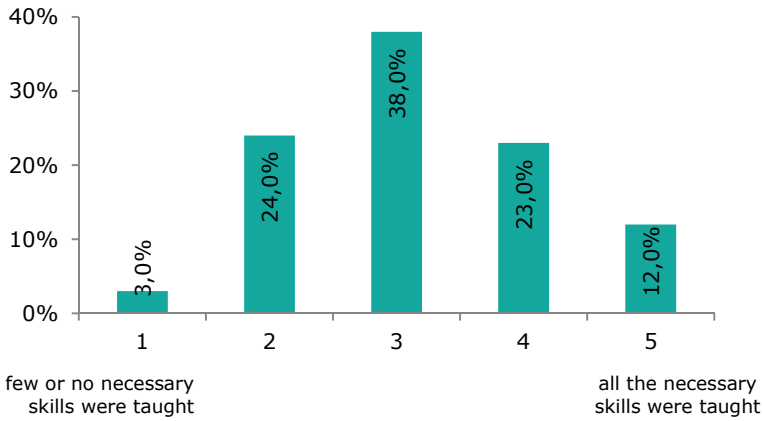

Figure 26 – percentage of job requirements and qualification

Analysing these responses in more detail, respondents were asked to rate the extent to which their study programme equipped them with the relevant economic skills required in their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. The table and figure above show that in relation to economic skills, 38% of respondents selected level 3, 24% selected level 2, 23% selected level 4, 12% level 5, and 3% level 1. 100 of 102 total respondents answered this question.

Table 32 – number of responses: level of technical skills

Technical skills	
1 (few or no necessary skills were taught)	0
2	6
3	20
4	47
5 (all the necessary skills were taught)	27
Total	100

Continuing to examine how these courses provide specific skills, respondents were next asked to rate the extent to which their study programme equipped them with the relevant technical skills required in their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. Table 32 shows, that in relation to technical skills, 20% of respondents selected level 3, 47% selected level 4 and 27% level 5. 100 of 102 total respondents answered this question.

Table 33 – number of responses: level of specialised skills

Specialised skills	
1 (few or no necessary skills were taught)	1
2	10
3	43
4	34
5 (all the necessary skills were taught)	12
Total	100

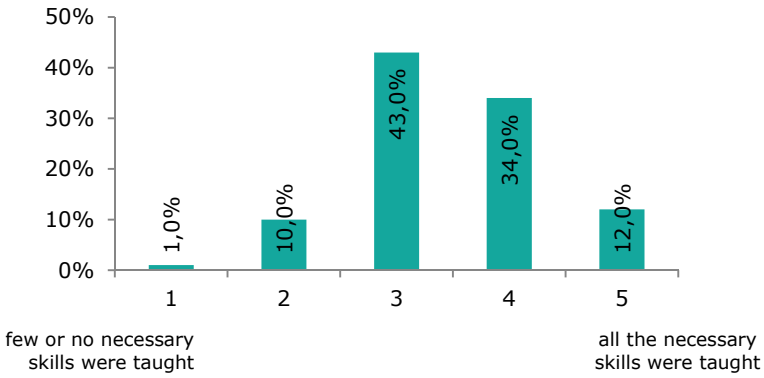

Figure 27 – percentage of level of specialised skills

Next in the skills breakdown, respondents were asked to rate the extent to which their study programme equipped them with the relevant specialist skills required in their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. The table and figure above show that in relation to specialist skills, 43% of respondents selected level 3, 34% selected level 4, 12% selected level 5, 10% level 2, and 1% level 1. 100 of 102 total respondents answered this question.

Table 34 – number of responses: foreign language skills

Foreign language skills	
1 (few or no necessary skills were taught)	15
2	22
3	23
4	28
5 (all the necessary skills were taught)	12
Total	100

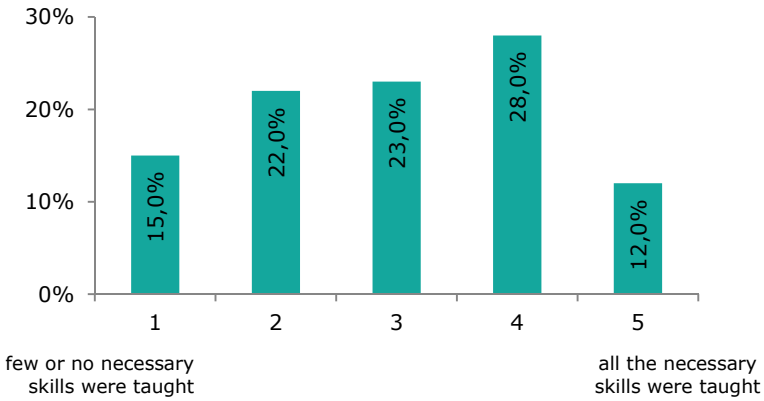

Figure 28 – percentage of foreign language skills

In terms of language proficiency, respondents were asked to rate the extent to which their study programme equipped them with the relevant foreign language skills required for their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. The table and figure above show that in relation to foreign language skills, 28% of respondents selected level 4, 23% selected level 3, 22% selected level 2, 15% level 1, and 12% level 5. 100 of 102 total respondents answered this question.

Table 35 – number of responses: level of methodological skills

Methodological skills	
1 (few or no necessary skills were taught)	1
2	12
3	34
4	32
5 (all the necessary skills were taught)	21
Total	100

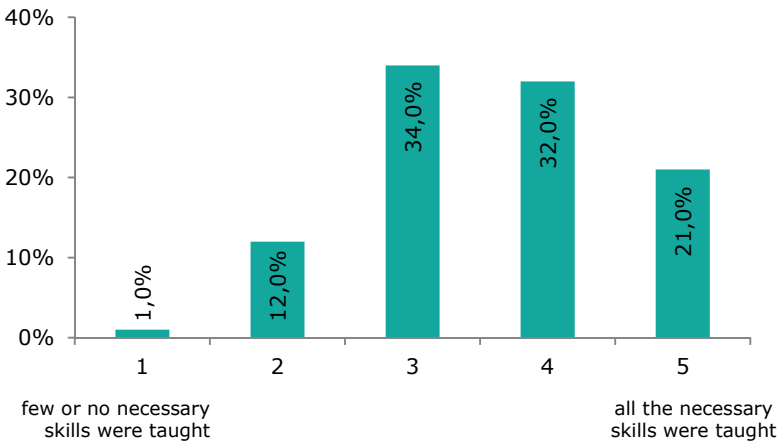

Figure 29 – percentage of level of methodological skills

With regard to methodological competences, respondents were asked to rate the extent to which their study programme equipped them with the relevant

methodological skills necessary for their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. The table and figure above show that in relation to methodological skills, 34% of respondents selected level 3, 32% selected level 4, 21% selected level 5, 12% level 2, and 1% level 1. 100 of 102 total respondents answered this question.

Table 36 – number of responses: level of social skills

Social skills	
1 (few or no necessary skills were taught)	1
2	16
3	34
4	39
5 (all the necessary skills were taught)	10
Total	100

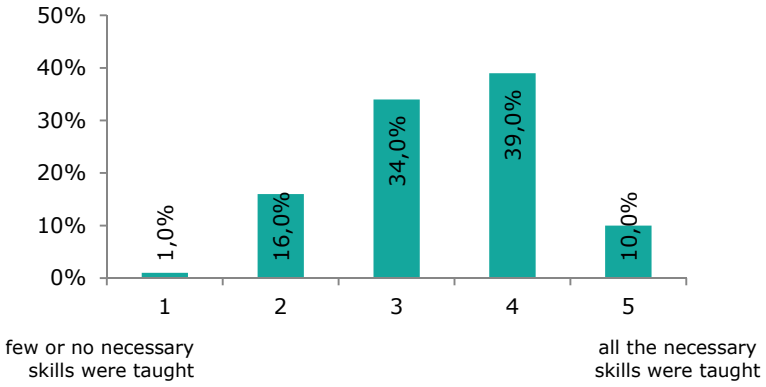

Figure 30 – percentage of level of social skills

Finally, the questionnaire asked the graduates about the provision of social skills in their programme. Respondents were asked to rate the extent to which their study programme equipped them with the relevant social skills required for their first job after graduation, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught, and level 5 that all necessary skills were taught. The table and figure above show that in relation to social skills, 39% of respondents selected level 4, 34% selected level 3, 16% selected level 2, 10% level 5, and 1% level 1. 100 of 102 total respondents answered this question.

