

A GENERATION IN PANDEMIC - THE FIRST LONGITUDINAL STUDY ON THE CAREER AND THE EMERGENCE IN THE LABOR MARKET OF GRADUATES OF A DUAL VOCATIONAL SCHOOL

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Abstract: *The emergence in the field of work for the young graduates of vocational school is less studied in Romania. The present study is a longitudinal one and captures the evolution of the perception of the students of a dual vocational school about career and profession from the beginning of schooling until before graduation, given that this generation of students studied more online due to the Covid-19 pandemic. In addition to the differences in perception between the two rounds of questionnaires, the study also presents the situation of professional insertion of this generation, three months after the completion of professional studies.*

Key words: *longitudinal study, labour market, profession, Covid-19, dual vocational school.*

1. Introduction

The education process is based primarily on trust and the formation of future perspectives (Alexandrescu, 2009, 496) by acquiring desirable behaviours for students and graduates (Jigău, 2009). On the other hand, it is extremely important for young people, in addition to vocational training, to acquire notions and to understand from an early age certain aspects related to their personal and professional development (Clenciu, 2016, 34). However, young people do not decide on the training path according to the possibility of employment in the future. This fact determines their employment in the field of work to not be in accordance with the specialization or qualification held, thus creating a surplus of specialists in certain fields (Chira, 2018) and their acute lack in other fields. Thus, an imbalance is established between the demand in the field of work and the professional training of young people, in this way they being forced to work in other fields than that of their professional training. These discrepancies are specific to each level of schooling, starting with vocational schools and reaching the university environment.

Vocational and technical education was considered inefficient and resource consuming (Woessmann, 2008, 2) because the qualifications in these schools and the low quality of study programs were not adapted to the requirements of the labour market (Glăvan, 2016, 415). Thus,

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in these schools graduates were trained in fields that were not required in the market, the professional insertion as skilled workers, of these young people, being almost impossible. Things changed with the establishment of dual vocational education through partnerships between the economic operator, the educational unit and the administrative-territorial unit. In schools, the implementation of this form of education is achieved through individual contracts of practical training between the economic operator, student / parent-guardian and the educational unit.

This form of vocational education is based on the German model, a very effective model for employment, after graduation of young people. This happens because, even from the school years, students practice directly with the economic agents that partner with the institution, and, in this way, their professional training is carried out almost entirely in factories. Later, after completing their studies, if they want and are accepted by economic agents, the pupils have the opportunity to be employed at the companies where they did their internship. As we have shown in previous research, this type of education brings more benefits to students. Thus, in addition to the possibility to practice directly within the companies, they also benefit from other facilities, the most important being the professional scholarship paid by the partner economic agent, this being offered in addition to the professional scholarship offered by the Romanian state to all vocational school students (Mucea, 2021).

2. Context, Purpose of the Study and Research Methodology

This study intends to be descriptive analysis on the evolution of the perceptions of students in the 2018-2021 generation of a dual vocational school (German Vocational School Alba substructure of the Technological High School "Alexandru Domşa" in Alba Iulia), regarding the importance of career, success in life and plans of the future, from the beginning of the schooling cycle (from the ninth grade) to the graduation (11th grade). At the same time, concrete data is presented on the professional trajectory and the insertion in the field of work immediately after the completion of the studies. All these opinions are influenced by the context of the Covid-19 pandemic, because this generation of vocational school students was the one who studied more online due to the restrictions that imposed the suspension of courses with the Establishment of the State of Emergency in Romania. Thus, the physical attendance at classes and at the practical training stages, according to article 1 of Decision no. 6 of the National Committee for Special Emergency Situations, did not take place.

Thus, in the second year of study for the 2018-2021 generation of vocational school (starting from the 10th grade, second semester), more precisely from March 11, 2020, a period of time a forced vacation was established. This was discontinued on April 27, 2020 when the courses resumed, but in online format and carrying out in this way until the end of the school year, this being a specific aspect for all schools in Romania. We can say that, from March 11, 2020 until the end of the school year (2019-2020), students did not return to school and did not participate in practical training courses in partner factories.

