

SERIES: EDUCATION***(Submitted on 12 Dec 2012)****Y.Kuzmina¹, D.Popov², Y.Tyumeneva³***PATHWAYS TO LIFE.****THE MONITORING OF SCHOOL AND UNIVERSITY GRADUATES' EDUCATIONAL AND WORK TRAJECTORIES⁴**

The purpose of this paper is to present a new longitudinal research project, which was started by the University – Higher School of Economics. The project is targeted to design and implement in Russia a tracing system for monitoring professional and educational trajectories of secondary and higher school graduates. The research will allow to:

- Identify and investigate typical life trajectories of graduates in several regions;
- Estimate to what extent different economic, social and psychological factors determine professional and educational trajectories;
- Specify how deep educational and labor trajectories are interrelated and why job position does not match education in many cases;
- Find barriers and resources which are impede/help to develop successful trajectories.

At the first stage of the research two groups are being investigated - secondary school students of 9th grade and higher school students of graduation courses. This ‘entrance point’, a moment when we gather the data for the first time, was chosen intentionally - life trajectories of young people are dispersing at these points, secondary school graduates may stay at their schools or enter a vocational school, higher school graduates can continue their education in magistracy or post-graduate courses or/and find a job. The specific of this study is in its longitudinal structure. The surveys will be conducted every three years. Every time the same respondents will be questioned. The quantitative survey data will be supplemented with the materials of focused interviews. It is supposed that research will be finished in 15 years, 5 surveys will be conducted by that time. In the long run such type of panel research allows creating a “portrait of generation”.

Keywords: longitudinal study of youth, educational trajectories, work trajectories, school to work transition.

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Introduction

A new longitudinal project called "The monitoring of school and university graduates' educational and work trajectories" has been launched in Russia by the National Research University Higher School of Economics. The project is designed as a cohort panel research with its main tasks being search, analysis, and understanding of key factors influencing youth during transitional moments of their biographies—in the process of choosing a place to study, a job, new life strategies.

One's life always comprises interchanging each other periods of relative stability and calmness on the one hand and dynamic changes and transitions on the other. In contemporary Russian society, the period of active search and decision making starts in high school or right after finishing it, when a young person begins to reflect on what is waiting ahead and what s/he wants in life. By carefully examining events and facts of this period a researcher obtains a crucial opportunity to learn much about young people's life, a chance to establish the probability of various events taking place.

It is very often that the period of changes proves relatively short. The issue of how to track carefully and thoroughly what occurs in one's life during such periods is frequently solved via using the model of longitudinal study. In international research practice such an approach is conventionally designated as life strategies research (Elder, 1985; Ежов, 2005). Despite all its shortcomings—complexity, high cost, and duration—this approach allows to reconstruct in great detail and analyze typical trajectories, life pathways. Ultimately, this sort of research may well become a some kind of "generation portrait." It is inevitable that some traits of this portrait will be more minute and finely drawn while others will only remain in outline.

It is planned that several generations of youth in a number of regions of Russia—Tatarstan, Yaroslavl Oblast, Moscow, Saint Petersburg, Primorsky Krai etc—are going to become the object of our research. The study is conducted in three-year cycles. This scheme enables to monitor changes in selected groups during many years. Due to a number of causes, it was decided to complement mass surveys with studies carried out in another, anthropological, logic. Examination of life trajectories implies complex analysis of expectations, reasons for satisfaction or dissatisfaction with a particular educational program, job. Adding a qualitative block significantly improves the potential for data interpretation.

As the research unfolds, we plan to add new regions to the project. This philosophy gives wide opportunities of cross-regional comparative analysis and at the end of the day will let us get a sample that would be representative both at the level of each region and at the national level on the whole. Given this, every region gets a chance of researching those issues and questions, included into the questionnaire as additional blocks, that are pertinent to it.

The first measurement took place in 2009, when 9th graders from high schools and university seniors in The Republic of Tatarstan and Yaroslavl Oblast were questioned. The foundation for a longitudinal study was laid and panels formed that comprised 8000 subjects overall. Recurring access to these respondents is going to occur in 2012, when schoolchildren will have chosen a new educational institution (university, technical secondary school) or enter labor market and students will have turned into young specialists. Thus, we trace fates of those who work, continue studying, change specialty etc. The main goal of the project's first phase is creating means of identification and analysis of school leavers' trajectories within general education and higher education systems.