Table 37 – number of responses: level of economic skills

On a scale from 1 to 5, could you please specify if the competences you acquired through the qualification where those required in your current job? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)	
Economic skills	
1 (few or no necessary skills were taught)	7
2	19
3	32
4	30
5 (all the necessary skills were taught)	7
Total	95

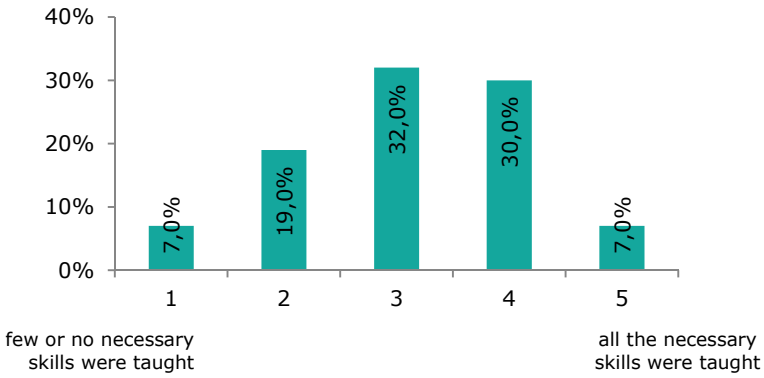

Figure 31 – percentage of level of economic skills

The following series of tables and figure show the responses provided by graduates to questions concerned with the relevance of the skills acquired from their qualification to their ***current*** job. Respondents were asked to rate the extent to which their study programme equipped them with the relevant skills for their current job, on a scale of 1 to 5. On this scale, level 1 indicates that few or no necessary skills were taught and level 5 that all necessary skills were taught. In terms of economic skills, 32% of respondents selected level 3, 30% selected level 4, and 19% selected level 2. 7% of the respondents each selected levels 1 and 5. A total of 95 of 102 respondents answered this question.

Table 38 – number of responses: level of technical skills

Technical skills	
1 (few or no necessary skills were taught)	2
2	6
3	18
4	48
5 (all the necessary skills were taught)	21
Total	95

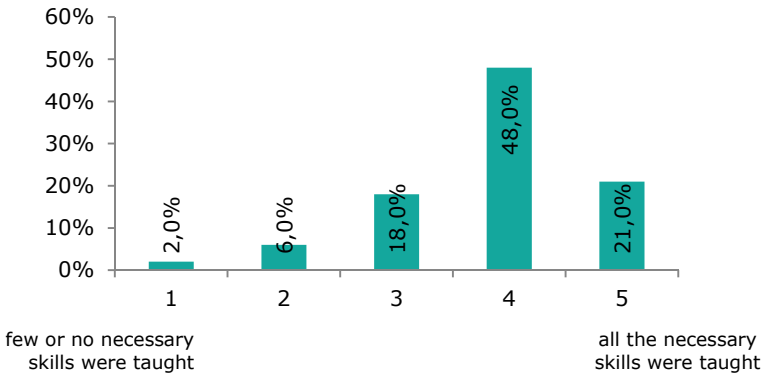

Figure 32 – percentage of level of technical skills

As table and figure above show, in terms of technical skills, 48% of respondents (using the same 1 to 5 scale) selected level 3, 21% selected level 5, and 18 selected level 3. 6% of the participants selected level 2, and 2% level 1. A total of 95 of 102 respondents answered this question.

Table 39 – number of responses: specialised skills

Specialised skills	
1 (few or no necessary skills were taught)	1
2	7
3	35
4	35
5 (all the necessary skills were taught)	17
Total	95

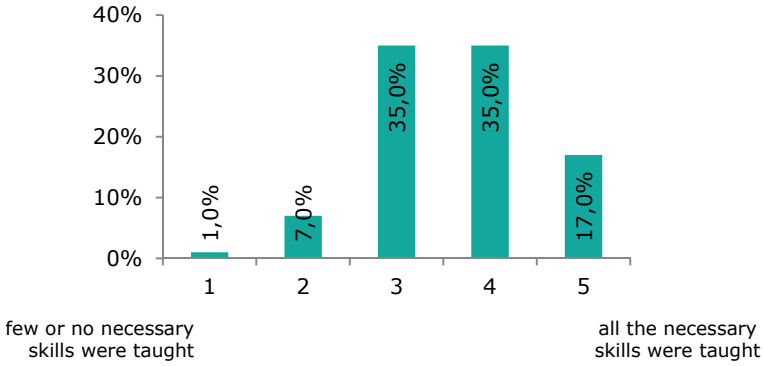

Figure 33 – percentage of specialised skills

Table and figure above show that in terms of specialised skills, 35% of respondents (using the same 1 to 5 scale) selected level 3, while another 35% selected level 4. 17% of participants selected level 5, 7% level 2, and 1% level 1. A total of 95 of 102 respondents answered this question.

Table 40 – number of responses: level of foreign language skills

Foreign language skills	
1 (few or no necessary skills were taught)	12
2	19
3	25
4	24
5 (all the necessary skills were taught)	14
Total	94

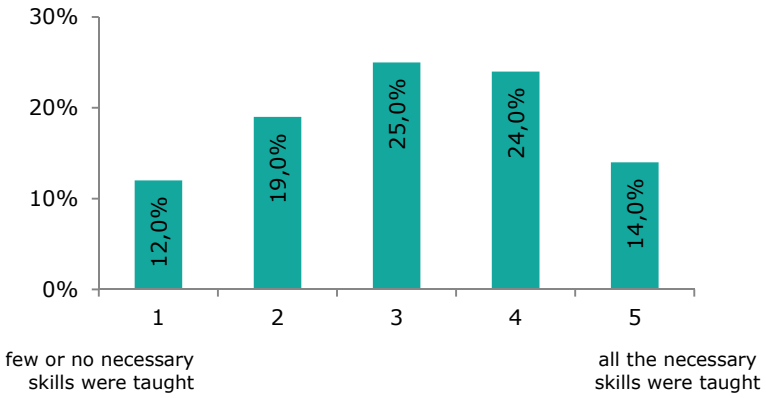

Figure 34 – percentage of level of foreign language skills

The table and figure show that in terms of foreign language skills, 25% of respondents (using the same 1 to 5 scale) selected level 3, followed closely by the 24% of graduates that selected level 4. 19% of participants selected level 2, 14% level 5, and 12% level 1. A total of 94 of 102 respondents answered this question.

Table 41 – number of responses: level of methodological skills

Methodological skills	
1 (all the necessary skills were taught)	2
2	9
3	30
4	33
5 (all the necessary skills were taught)	20
Total	94

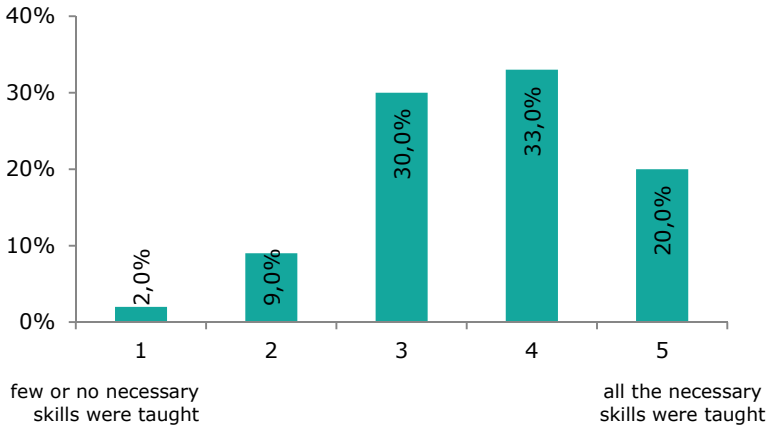

Figure 35 – percentage of level methodological skills

The table and figure above demonstrate that in terms of methodological skills, 33% of respondents (using the same 1 to 5 scale) selected level 4, followed closely by the 30% of graduates that selected level 3. 20% of participants selected level 5, 9% level 2, and 2% level 1. A total of 94 of 102 respondents answered this question.