After the summer vacation, the beginning of the new school year (the last for the After the summer vacation, the beginning of the new school year (the last for the studied generation) takes place on September 4, 2020, and in Romania it takes place according to three scenarios: green (the presence of all students in the classroom); yellow (hybrid scenario - half of the class

online, and the other half in the classrooms, at the same time) and the red scenario (all classes online, including internships). The implementation of these scenarios was influenced by the rate of SARS-CoV-2 infection in each locality. The school where the research took place stepped into the red scenario on October 15, 2020. Subsequently, all courses requiring physical attendance were suspended as of November 9, 2020, according to the Ministerial Order (5977 / 09.11.2020) published in the Official Gazette. Thus, schools and kindergartens went online regardless of the incidence of infection in each locality, initially for a period of 30 days, a period that lasted until May 31st, 2021 when all classes returned to physical attendance. The exception of the rule was represented by the final years of study (8th and 12th grade) which returned to the physical presence, earlier, on May 5th, 2021.

Even if the 11th grade vocational school classes are considered graduating classes and take a theoretical and practical exam at the end of the training cycle, they did not resume the courses together with the 8th and 12th grades. Although this was an unexpected fact, we are inclined to believe that this did not happen because, normally, the examination for vocational school graduates does not fall into the category of national examinations. However, this school year was the one that underwent the most structural changes, thus creating numerous situations of uncertainty and general unpredictability for students and teachers. It should be mentioned that the longitudinal case study was conducted for the generation of students 2018-2021, in the first dual vocational school in Alba County, established in 2013 and among the first educational institutions of this type in Romania.

This research was conducted using a questionnaire-based sociological survey method. The tool used in this longitudinal study was built to be self-applied, so each student answered the questions individually in a class. The study had as a research universe the 2018-2021 generation of the dual vocational school, having at the level of the educational unit three parallel classes. According to the data received from the educational institution, in the 2018-2019 school year, 90 students started school, leaving 89 children at the end of it. Meanwhile, the school year 2020-2021 started with 78 students, and ended with the same number. These data does not show the number of students promoted, but show the mobility of students during the school year, through transfers or school dropouts. Also, these figures include repeaters from previous years as well.

We cannot say that a sampling method was used, the study being carried out in two different time periods, however, only students belonging to the same generation participated in the study. In total, in the first phase (t1 - February 2019) 73 students in the first year of study were interviewed, before the spread of the Covid-19 pandemic. Subsequently, another questionnaire was distributed in the second phase (t2 - May-June 2021), this one having 68 students in the last year of study that answer the questions and still being conducted under the restrictions imposed by the pandemic. Thus, the same students (belonging to the 2018-2021 generation) were interviewed at the beginning of the second semester of the first year of professional studies (school year 2018-2019), followed by the answers to the second questionnaire second two months prior to graduation (in the school year 2020-2021). A total of 141 questionnaires were completed and entered into the database, representing all students who were present at the courses in the research phases.

3. Profile of Respondents

Even if we discuss a longitudinal study, the socio-demographic characteristics of the respondents will be presented differently, for the first period of data collection (t1 - February 2019) and for the second stage (t2 - May-June 2021). Given that we are talking about a technological high school, mainly with a mechanical and electromechanical profile, the share of boys is higher than that of girls, a fact that emerges from the questionnaire as well. Thus, regarding the sex of the respondents in phase t1 we have 89% boys (65 people) and 11% girls (8 people), while in phase t2 there are 88.2% boys (60 people) and 11.8% girls (8 people). Even if the number of girls surveyed is identical in the two phases, the percentage share is different between t1 and t2 because in the second phase of testing there were five less boys that answered the questionnaire.