In the course of the research interrelations between life trajectories and context factors are revealed. The latter include all socio-economic, demographic, political, and other conditions which with a certain probability can influence choosing and shaping of a life pathway typical for a given territorial or institutional system of trajectories.

The overarching goal of the research project is to detect and analyze trajectories in the spaces of education, labor, and family. Apart from this, it is also important to find out what factors exert influence on choosing a particular trajectory, to analyze interaction between

trajectories in the three mentioned spaces, track sequence and speed of trajectory development, changes in practices, motivations, values. Among the key tasks and capabilities of the project the following is worth being singled out:

1. Investigation of a relation between a number of economic, social, and psychological characteristics of research participants, their previous educational and work experience on the one hand and choices of professionalization trajectories on the other.
2. Identification of participants' predictive traits (the assumption about their predictive value is based either on preceding findings or on the data gathered in this project).
3. Clusterization of research participants in accordance with presumably predictive traits.
4. Tracing each cluster's trajectory; extraction of "typical" trajectories.

The present paper provides a social characteristic of cohorts under scrutiny, offers the results of a painstaking analysis on senior high school students' and university seniors' life plans. Considering the fact that only the first measurement has been performed, it is premature to discuss a full-fledged modeling of typical trajectories. However, the university leavers' group is able to become a certain reference point helping to analyze what currently is happening to senior high school students.

Longitudinal studies on youth in other countries

The method of monitoring those who leave educational institutions' trajectories is gaining more and more popularity in worldwide research practice. This is caused by the fact that it is most adequate to specific modern processes going on in education sphere, on labor market, and in the area of their intersection/interaction.

There currently exist several renowned monitoring projects with similar design that are being implemented in various countries. Among these we should mention the National Longitudinal Survey of Youth (NLSY-79 and NLSY-97) and the National Education Longitudinal Study (NELS 88) in the United States, the Youth in Transition Survey (YITS) in Canada, the Youth Cohort Study (YCS) and the Longitudinal Study of Young People (LSYPE) in England, the Longitudinal Surveys of Australian Youth (LSAY) in Australia⁵.

One of the first full-scale research in the area of studying young people was the American NLSY-79 project. At the first stage, young females, most of whom would later become mothers, were surveyed. According to the creators' plan, this project was to foster complex understanding of how family and immediate social environment affect a child's development. At the present moment, the research is under way, children being observed since their very birth have already reached or will soon reach their 30th birthday.

In 1997, another national monitoring, the NLSY-97, that was supposed to amplify and develop the ideas of the first project, was launched in the United States. This time families with children at the age of 10-12 years were selected at the initial point of the research. These children already attended school and were able from the very beginning to answer interviewers' questions by themselves. Cognitive tests were added to main survey instruments. The key goal of this project is to gather extended information on respondents' behavior on labor market and their educational experience. Another part of the research was the collection of data related to these young people's families and social environment which allows to evaluate the youth entering labor market more completely. This study's data enable us to answer the question of how young

⁵ National Longitudinal Survey of Youth (NLSY 79) <http://www.bls.gov/nls/nlsy79.htm>.

National Longitudinal Survey of Youth (NLSY 97) <http://www.bls.gov/nls/nlsy97.htm>

National Education Longitudinal Study (NELS 88) <http://nces.ed.gov/surveys/NELS88/index.asp>.

Youth in Transition Survey (YITS) <http://www.statcan.gc.ca/imdb-bmdi/4435-eng.htm>.

Youth Cohort Study (YCS) <http://www.esds.ac.uk/findingData/ycsTitles.asp>.

Longitudinal Study of Young People in England (LSYPE) <http://www.esds.ac.uk/findingData/lstypeTitles.asp>.

Longitudinal Surveys of Australian Youth (LSAY) <http://www.acer.edu.au/lsay/index.html>.

people's existing experience influences their career development, participation in government programs, and creation of family.