Table 42 – number of responses: level of social skills

Social skills	
1 (few or no necessary skills were taught)	1
2	9
3	33
4	35
5 (all the necessary skills were taught)	16
Total	94

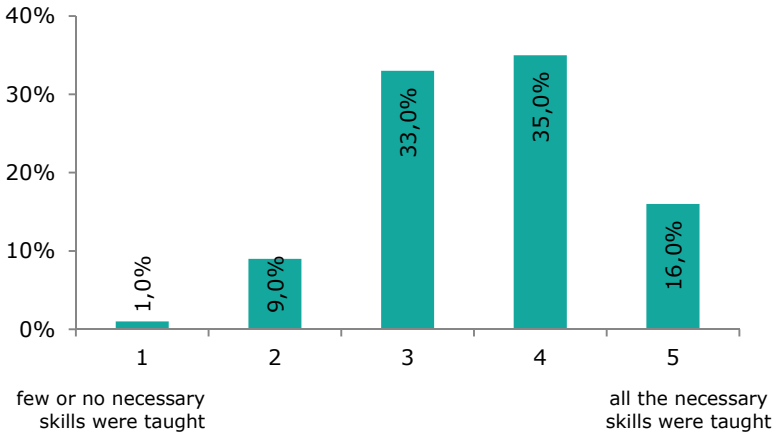

Figure 36 – percentage of level of social skills

Finally, the table and figure above indicate that with regard to social skills, 35% of respondents (using the same 1 to 5 scale) selected level 4, followed closely by the 33% of graduates that selected level 3. 16% of participants

selected level 5, 9% level 2, and 2% level 1. A total of 94 of 102 respondents answered this question.

Table 43 – number of responses: work placement opportunity

Did this programme/school include a mandatory work placement?	
Yes	49
No	53
Total	102

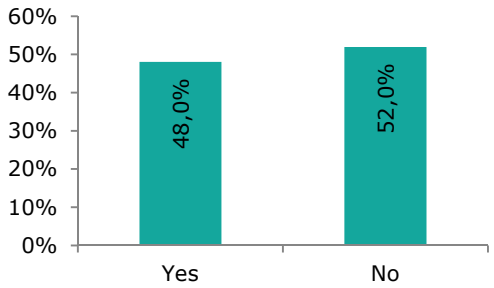

Figure 37 – percentage of work placement opportunity

When asked whether their qualification programme included a mandatory work placement, the responses were divided almost equally (as the table and figure above show). The slight majority of respondents (52%) stated that their qualification programme did not include a mandatory work placement, with the remaining respondents (48%) indicating that theirs did. All 102 respondents provided an answer to this question.

Table 44 – number of responses: job offer

Did you receive a job offer from the company where you completed the professional practical training?	
Yes	31
No	17
Total	48

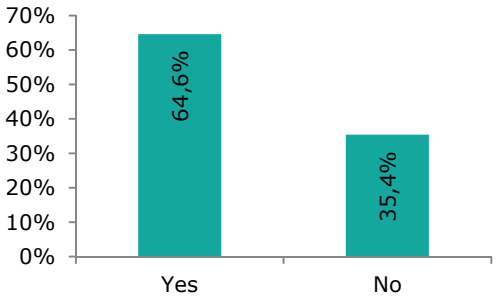

Figure 38 – percentage of job offer

Those respondents whose qualification programme did include a mandatory were asked whether they received a job offer from the placement company. Results show that 64.6% of respondents stated that they did receive an offer of employment from the placement company, while the remaining 35.4% did not. This evidence suggests that more than half of the respondents were

invited to continue working with the company in question, which is certainly a positive development.

Table 45 – number of responses: final thesis

Did you have to write a final thesis?	
Yes	56
No	40
Total	96

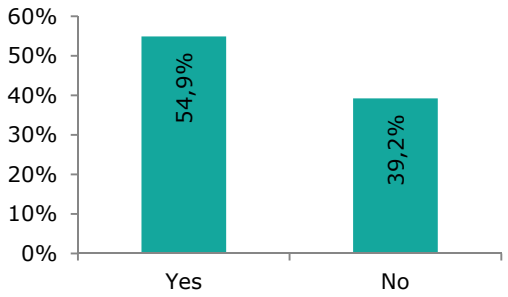

Figure 39 – percentage of writing final thesis

Participants were asked whether they were required to write a final thesis as part of the requirements of completing their qualification programme, and results demonstrate that 54.9% of the respondents stated that they were, while 39.2% indicated that they were not. 96 of the 102 total respondents answered this question.

4.5 Demographics

Table 46 – number of responses: gender

What is your gender	
Male	98
Female	4
Total	102

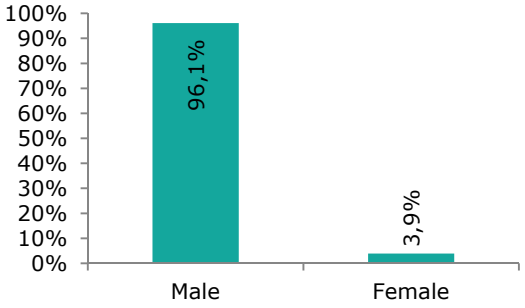

Figure 40 – percentage of gender

Almost all of the survey respondents were male (96.1%). Only 3.9% were female. This is most likely attributable to the fact that the qualification programmes analysed in this study are dominated by males in terms of

enrolment. Therefore, the survey sample appears to reflect the gender balance in this area of education. All respondents answered this question.

Table 47 – number of responses: age

Your age	
Less than 20 years	2
20 to 30 years	65
31 to 40 years	31
41 to 50 years	4
Total	102

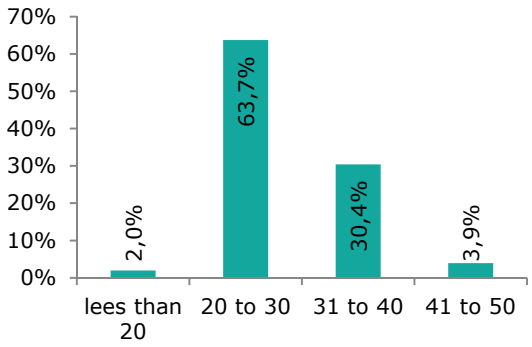

Figure 41 – percentage of age

The average age of respondents to this questionnaire was 28.

5. Conclusions

As was stated in the methodology section above, these conclusions are to be read in the context in which they are situated, in that they provide indications of possible tendencies of qualifications at EQF levels 5 and 6, and how these qualifications are viewed and used within Europe.

- The majority respondents did not have a job at the time of enrolment in the course, and they did not have one when they graduated. One of the reasons for this is that many of the qualifications investigated in this study are IVET, wherein individuals are not typically employed prior to enrolment. The evidence from further investigation of the employment situation suggests that respondents found it relatively easy to secure a job.

- In terms of the respondents' first job after graduation, there is a great deal of variation between the type of jobs in which graduates were employed, e.g. experienced non-managerial, entry-level jobs, project manager (team leader), trainee, intern, and assistant roles. This finding is interesting because if the types of jobs, and the responsibilities those jobs entail, can differ so widely it may indicate that previous experience and qualifications are taken into consideration.

- In terms of mobility across borders, almost all respondents are employed in the same country in which they received their qualification. This suggests, therefore, that these qualifications have a very low mobility factor.

- With regard to the level of autonomy in their first job after graduation, this seems to vary depending on the area. For instance, the overall findings suggest that the level of autonomy is high in that graduate jobs entail many responsibilities. However, when the results are analysed in detail, it becomes clear that in terms of individual responsibilities, for example budget or management skills, the respondents believe that they had a low level of autonomy.

- In relation to the respondents' current professional status, the majority indicated that they have a permanent contract, while a minority have fixed-term contracts or other temporary agreements.

- In terms of career progression, the majority of the respondents indicated that their current job is also their first job after graduation, and in some cases it was the job respondents had prior to enrolment in the qualification programme.