Regarding the age, for the first phase (t1) it ranges between 14 and 18 years old, most of the ninth grade students being 15 years old at the time of the study (66.7%), these being followed by those who were 16 years old (23.6%), and those who were 14 years old (4.2%) and 17 years old respectively (4.2%). The largest respondent student was 18 years old (1.4%). The second phase (t2) keeps the previous trends, the only difference is that it includes the time difference between the two rounds of the study. Thus, in the 11th grade most respondents were 17 years old (50%), these being closely followed by those who had turned 18 years old (44.1%). At the same time, there are 16-year-old respondents (2.9%) but also 19-year-old respondents (2.9%) in the study.

Regarding the background of the students, even if the educational unit in which the study took place is located in the municipality of Alba Iulia, there is a significant difference between those who live in rural areas and those in urban areas. Thus, in the first round of questionnaires, 66.7% of ninth grade students are from rural areas, while 33.3% are from urban areas. The situation is almost identical in the second half of the survey, where 66.2% are from rural areas and 33.8% are from urban areas. Observing these data, we note that the participants of the longitudinal study commuted daily or weekly to attend dual vocational school courses, except for those who lived in rent or relatives, however, the data for this situation is not known.

Even if the students participating in the study attend the courses on a full-time basis, in the second phase of the study (t2) some of them had started to earn their own income from work. Thus, 4.4% of them stated that they are full-time employees, while 7.4% work part-time, and 14.7% state that they work without legal forms. However, most respondents, 73.5%, said they were not employed. This aspect was not questioned in the first phase of the research (t1), since it was a bit early for students to work, so there are no data on this aspect.

4. The Evolution of the Perception about Career, Counselling and Career Guidance

Before discussing the changes in students' perceptions about career or personal and professional training, from the beginning to the end of the study cycle, it should be noted that, regardless of the year of study, all classes of dual vocational school have included in their schedule one hour per week of "counselling and career guidance". During these hours, the main topics of discussion are: self-knowledge and personal management, interpersonal communication, learning management, career planning and development, the labour market and lifestyle and work. During these classes, students do not receive grades, but their

participation is required because there are absences, therefore all respondents participated during the study cycle in group activities, counselling and career guidance.

In order to deepen this aspect, the students were asked to express their opinion about the importance of the activities and classes of counselling and career guidance, that take place within the school. At the beginning of the schooling cycle (t1 - ninth grade) a percentage of 16.4% of respondents were of the opinion that the importance of these activities is very high, while 34.2% considered that their importance is high. At that time, most of the students consider that these activities are of average importance (45.2%). At the opposite pole being 2.7% of those who considered that these activities have a low and very low importance (1.4%). Over time, students' opinions have changed, so that in the second phase of the research (t2), mostly more respondents consider the counselling and guidance activities to be very important (27.9%) and important (50%), while 22.1% of them consider that the importance of their activities is average. Unlike the beginning of the schooling cycle, now, close to graduation, no respondent considers the activities of counselling and career guidance to be of little importance. In this way, with the maturity of the studied generation over time, we can say that their views on the importance of careers or school and professional counselling have changed in a positive way.

Following the discussion, in both phases of the research, the students were asked to prioritize some aspects related to their career and professional trajectory. Thus, depending on the need, young people ranked the following needs: self-knowledge and support in making important decisions (the need for self-knowledge through tests of interest, skills and personality and the need for support in choosing high school, college or profession) and needs related to information and preparation for employment (the need for information about high school, college or profession and the need for support in preparing a CV, a letter of intent or preparation for the job interview).

According to the following table, the need for self-knowledge is of increasing importance both in the first half of the questionnaire (42.2%) and in the second half (50%). Thus, students feel that they need counselling and career guidance to get to know themselves better, by applying tests of personality, interests or skills. Although the percentages are different, the response tendencies between the two phases of the questionnaire are similar, mentioning the fact that at the end of the school year, students gave more importance to self-knowledge than at the beginning of their studies. Thus, 83.4% consider in phase t2 that self-knowledge is important and very important, while only 68% of them attributed this importance in phase t1.