In England, longitudinal studies of youth have been carried out since the mid-'80s (the Youth Cohort Study, YCS). A whole number of longitudinal projects which trace behavior and decision making of young people at the age of 16 when they face the necessity of choosing their further life pathway has been launched in this country. The study is aimed at identifying and explaining those factors which influence young people's trajectories—school results and academic achievements, opportunities of getting additional education, educational experience at school, and so on. The research has been conducted since 1985 and embraces 13 generations of young people. In 2004, this British project has been supplemented with another one—the Longitudinal Study of Young People in England (LSYPE). This monitoring project is focused on the generation of schoolchildren who were born between 1989 and 1990. Having similar design (among the key topics studied are household and demographic characteristics, language used at home, attitudes towards school and education, school subjects preferred, educational needs, expectations, and intentions of parents, events taking place within family etc), this research allows to acquire data concerning younger generations in the United Kingdom.

Starting with the mid-'90s, a national monitoring of students (the Longitudinal Surveys of Australian Youth, LSAY), created as a tool of analytical support of Australian government's educational policy, has been run in Australia. 9th graders are surveyed at the first stage of the research. In 1995, 1998, and 2003 studies of other schoolchildren generations started; incidentally, the 2003 sample included all the respondents who have been tested within The OECD Programme for International Student Assessment (PISA).

Tools and sample of the Russian monitoring

The questionnaires for the Russian monitoring research were developed with taking the aforementioned studies' experience into consideration, which, if it is necessary, allows to conduct comparative analysis. A questionnaire is the main tool in investigating educational and professional trajectories in terms of helping gather and put in order research participants' characteristics which are supposedly significant for explaining and predicting changes taking place in a respondent's life in the areas of his/her education and professional career. The range of information collected can be divided into the following question blocks:

- Economic, social, and cultural status of respondents' families;
- Respondents' education-, work-, and leisure-related experience;
- Respondents' attitudes and plans concerning their own education and career;
- Respondents' motivational and value characteristics;
- Some personal traits and self-evaluation of health.

Each block mentioned above is connected with hypotheses, which are made prior to the study, on possible determinants of changes in educational and career trajectories.

Questionnaires for schoolchildren and students are partially different in content and question wordings. These distinctions are due to the fact that respondents of various age have disparate educational and work experience, and so their topical problems also vary. In addition to this, questionnaires designated for different age groups contained different numbers of questions aimed at the same area under study, so every respondents' "sphere of life" had its own weight. However, the questionnaires also included so-called "anchor" questions, i.e., questions which, without being changed, were presented to all the respondents⁶.

Questions employed were open and closed with either answer choice or with 4-point/5-point Likert scale.

⁶ Anchor questions are a usual attribute of any study that pursues the goal of detecting time trends in scrutinized parameter, since they allow to compare researches within the framework of longitudinal and monitoring projects.

As the research is being developed, questionnaire data will be amplified with results on cognitive tests as well as with information obtained at educational institutions, at work, and in respondents' families.

During the first phase of the research, questionnaires were given to 9th grade high school students and university seniors. The survey was conducted in two regions—Yaroslavl Oblast and The Republic of Tatarstan. The sample design provides representativeness of general populations—9th grade high school students and university seniors.

Table 1. Rates of educational systems' activity in The Republic of Tatarstan and Yaroslavl Oblast (as of 2009).

	Yaroslavl Oblast	The Republic of Tatarstan
State and municipal comprehensive secondary schools (without night comprehensive schools)		
number of schools, units	463	2315
number of schoolchildren, people	105871	391800
Non-state comprehensive secondary schools		
number of schools, units	6	8
number of schoolchildren, people	762	900
State educational institutions of higher professional education (including branches)		
number of institutions, units	20	49
number of students, people	41298	166600
admission, people	9100	35300
graduation, people	7503	30400
Non-state educational institutions of higher professional education (including branches)		
number of institutions, units	14	37
number of students, people	11637	57100
admission, people	2247	10600
graduation, people	2075	11100

Both Yaroslavl Oblast and The Republic of Tatarstan are located in the central part of Russian Federation. Nevertheless, one cannot overlook crucial discrepancies between these two regions—both from the standpoint of general economic development and in the area of educational systems development. In this article, we do not intend to run a cross-regional comparison deeming it impossible to give an elaborated characteristic of these regions; let us only highlight some significant traits.