- When asked whether the respondents had experienced change to their professional life as a result of taking the qualification, the majority

indicated that their professional life was 'unchanged' or had changed 'positively'.

- With regard to the relevance of skills acquired during the qualification process to the individual's professional life, the overall response of respondents was positive, indicating that the learning outcomes effectively match the expectations of employers.

Selective findings from the schools/courses are presented below:

- The majority of respondents completed their qualification between 2 and 3 years ago. It is interesting to note that the majority of respondents from the German school were employed upon enrolment in the qualification. This can be explained by the fact that the qualification offered in this school is CVET, whereas several of the other courses are IVET and it is more common for those that are unemployed (or have yet to obtain their first job) to participate in IVET courses.

- In terms of the number of graduates that had employment upon completion of the qualification, the Austrian and German schools appear to have most graduates with job offers. The overall results indicate that there is a variety of different experiences in relation to the ease with which graduates find work upon graduation.

- Some graduates are employed as a project manager or in higher positions, but it is clear that the individuals with these jobs were those that had worked or were in employment prior to enrolment.

- The most common types of job profiles within the sample include building construction, engineering, and installation/maintenance.

- Within a European context, it is interesting to note that the majority of respondents from all schools stated that they worked in the same country as that in which they obtained their qualification. Only the Austrian school had graduates that sought employment across borders.

- The majority of the respondents stated that they performed relatively simple tasks. However, a significant proportion of the graduates from the Grundig Akademie and ABB Technikerschule schools indicated that they possess a higher level of autonomy in terms of tasks, probably due to the CVET nature of the qualification they obtained.

- The majority of the graduates indicated that their current job is also their first. This seems logical as the majority of the graduates only received their qualification two to three years ago.

- The respondents were questioned about the relevance of skills taught during their participation in the qualification programme. The results indicate that respondents felt that they were not taught all of the skills necessary to the performance of their jobs, but they were taught all of the necessary technical skills.

- With regard to the relevance of the skills acquired during the qualification process towards the individual's professional life, the overall results are positive. The learning outcomes effectively match the expectations of the employer.

Please note that the aim of this work package was to compare qualifications, not countries per se. The results do not allow for the drawing of universally applicable general conclusions on comparisons between countries, but it is possible to make observations and suggest possible tendencies from these findings.

6. Findings by school/course

The following section provides an overview of the responses and findings collected during the survey divided by school/course.

Table 48 - Number of responses of years since graduation per school/course

How many years ago did you graduate?	2 years	3 years	4 years	5 years
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	5	8	2	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	3	5	0	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	2	9	4	2
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	6	8	10	4
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	9	4	1	8
Kaunas College (Engineer of mechatronic systems)	1	1	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	4	2	1	0

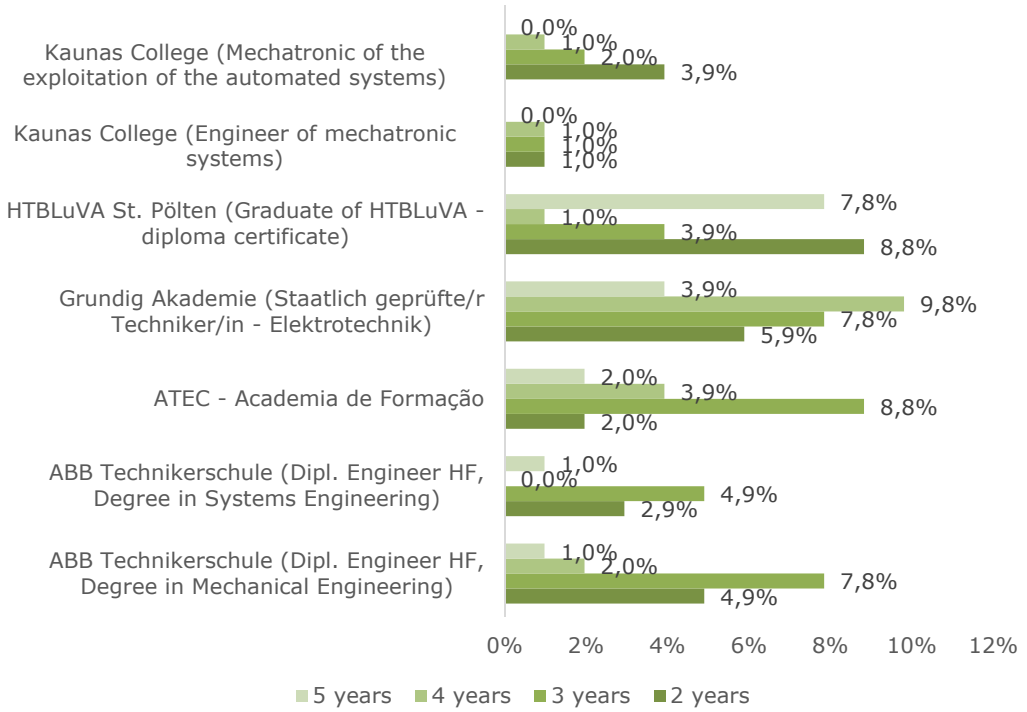

Figure 42 - percentage of years since graduation per school/course

Table 48 and figure 48 show a breakdown of the number of years since respondents graduated. The majority completed their qualification between 2 and 3 years ago.

Table 49 - Number of responses of if the graduate worked prior to enrolment in qualification per school/course

Did you work prior to starting this programme/school?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	16
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	9
ATEC - Academia de Formação (Técnico de Mecatrónica)	11	6
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	28
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	18	4
Kaunas College (Engineer of mechatronic systems)	1	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	5	2

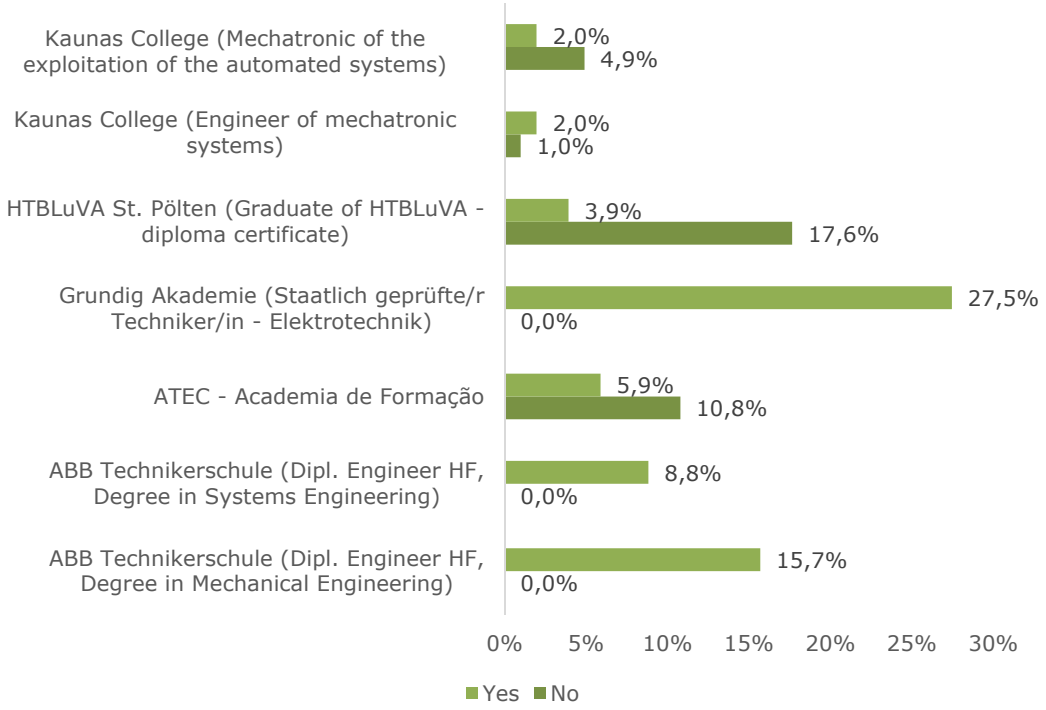

Figure 43 - percentage of overview of if the graduate worked prior to enrolment in qualification per school/course

It is interesting to note that, as results show, the majority of respondents from the German school were employed upon their enrolment in the qualification. This may be explained by the fact that this qualification is CVET rather than IVET.