Needs of self-knowledge and support in making important decisions Table 1

		Very important	Important	Unimportant	Not important at all
Need for self-knowledge (interest tests, aptitude tests and personality tests)	t1 - 9th grade	42.2%	25.8%	21.2%	10.6%
	t2 - 11th grade	50%	32.4%	10.3%	7.4%
The need for support in choosing the high school / faculty / profession	t1 - 9th grade	31.8%	30.3%	15.2%	22.7%
	t2 - 11th grade	39.7%	41.2%	13.2%	5.9%

Regarding the importance of the need for support in terms of choosing an educational institution or for establishing the right profession, there are important percentage differences between the two rounds of questionnaires. Thus, in phase t2 80.9% of students consider that support in choosing an educational institution or a profession is important and very important, while in phase t1 only 62.1% considered this. In addition to the students' maturity in thinking, a possible explanation for the percentage differences between the two phases is given by the fact that in the ninth grade they had just chosen the school where they were going to study for three years and students were not so interested in profession or employment. Things are changing for these young people once they finish their studies, since they are close to graduation and students need more support for integration into the workforce and / or continuing their studies at a higher level of education.

At the same time, the data shows the great desire of students to know themselves, thus managing to discover the world in which they live by relating to themselves. Thus, knowing themselves in the first place, they also get to know the society in which they live. On the other hand, the high importance that students attach to the need for self-knowledge, the need to support the choice of a school and the need to choose the profession knowingly, may be caused by the lack of support programs and projects for students.

Furthermore, the following table presents the data related to the importance that students attach to the need for information on educational institutions in which to study or continue their studies and the need for information regarding professions. Simultaneously, with the need to know some important aspects for their professional training, there are presented their perceptions on the need for information related to their preparation for a job, but not in terms of theoretical and practical training, but rather how to present themselves in front of a future employer, how to make an attractive resume and how to write a letter of intent or motivation. All these aspects are very important to start with the right foot in the labour market and to be able emerge in the field of work immediately after graduation.

As in the case of the other needs discussed above, the importance of the need for information about high schools, faculties or professions is greater in the second half than in the first half. Thus, unlike the beginning of the schooling cycle, in the ninth grade, young people in the 11th grade are much more eager to know information about these topics. Therefore, the students surveyed are of the opinion that in the classes or activities of counselling and career guidance, they need information about high schools, faculties or professions.

Information needs and preparation for employment

Table 2

		Very important	Important	Un-important	Not important at all
The need for information about high school / college / profession	t1 - 9th grade	26.9%	28.4%	23.9%	20.9%
	t2 – 11th grade	27.9%	50%	14.7%	7.4%
The need for support in writing a CV, a letter of intent, preparation for the job interview	t1 - 9th grade	19.7%	18.2%	27.3%	34.8%
	t2 – 11th grade	51.5%	30.9%	8.8%	8.8%

The data in the table above show in the best way the maturing and awareness of the importance of these topics, also discussing the need for support in preparing for employment, analyzing the need for young people to know how to write their CV, how to write a letter of intent / motivation or how to present at a job interview. Thus, the longitudinal study shows significant differences in terms of percentage, from phase t1 to phase t2 for the same generation of students, on the importance of the way of introduction to an employer.

Thus, if in the ninth grade only for 37.9% the information related to the preparation for employment was important and very important, the same students considered, in the 11th grade, in a percentage of 82.4% that the aspects related to the preparation of personal documents for employment and the way they introduce themselves at the job interview are important and very important. The percentage difference between the two phases of the questionnaire is significant and easy to understand, because at the beginning of the schooling cycle students are less interested in issues related to employment, but before graduation, students' interest changes radically, as they are put in a position to look for a job, to make a CV or to apply for a first job interview. Therefore, for the same generation of students, the interest in some aspects related to career and counselling and career guidance changes, depending on the class in which they are at the time of the survey (the intervals of the survey). The interests and knowledge needs of those at the beginning of vocational training are different from those of those on the verge of graduation.