Table 50 - Number of responses of years worked prior to qualification per school/course

How many years had you worked in this job at the time of starting this programme / school?	up to 1 year	1 to 2 years	2 to 5 years	6 to 10 years	more than 10 years
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	3	2	2	6	3
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	3	1	2	3	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	1	3	2	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	2	4	10	9	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	0	0	1
Kaunas College (Engineer of mechatronic systems)	2	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	0	0	0	0

Table 50 shows how many years the respondents had worked prior to enrolment. Once again the German school was the partner which had graduates who had worked the longest prior to enrolment. This is attributable to the fact that it is a CVET qualification.

Table 51 - Number of responses of possible employment upon graduation per school/course

Did you already have a job at the time of your graduation from this programme / school?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	16
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	8
ATEC - Academia de Formação (Técnico de Mecatrónica)	6	11
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	6	22
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	20	2
Kaunas College (Engineer of mechatronic systems)	0	3
Kaunas College (Mechatronic of the exploitation of the automated systems)	2	5

Table 51 shows the results of how many graduates had employment upon completion of the course. The Austrian and German schools appear to have most graduates with job offerings.

Table 52 - Number of responses of finding a job upon graduation per school/course

Was it easy for you to find a job after graduation?	it was very easy	it was moderately easy	no, it was not easy	I did not look for a relevant job	I already had a job while graduating
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	3	3	2	1	6
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	1	3	1	3
ATEC - Academia de Formação (Técnico de Mecatrónica)	1	4	8	1	3
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	4	12	4	1	7
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	9	7	3	2	0
Kaunas College (Engineer of mechatronic systems)	0	2	1	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	3	1	0	2

Table 52 demonstrates that respondents had a mixture of different experiences in relation to the ease with which they found work upon graduation.

Table 53 - Number of responses concerning job profile per school/course

Please indicate the job level of your first job after graduation	Intern	Trainee	Assistant	Entry-level job	Experienced (non-manager)	Project Manager, team leader (supervisor of staff)	Executive Manager	Others
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	0	0	12	3	0	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	0	2	6	1	0	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	2	8	3	2	2	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	0	4	17	6	0	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	0	1	15	1	1	0	2
Kaunas College (Engineer of mechatronic systems)	0	0	0	1	2	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	0	0	2	4	0	0	0

Table 53 shows the responses participants provided to questions about their job profile, and what kind of work they undertook in their first job after graduation. Some graduates achieved project manager positions or higher, but it is clear that respondents who have obtained these jobs are most likely those that had worked prior to enrolment.

Table 54 - Number of responses of job category per school/course

Please indicate the job category of your first job after graduation	Biotech/R&D/Science	Building Construction	Engineering	IT / Software Development	Installation / Maintenance / Repair	Logistics / Transportation	Manufacturing / Production / Operations	Others
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	0	9	0	0	0	3	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	0	5	2	1	0	0	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	1	1	1	1	7	1	5	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	2	0	6	7	5	0	5	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	1	11	4	1	1	2	1
Kaunas College (Engineer of mechatronic systems)	0	0	1	0	2	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	0	2	3	0	2	0

Table 54 presents the responses provided by participants when they were asked to indicate the category of their first job upon graduation. The most frequently reported job categories were building construction, engineering, and installation/maintenance.

Table 55 - Number of responses: employment mobility per school/course

For your first job after graduation, did you work	…. in the same country in which you completed your engineering/mechatronics qualification.	In another country
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	15	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	9	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	17	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	28	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	20	1
Kaunas College (Engineer of mechatronic systems)	3	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	7	0

Table 55 shows the responses provided to the question of mobility in relation to their first job after graduation. A clear majority of respondents from all schools indicated that they worked in the same country in which they received their qualification. Only the Austrian school had graduates that sought employment across borders.

Table 56 - Number of responses: job autonomy per school/course

What was your level of autonomy on your first job after graduation					
I do / did activities / tasks	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	3	10	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	3	4	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	2	10	4	1	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	3	7	12	6
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	3	14	2	1
Kaunas College (Engineer of mechatronic systems)	0	1	1	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	2	0	5	0

Table 56 and displays the degree of autonomy the respondent felt they had in their first job after graduation. The majority of the respondents stated that they performed relatively simple tasks. However, a large proportion of the graduates from the Grundig Akademie and ABB Technikerschule schools indicated a higher autonomy of tasks.

Table 57 - number of respondents: autonomy of responsibilities per school/course

What was your level of autonomy on your first job after graduation					
Accountability / Responsibilities	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	7	7	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	2	3	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	3	7	4	2	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	6	6	11	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	2	4	4	6	2
Kaunas College (Engineer of mechatronic systems)	0	2	2	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	2	2	2	3

Table 57 shows the level of responsibility graduates had in their first job after graduation. Graduates who stated that they had worked prior to enrolment in the qualification programme (and who attended certain schools), also indicated that that they had a higher level of responsibility in their work.

Table 58 - number of responses: budget and financial accountability skills per school/course

What was your level of autonomy on your first job after graduation					
Budget and financial accountability	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	3	2	4	2	4
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	2	2	3	2	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	5	9	2	1	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	9	2	10	2	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	10	4	3	3	0
Kaunas College (Engineer of mechatronic systems)	2	1	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	2	1	1	2	1

Table 58 shows how graduates indicated their level of responsibility in relation to financial and budget management in their first job after graduation. For all schools the majority of results indicate that graduates had a lower level of responsibility in financial aspects.

Table 59 - number of responses: leadership skills per school/course

What was your level of autonomy on your first job after graduation					
Leadership	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	6	5	3	1	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	5	4	2	0	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	4	9	0	2	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	10	9	7	1	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	14	3	3	0	1
Kaunas College (Engineer of mechatronic systems)	2	0	1	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	3	1	2	1	0

Table 59 displays the participants' answers in relation to the level of management that they were responsible for in their first job after graduation. The majority of graduates from across all of the schools appear to have had no special management tasks.

Table 60 - number of responses: total size of company per school/course

What is the total size of the company	1 to 10 employees	11 to 20 employees	21 to 50 employees	51 to 250 employees	more than 250 employees
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	0	4	4	6
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	2	0	0	6
ATEC - Academia de Formação (Técnico de Mecatrónica)	1	5	5	6	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	0	3	4	20
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	2	0	4	5	10
Kaunas College (Engineer of mechatronic systems)	1	0	0	2	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	3	1	0	2

Table 60 shows the answers provided to questions about the size of the company that respondents worked for. The majority of the respondents worked for companies that employ up to 250 employees.

Table 61 - number of responses: current professional status per school/course

Please describe your current professional status	Self-employed	Fixed-term contract	Temporary contract	Currently unemployed	Permanent contract	Other
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	0	0	14	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	0	0	9	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	5	3	3	6	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	0	2	0	23	2
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	3	1	0	13	3
Kaunas College (Engineer of mechatronic systems)	0	1	1	0	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	7	0	0	0	0

In table 61, the current professional status of the respondents per school/ course is outlined. The most common type of employment among the graduates is a permanent contract.

Table 62 - number of responses: first job after graduation per school/course

Is your current job still your first job after graduation?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	7	8
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	3	6
ATEC - Academia de Formação (Técnico de Mecatrónica)	3	11
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	12	16
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	9	11
Kaunas College (Engineer of mechatronic systems)	0	3
Kaunas College (Mechatronic of the exploitation of the automated systems)	4	3

Table 62 shows that for the slight majority of graduates surveyed from all schools, their current job is also the first they obtained after graduation.

Table 63 - number of responses: job level current job per school/course

Please indicate the job level of your current job after graduation	Intern	Trainee	Assistant	Entry-level job	Experienced (non-manager)	Project Manager, team leader (supervisor of staff)	Executive Manager	Others
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	0	0	0	4	2	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	0	0	2	0	0	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	0	1	6	1	2	2
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	1	0	0	4	2	0	1
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	0	1	3	0	0	0

In table 63, the profile of the current job level of respondents is outlined. The range of job levels varies considerably from trainees to experienced workers, and includes positions such project manager (supervision of staff).

Table 64 - number of responses: job category of current job per school/course

Please indicate the job category of your current job	Biotech/R&D/Science	Building Construction	Engineering	IT / Software Development	Installation / Maintenance / Repair	Logistics / Transportation	Manufacturing / Production / Operations	Others
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	0	3	0	0	0	2	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	2	1	0	0	0	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	6	3	0	0	1	2
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	3	4	0	0	0	1
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	1	0	1	0	2	0

In table 64 the area of work in which the graduate's current job is situated is shown. Building, installation, and manufacturing are the areas in which the majority of graduates appear to be employed.

Table 65 - number of responses: mobility in current job per school/course

In your current job, do you work	…. in the same country in which you completed your engineering/mechatronics qualification.	In another country
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	7	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	2	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	12	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	8	1
Kaunas College (Engineer of mechatronic systems)	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	3	1

In table 65, the mobility rate among the graduates is shown in relation to the country in which they received their qualification, and the country in which they are currently employed. The vast majority of respondents indicated that the country of qualification and employment is the same.

Table 66 - number of responses: level of autonomy per school/course

What is your level of autonomy on					
I do/did activities/tasks	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	0	6	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	0	1	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	1	6	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	1	1	4	1
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	0	2	2

In table 66, the level of the autonomy experienced by the graduates in their job is displayed. The results indicate that the majority of respondents perform relatively complex tasks.

Table 67 - number of responses: level of accountability/responsibilities per school/course

Accountability / responsibilities	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0	0	4	3
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	1	0	1	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	4	3	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	1	0	3	3
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	1	1	2

In table 67, the level of work responsibility of the respondents in their current job is show. The majority of graduates are employed in roles with significant levels of responsibility.

Table 68 - number of responses: level of budget and financial accountability per school/course

Budget and financial accountability	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	2	1	2	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	0	0	1	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	4	2	2	1	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	4	2	1	0	1
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	1	1	0	1

In terms of financial responsibility, table 68 shows that the respondents tend to be responsible for lower amounts of capital, if any at all in their current jobs. Graduates from only two schools indicated that they had a higher level of financial accountability.

Table 69 - number of responses: leadership level per school/course

Leadership	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	2	2	2	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	2	0	0	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	3	3	3	1	2
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	3	3	2	0	0
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	3	0	1	0	0

Table 69 indicates the level of leadership/management of the respondents in their current jobs. The results clearly make evident that the majority of the respondents have relatively low levels of management tasks.

Table 70 - number of responses: size of current company per school/course

What is the total size of the company you currently work for	1 to 10 employees	11 to 20 employees	21 to 50 employees	51 to 250 employees	more than 250 employees
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	3	1	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	0	0	3
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	0	0	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	0	2	0	9
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	0	3	5
Kaunas College (Engineer of mechatronic systems)	0	0	0	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	0	0	3	0

Table 70 shows the responses provided on the size of the company that the graduates currently work for. The majority work for an organisation with 51 to 250 employees, while the next largest group of graduates work for companies who employ between 21 and 50 employees.

Table 71 - number of responses: possible job change – salary per school/course

Between your graduation and today, how has your job changed in terms of…				
Compensation (pay)	Very positively	Positively	Unchanged	Negatively
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	1	2	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	3	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	2	3	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	2	2	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	5	0
Kaunas College (Engineer of mechatronic systems)	0	0	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	0	0

Table 71 displays the responses provided by respondents in relation to the question of whether they had experienced a change in salary since their graduation. The majority of the respondents stated that they had experienced no change, or a positive change.

Table 72 - number of responses: level of position per school/course

Level of your position	Very positively	Positively	Unchanged	Negatively
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	2	0	3	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	1	5	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	4	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	3	8	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	6	0
Kaunas College (Engineer of mechatronic systems)	0	0	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	2	0

Table 72 displays how respondents answered the question as to whether they feel there has been a change in their work position since completion of their qualification. The majority of respondents answered that they had experienced no change, or had experienced positive change.

Table 73 - number of responses: degree of autonomy per school/course

Degree of autonomy	Very positively	Positively	Unchanged	Negatively
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	2	0	5	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	0	5	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	2	1	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	2	4	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	3	0
Kaunas College (Engineer of mechatronic systems)	0	0	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	1	0

Table 73 displays the extent to which respondents felt they have experienced a change in the level of autonomy of their work position since the completion of their qualification. The majority of respondents indicated that they had experienced a positive or very positive change in terms of the level of autonomy.

Table 74 - number of responses: size of projects per school/course

	Very positively	Positively	Unchanged	Negatively
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	2	0	3	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	1	3	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	2	1	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	4	2	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	6	0
Kaunas College (Engineer of mechatronic systems)	0	0	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	1	0

In table 74, the responses provided by respondents to the question of whether they had experienced change in terms of size of projects they worked on since qualification. Once again the findings indicate that graduates experienced positive or very positive change.

Table 75 - number of responses: supervision of staff per school/course

	Very positively	Positively	Unchanged	Negatively
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	1	9	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	0	6	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	2	4	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	3	15	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	0	10	0
Kaunas College (Engineer of mechatronic systems)	0	0	2	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	2	0

Table 75 shows the level of change experienced by the graduates in terms of supervision of staff since graduation. The results indicate a positive change from all schools.

Table 76 - number of responses: relevance of skills per school/course

On a scale from 1 to 5, how well do you think this programme equipped you with the relevant competences for your professional activity? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	11	3	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	3	3	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	4	12	1
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	2	8	13	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	2	3	12	3
Kaunas College (Engineer of mechatronic systems)	0	0	1	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	1	0	5	1

Table 76 shows the opinions of the respondents in relation to the relevance of skills taught during their participation in the qualification programme in terms of their professional requirements. The findings indicate that respondents felt that they were not taught all of the necessary skills.

Table 77 - number of responses: job requirements and qualification per school/course

On a scale from 1 to 5, could you please specify if the competences you acquired through the qualification where those required in your first job? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)					
Economic skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	7	5	3	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	0	5	1	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	7	8	1
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	10	8	6	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	3	10	4	4
Kaunas College (Engineer of mechatronic systems)	0	1	1	1	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	2	2	0	2

In table 77, the findings on the extent to which the respondents felt that the skills taught during the qualification were relevant in terms of the graduate's first job are displayed. The respondents presented a mixture of responses. However, overall the relevance of the skills taught was rated slightly negatively in relation to the requirements of the graduate's first job.

Table 78 - number of responses: level of technical skills per school/course

Technical skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	3	10	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	2	5	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	3	9	5
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	6	14	7
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	2	3	7	9
Kaunas College (Engineer of mechatronic systems)	0	0	1	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	1	2	1	3

Table 78 shows the respondent's views on the accuracy of technical skills taught in relation to the requirements of their first job. The picture here is slightly different, as many graduates indicated that most, if not all, the necessary skills were taught during the qualification.

Table 79 - number of responses: level of specialised skills per school/course

Specialised skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	9	6	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	1	4	3	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	7	5	5
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	4	11	11	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	3	8	7	3
Kaunas College (Engineer of mechatronic systems)	0	0	1	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	1	3	1	2

Table 79 shows the results of the respondent's views on the accuracy of the specialised skills taught in relation to the requirements of the respondent's first job. Most respondents selected levels three and four on a five point scale of effectiveness, with 5 indicating highly effective provision of specialised skills.

Table 80 - number of responses: foreign language skills per school/course

Foreign language skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	12	2	2	0	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	5	0	2	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	7	9	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	5	10	8	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	6	4	6	4
Kaunas College (Engineer of mechatronic systems)	0	1	0	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	2	0	3	2

Table 80 demonstrates the responses of graduates on the extent to which their qualification programme provided the necessary relevant foreign language skills required for their first job after graduation. In this case, the results suggest that to a great extent the language skills provided were not completely sufficient.