Following the analysis of the data, there are differences in the needs of students, depending on the two phases of the longitudinal study. Thus, at the beginning of the study cycle, they did not consider so important the aspects related to professional and career training, an aspect that changes when students are close to graduation. Therefore, with the passage of time and the maturity of teenagers, some needs become urgent, students becoming aware of the essential role they play in shaping their careers.

5. Projections about the Profession, Before and After the Pandemic

Young people's perception of their careers can be analysed in terms of their plans for the future. In this sense, an essential aspect analysed in the longitudinal study was the students' plan for the future. Thus, in both the first and the second research rounds, the students were asked to state what their future intentions were from a professional point of view. In this category, the answer options were the same in both rounds of research, thus making it easy to notice a difference in future intentions from the beginning of the vocational training cycle to the end of it. Observing the differences in perception is even more important, as between the two rounds of testing, the pandemic caused by Covid-19 may have influenced the students' intentions.

In this way, the long-term intentions of the ninth grade (in t1 phase) students from a professional point of view were to work in the field in which they are preparing for in school, this category of respondents occupying the most widespread share, 71, 6% of them wanting this. At the other end of the spectrum is 1.5% of those who wanted to work in a field other than the one in which they were preparing for in school. At the same time, 9% of those surveyed said, at the time, that they wanted to start their own business, and 4.5% expressed their intention to emigrate and work in another country. For 13.4% of ninth graders, long-term professional intentions were not yet crystallized, and they said they had not yet considered their professional future.

In the second round of research (t2) the long-term plans of the 11th grade students underwent some changes. Thus, now close to completing their professional studies, only 45.6% of students wanted to work long-term in the field in which they trained at school, while 27.9% of them said they want a long-term job in other field than the one in which they have prepared until then. At the same time, 13.2% of students wanted to start their own business, while for 7.4% emigration and work in a foreign country is the plan for the future. However, there are still students who on the verge of graduation say that they have not yet thought long-term about their professional future, the share of this category being 5.9%.

Discussing the presented data, there is a significant difference, of 26%, between the two research rounds on the students' intention to continue their professional activity in the field in which they have prepared for in these three years of vocational school. Thus, with time, the interest of young people to practice in the chosen field of vocational training decreases significantly, as they want to work in other fields, in which they are not yet qualified. Here, the percentage differences is also significant, in such way that if in first half (t1 phase) only 1.5% of the students wanted this, in the second half, the t2 phase, their percentage rises to 27.9%. These differences can be attributed to many factors, but for some young people it seems that the field of practical training was chosen unknowingly or maybe their expectations were just different at the beginning of school. Also, it is possible that other areas of occupation have become much more attractive for them. At the same time, it is possible that the lack of practical training within the partner companies, due to the Covid-19 pandemic, may have influenced this change of perspective.

At the same time, there are some percentage differences between the two rounds of questionnaires, although not significant, regarding the intention of young people to start a business (the difference being 4.2%) or to emigrate to work in another country (the difference being 2.9%). It is possible that the pandemic also influenced the intentions of young people, either because the business environment was unstable and got affected by the economic crisis caused by the pandemic, or due to the need for a green certificate or testing imposed a restriction on travel outside Romania.

All of these factors are just assumptions, but 11th graders were asked to comment on the extent to which the Covid-19 pandemic has changed their plans for the future. Their answers are scattered, so for 17.6% of students the Covid-19 pandemic changed their plans completely, at the opposite pole being 27.9% of those who say that this pandemic did not affect their plans for the future at all. At the same time, 7.4% of young people say that their plans have been greatly changed by the pandemic, while 22.1% say that their plans for the future have been greatly changed. On the other hand, 5.9% of young people believe that the pandemic has changed their plans for the future to a very small extent and 11.8% say that the change has taken place only to a small extent. Also, for 7.4% of students the pandemic produced changes in their plans for the future only on average. As expected, the pandemic has also changed the plan for students and young people, but the extent to which these changes have occurred is perceived differently by students.

6. Professional Insertion of Graduates and Further Studies

The professional inclusion for each generation of pupils and students is very important, both

from the point of view of the educational institution that offers education and training, and for each graduate in particular. This study further presents the official data, received from the educational institution, about the professional inclusion of the studied generation, 3 months after graduation. It should be noted that students of this generation have had internship contracts in recent years with four important economic agents, one of them having the most students (82.4%). Regardless of the economic partner, due to the Covid-19 pandemic, the practical training sessions took place mostly online, the students being physically in factories only for short periods of time.

Three months after completing their professional studies, 20.3% of all graduates were already employed by the economic operator with whom they had a contract and during schooling, while 37.8% of graduates were employed by another economic operator. It cannot be stated here whether the graduates work in the field in which they are qualified or not. At the same time, there are 2.7% of graduates who, after completing their studies, started their own business or registered as authorized individuals. Observing these data, we note that 60.8% of the graduates of the 2018-2021 generation were integrated in the field of work three months after graduation. It should not be forgotten that the insertion of these graduates was influenced by the semiconductor crisis in the automotive industry, so now it is likely that the insertion rate of these young people is higher. On the other hand, using the same data, we mention that no graduate was listed as unemployed with compensation three months after graduation, but 32.4% of them were unemployed or looking for a job at that time. At the same time, 16.2% of them were in the care of their parents and were not even looking for a job or were living abroad. It is possible that this percentage also includes young people who were working without legal forms at that time.

It should not be overlooked that some of the graduates of the studied generation continued their studies after graduation. Thus, 39.2% of students continued their studies following the form of evening education (with frequency), while 2.7% of them follow high school studies with daily frequency. The remaining 58.1% did not attend any other form of education after graduation. For some of the graduates, the continuation of their studies is done at the same time as their work, as they are also employed and enrolled in evening education.

7. Conclusions and Limits

The present study is the only or among the few studies that show the trajectory and evolution of the perception about career and profession, of a generation of students belonging to a dual vocational school in Romania. These differences of opinion are even more interesting as the context of the Covid-19 pandemic required more education and practical training in the online environment of the studied generation. At the same time, concrete data is presented about the inclusion of this generation in the field of work. Therefore, for this generation of students there are differences in perception between the first stage of the questionnaire (t1) and the second one (t2), and these differences primarily show the maturity of students and the change in perception of their needs for professional inclusion. For example, the increased interest in the 11th grade, compared to the interest shown in the ninth grade, for the way of elaborating the CV is the best example in this case.

On the other hand, the desire to work in the profession in which they were trained during vocational school is different from the beginning of the schooling cycle until the end of it. Thus, significantly more 11th grade students want to work in a different field of activity than the one in which they were trained. One possible explanation for this is the lack of practical training in factories caused by the Covid-19 pandemic. Even so, a fairly high percentage of the graduates of the analysed generation are included in the field of work, many of them being employees of the companies with which they had had an internship contract since school. On the other hand, some of the students have already started working, probably since they have been longer online and thus being able to connect both to classes and practice, the share of these people being already presented in the paper.

Even if this study is an innovative one, considering that it targeted the generation of a vocational school that studied most of the time online, and that it also presents concrete data on the inclusion of graduates of this generation in the work field, there are some limits that must be specified. Thus, at the two phases of the questionnaires (t1 and t2) the respondents were not completely the same, because during the school years, there were changes in the school population, but these fluctuations were minimal, which can be also seen in the profile of respondents. The main limitation of the study is the lack of data on integration in the field of work as qualified employees of graduates. More precisely, it is not known whether they were employed, in the first three months after graduation, in the field in which they were trained or in a related field or if they work in another field of activity unrelated to their training. This is relevant in order to understand in depth the importance of dual vocational schools.

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