Table 81 - number of responses: level of methodological skills per school/course

Methodological skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	4	9	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	3	4	1	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	4	11	2
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	5	10	7	5
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	3	9	3	6
Kaunas College (Engineer of mechatronic systems)	0	0	1	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	0	2	0	4

Table 81 indicates the results of the relevance of the methodological skills taught in terms of the requirements of the work carried out by the graduates in their first job. The results above indicate that overall the necessary methodological skills were taught with some exceptions.

Table 82 - number of responses: level of social skills per school/course

Social skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	3	6	5	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	5	1	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	4	12	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	4	9	12	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	5	8	6	2
Kaunas College (Engineer of mechatronic systems)	0	0	1	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	1	1	2	3

Table 82 displays the level of social skills respondents felt they acquired from their qualification programme in relation to the requirements of their first job after graduation. The results clearly indicate that the respondents were generally satisfied with the social skills acquired.

Table 83 - number of responses: level of economic skills per school/course

On a scale from 1 to 5, could you please specify if the competences you acquired through the qualification where those required in your current job? (1 means few or no necessary skills were taught and 5 means all the necessary skills were taught)					
Economic skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	1	4	6	3	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	0	4	2	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	6	10	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	2	6	10	8	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	2	6	4	5	1
Kaunas College (Engineer of mechatronic systems)	0	0	1	2	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	2	1	0	2

Table 83 shows the respondent's views on the relevance of the economic skills taught in their qualification programmes in relation to the skills required in their current work place. The majority of the responses provided suggest that provision was insufficient or merely adequate and this may indicate room for improvement in this type of competence.

Table 84 - number of responses: level of technical skills per school/course

Technical skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	3	10	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	2	4	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	2	14	1
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	0	7	14	6
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	2	1	6	7
Kaunas College (Engineer of mechatronic systems)	0	0	1	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	1	2	0	2

Table 84 shows the respondent's views on the technical skills taught in their qualification programmes in relation to the requirements of their current jobs. As can be seen above, in principle the respondents feel that all the necessary skills were taught on the qualification programme.

Table 85 - number of responses: specialised skills per school/course

Specialised skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	8	5	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	2	3	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	6	9	2
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	1	12	11	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	0	3	4	6	4
Kaunas College (Engineer of mechatronic systems)	0	0	1	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	0	2	1	2

Table 85 indicates the respondent's views on the relevance of the specialized skills taught in the qualification programmes in relation to the skills required for their current job. The results suggest that the skills taught are to some extent in the line with professional requirements, but that there could be some improvement in this area.

Table 86 - number of responses: level of foreign language skills per school/course

Foreign language skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	10	3	2	1	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	1	5	0	1	2
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	1	5	9	1
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	4	14	6	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	3	4	6	3
Kaunas College (Engineer of mechatronic systems)	0	1	0	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	2	0	1	3

Table 86 shows respondent views on the relevance of the foreign language skills taught during the qualification programme in relation to those needed in the current work place. The opinions of the respondents on this issue appear to be somewhat divided, both between different schools and between graduates from the same school.

Table 87 - number of responses: level of methodological skills per school/course

Methodological skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	1	5	6	3
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	3	3	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	5	10	2
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	2	9	9	6
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	3	7	3	3
Kaunas College (Engineer of mechatronic systems)	0	0	1	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	1	0	2	3

Table 87 shows respondent views on the relevance of methodological skills taught on their qualification programme in relation to current job requirements of the graduates. The results indicate that there is an overall level of satisfaction with the methodological skills taught.

Table 88 - number of responses: level of social skills per school/course

Social skills	1	2	3	4	5
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	2	6	6	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	2	4	2	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	0	5	11	1
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	2	11	10	4
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	3	6	3	3
Kaunas College (Engineer of mechatronic systems)	0	0	1	0	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	0	0	3	3

Table 88 shows the results of respondent views on the relevance of the social skills taught in their qualification programme, in relation to those required in their current job. Opinions differ between graduates of different schools as to the relevance of the social skills provided. The overall results suggest that generally the necessary skills were provided in the programmes.

Table 89 - number of responses: work placement opportunity per school/course

Did this programme/school include a mandatory work placement?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	15	1
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	8	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	1	16
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	27	1
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	1	21
Kaunas College (Engineer of mechatronic systems)	1	2
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	7

Table 89 shows the extent to which mandatory work placements formed a part of respondents' qualification programmes. With regard to this issue, it is clear that there are differences between the schools. Some schools offers work placement possibilities, while others do not.

Table 90 - number of responses: job offer per school/course

Did you get a job offer from the company where you completed the professional practical training?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	0
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	1
ATEC - Academia de Formação (Técnico de Mecatrónica)	8	8
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	1	0
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	16	5
Kaunas College (Engineer of mechatronic systems)	1	1
Kaunas College (Mechatronic of the exploitation of the automated systems)	5	2

Table 90 shows the extent to which respondents who participated in work placements were offered a job by the company in which they undertook their placement, upon completion of the qualification. Although a substantial proportion of respondents stated that they did not receive a job offer, responses from the different schools show that some graduates were invited to join companies.

Table 91 - number of responses: final thesis per school/course

Did you have to write a final thesis?	No	Yes
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	13
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	7
ATEC - Academia de Formação (Técnico de Mecatrónica)	14	3
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	19	8
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	7	15
Kaunas College (Engineer of mechatronic systems)	0	3
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	7

Table 91 shows whether or not graduates were required write a final thesis as part of the requirements for the completion of their qualification. The majority of respondents indicated that they were required to deliver a thesis, although a substantial number also stated that they were not. It is clear that whether a thesis requirement is in place is highly dependent on the school and course.

Table 92 - number of responses: gender per school/course

What is your gender	Female	Male
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	16
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	9
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	17
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	28
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	3	19
Kaunas College (Engineer of mechatronic systems)	0	3
Kaunas College (Mechatronic of the exploitation of the automated systems)	1	6

In table 92 the gender of the respondents is shown. The clear majority of respondents were male.

Table 93 - number of responses: age per school/course

Your age	under 20	20 to 30	31 to 40	41 to 50
ABB Technikerschule (Dipl. Engineer HF, Degree in Mechanical Engineering)	0	6	6	2
ABB Technikerschule (Dipl. Engineer HF, Degree in Systems Engineering)	0	3	6	0
ATEC - Academia de Formação (Técnico de Mecatrónica)	0	14	3	0
Grundig Akademie (Staatlich geprüfte/r Techniker/in - Elektrotechnik)	0	9	16	3
HTBLuVA St. Pölten (Graduate of HTBLuVA - diploma certificate)	2	16	4	0
Kaunas College (Engineer of mechatronic systems)	0	3	0	0
Kaunas College (Mechatronic of the exploitation of the automated systems)	0	7	0	0

The age of the respondents is outlined in table 93.The majority of respondents were between 20 and 30 years old.

7. Annex

Reality Check II: Alumni survey

Thank you for participating in this survey.

The survey is carried out as part of the EQUAL-CLASS project, a European Commission-funded project which aims to analyse and compare qualifications in the field of mechatronics, electronics/electrical engineering across different European countries.

The questions refer to the engineering qualification you have obtained and to your professional pathway since graduation. Your responses are of great value to our project.

The survey is mostly based on multiple choice questions and should not take more than 5-10 minutes to complete. All responses will remain strictly confidential.

If you have any questions with regard to this survey, please do not hesitate to contact mettechristensen@spi.pt.

Additional information about the project can be found at http://www.equal-class-eqf.eu

* Mandatory question

1. Education and training

Please select the qualification / programme you completed from the drop-down list below..*

1.2. How many years ago did you graduate? *

- ☐ 2 years
- ☐ 3 years
- ☐ 4 years
- ☐ 5 years

1.3 Did you already work in a job prior to starting this programme/school?

- ☐ Yes
- ☐ No (please proceed to question 2.1)

1.3.1 How many years had you worked in this job at the time of starting this programme/school?

- ☐ up to 1 year
- ☐ 1 to 2 years
- ☐ 2 to 5 years
- ☐ 6 to 10 years
- ☐ more than 10 years

2. Professional pathway

2.1 Did you already have a job at the time of your graduation from this programme/school? *

- ☐ Yes
- ☐ No

2.2 Your first job after graduation

2.2.1 Was it easy for you to find a job after graduation?

- ☐ It was very easy
- ☐ It was moderately easy
- ☐ No, it was not easy
- ☐ I did not look for a relevant job
- ☐ I already had a job while graduating

2.2.2 Please indicate the job level of your first job after graduation

- ☐ Intern
- ☐ Trainee
- ☐ Assistant
- ☐ Entry-level job
- ☐ Experienced (non-manager)
- ☐ Project Manager, team leader (supervisor of staff)
- ☐ Executive Manager (e.g. Department Head, CEO)
- ☐ Other: please specify

2.2.3 Please indicate the job category of your first job after graduation

- ☐ Biotech/R&D/Science
- ☐ Building Construction
- ☐ Engineering
- ☐ IT / Software Development
- ☐ Installation / Maintenance / Repair
- ☐ Logistics / Transportation

- ☐ Manufacturing / Production / Operations
- ☐ Other: please specify

2.2.4 For your first job after graduation, did you work…

- ☐ …in the same country in which you completed your engineering/mechatronics qualification.
- ☐ In another country. Please specify:

2.2.5 What was your level of autonomy on:

Your first job after graduation?

I do/ did activities - tasks

	1	2	3	4	5	
Simple tasks	☐	☐	☐	☐	☐	very complex tasks

Accountability / Responsibilities

	1	2	3	4	5	
I am employed with few responsibility	☐	☐	☐	☐	☐	I am fully responsible

Budget and financial accountability

	1	2	3	4	5	
I'm responsible for a budget of less than € 10,000	☐	☐	☐	☐	☐	I'm responsible for more than € 100,000.

Leadership

	1	2	3	4	5	
I have no special management tasks	☐	☐	☐	☐	☐	I lead more than 10 employees

2.2.6 What is the total size of the company?

- ☐ 1 to 10 employees
- ☐ 11 to 20 employees
- ☐ 21 to 50 employees
- ☐ 51 to 250 employees
- ☐ more than 250 employees

2.2.7 Please describe your current professional status

- ☐ Self-employed
- ☐ Fixed-term contract
- ☐ Temporary contract
- ☐ Currently unemployed [please proceed to question 3.]
- ☐ Permanent contract
- ☐ Other: ____

2.3.1 Is your current job still your first job after graduation?

- ☐ Yes [if yes, please proceed to question 2.4]
- ☐ No

2.3.2 Please indicate the job level of your current job.

- ☐ Intern
- ☐ Trainee
- ☐ Assistant
- ☐ Entry-level job
- ☐ Experienced (non-manager)
- ☐ Project Manager, team leader (supervisor of staff)
- ☐ Executive Manager (e.g. Department Head, CEO)
- ☐ Other: please specify ____

2.3.3 Please indicate the job category of your current job.

- ☐ Biotech/R&D/Science
- ☐ Building Construction
- ☐ Engineering
- ☐ IT / Software Development
- ☐ Installation / Maintenance / Repair
- ☐ Logistics / Transportation
- ☐ Manufacturing / Production / Operations
- ☐ Other ____

2.3.4 In your current job, do you work…

- ☐ ….in the same country in which you completed your engineering/mechatronics qualification.
- ☐ in another country. Please specify: ____

2.3.5 What is your level of autonomy on:

Activities - Tasks

	1	2	3	4	5	
Simple tasks	☐	☐	☐	☐	☐	Very complex tasks

Accountability / Responsibilities

	1	2	3	4	5	
I am employed with few responsibility	☐	☐	☐	☐	☐	I am fully responsible

Budget and financial accountability

	1	2	3	4	5	
I'm responsible for a budget of less than € 10,000	☐	☐	☐	☐	☐	I'm responsible for more than € 100,000.

Leadership

	1	2	3	4	5	
I have no special management tasks	☐	☐	☐	☐	☐	I lead more than 10 employees

2.3.6 What is the total size of the company you currently work for?

- ☐ 1 to 10 employees
- ☐ 11 to 20 employees
- ☐ 21 to 50 employees
- ☐ 51 to 250 employees
- ☐ more than 250 employees

2.4 Between your graduation and today, how has your job changed in terms of…

Type of tasks performed	Very positively	Positively	Unchanged	Negatively	Very negatively
...compensation (pay)	☐	☐	☐		
…level of your position	☐	☐	☐		
…degree of autonomy	☐	☐	☐		
…size of projects	☐	☐	☐		

…supervision of staff ☐ ☐ ☐

3. Qualification

The following questions relate to your engineering qualification you obtained at your school

3.1 On a scale from 1 to 5 how well do you think this programme equipped you with the relevant competences for your professional activity? (1 = few or no skills required were taught; 5 = all the necessary skills were taught)

	1	2	3	4	5
Scale from 1 to 5	☐	☐	☐	☐	☐

3.2 On a scale from 1 to 5 could you please specify if the competences you acquired through the qualification were those required in first your job? (1 = few or no skills required were taught; 5 = all the necessary skills were taught)

	1	2	3	4	5
Economic skills	☐	☐	☐	☐	☐
Technical skills	☐	☐	☐	☐	☐
Specialised skills	☐	☐	☐	☐	☐
Foreign language skills	☐	☐	☐	☐	☐
Methodological skills	☐	☐	☐	☐	☐
Social skills	☐	☐	☐	☐	☐

Others: ☐

3.3 On a scale from 1 to 5 could you please specify if the competences you acquired through the qualification were those required in your current job? (1 = few or no skills required were taught; 5 = all the necessary skills were taught)

Economic skills

Technical skills

Specialised skills

Foreign language skills

Methodological skills

Social skills

Others:

3.4 Did this programme/school include a mandatory work placement?

- Yes [if yes, please proceed to question 3.4.1]
- No

3.4.1 Did you get a job offer from the company where you completed the professional practical training?

- Yes
- No

3.5 Did you have to write a final thesis?

- Yes

☐ No

4 Demographics

4.1 What is your gender *****

☐ Male
☐ Female

4.2 Your age * _____

Thank you for participating in this survey

Equal class PROJECT

ENGINEERS QUALIFIED IN HIGHER NON-UNIVERSITY VET INSTITUTIONS – PROVIDING ARGUMENTS AND EVIDENCE FOR NQF/EQF CLASSIFICATION

Comparing qualifications in mechatronics & electrical engineering/electronics

European Qualifications Framework (EQF) levels 5-6
in Austria, Germany, Lithuania, Portugal and Switzerland

3 perspectives

LEARNING OUTCOMES
(THEORETICAL – DESCRIPTIVE)

Structured description and comparison of qualifications based on learning outcomes

- Using adapted methodology from the ‚ZOOM' project
- Comparing qualification profiles
- Comparing the assessment of knowledge, skills and competence

LEARNERS
(PRACTICAL – PERFORMANCE TESTING)

'Remote Laboratories'

- Online laboratories to remotely conduct real experiments
- Testing learners' PLC* knowledge, skills and competence
- Learners in the participating countries have to solve the same programming exercises online.

* PLC = Programmable Logic Controller

GRADUATES
(LABOUR MARKET)

Alumni survey

- Comparing graduates' occupations and positions in the labour market
- Web-based questionnaire in four different languages
  - Job level and status
  - Degree of responsibility
  - Career prospects
  - Type of tasks executed

+

How can learning outcomes acquired in the workplace be taken into account?

Desk research & interviews

- Validation and recognition of non-formal/informal learning
- Higher NQF/EQF level?

Can the results provide additional evidence for the classification of qualifications in the National/European Qualifications Framework?

Aims: Providing and testing a set of methodological tools

- for transnational comparison
- for the creation of transparency and
- for raising the understanding of a qualification

Further information: www.equal-class-eqf.eu
Duration of the project: 10/2012 – 09/2014
Partners from: Austria, Germany, Lithuania, The Netherlands, Norway, Portugal and Switzerland

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Lifelong Learning Programme

GRUNDIGAKADEMIE

ABB Technikerschule

spi

HTL ST. PÖLTEN

EU pro VET

CONSULTUR studies&analyses

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