The Republic of Tatarstan has its own distinct social and cultural peculiarities. Many of those young people surveyed in the republic have chosen the Tatar language as the first language they learnt and still understand, more than a third use the Tatar language for everyday communication within family. In many schools education is run both in Russian and Tatar. We expect that owing to a full-fledged labor market most of those who graduate from educational institutions of Tatarstan will remain in the republic.

As concerns Yaroslavl Oblast, it does not have as well developed economy as The Republic of Tatarstan. This region is situated close to the metropolitan area, therefore we can assume that cross-regional mobility here would be higher: a part of young specialists, school and university graduates will continue their educational and labor activity in Moscow.

In order to study schoolchildren, we have employed the model of sample used in The OECD Programme for International Student Assessment (PISA). Schools have been selected with keeping in mind both their location (regional center, city, village) and type (general secondary school, gymnasium, lyceum etc). In each school chosen each entire 9A grade has been surveyed.

Overall, 4006 9th grade schoolchildren have been surveyed—2010 from Tatarstan and 1996 from Yaroslavl (52% males and 48% females). The average age of respondents was 16 years (14 years minimum, 18 maximum).

To build a sample of students from the two regions—Tatarstan and Yaroslavl Oblast—we have employed specially aggregated groups of specialties drawn from the All-Russian Classifier of Educational Specialties (OKCO). All the specialties from OKCO have been grouped in the following way:

- 1) Pedagogical specialties;
- 2) Technical and engineering;
- 3) Natural-scientific;
- 4) Economico-managerial + social;
- 5) Jurisprudence;
- 6) Humanities;
- 7) Medical;
- 8) Culture;
- 9) Building and architecture;
- 10) Agriculture.

For each specialty we have randomly selected programs (BA and MA) from the list of all relevant university programs in Yaroslavl Oblast and Tatarstan with the amount of students surveyed in every specialty being proportional to the overall quantity of those who study this specialty. By and large, 3476 4th year students from all Tatarstan and Yaroslavl universities have been questioned (2001 from Tatarstan, 1475 from Yaroslavl), 45% of whom were male respondents, 55%—female respondents. The average age of students surveyed was 22,5 years.

The description of studied cohorts (socio-demographic characteristics)

The basic indicators on which the description of two cohorts relies are first of all their socio-economic, educational, and cultural characteristics. Some of these characteristics may be merged into broader, generalized parameters, so-called indices. Indices are complex indicators that combine answers from a certain area. Indices are more reliable indicators than answers to singular questions and they are frequently employed in many large-scale, national, or cross-national survey studies (PIRLS, TIMSS, PISA, PIAAC etc). Below we give main social, economic, educational, and cultural indicators by which two groups of respondents were compared ⁷.

1. Parents' education.
2. Home educational resources.
3. Parents' professional status.

Schoolchildren's parents did not participate in the survey, therefore it is quite difficult to evaluate families' financial resources, since schoolchildren are usually not aware of their parents' financial status.

Data on both parents' education are united into the Index of parents' highest level of education. It was calculated on the basis of the information about the highest level of education ever achieved by respondent's father and mother, and it could take on values from 1 to 7:

⁷ A more elaborated description of survey questions that have formed indices is going to be given below.

Table 2. The Index of parents' highest level of education distribution in two cohorts.

Values of the Index and the corresponding highest levels of education among two parents:	Schoolchildren (%)	Students (%)
1—both parents have 9 grades education	2	0
2—initial professional education only	3	1
3—the highest level of education among two parents is general secondary education (10 grades)	7	2
4—the highest level of education among two parents is secondary professional education	35	32
5—the highest level of education among two parents is incomplete higher education	4	4
6—the highest level of education among two parents is higher education	41	54
7—at least one of parents has acquired higher education twice or has an academic degree	8	7

It can be seen from Table 2 that the two samples differ in the lowest and the highest Index values: among university students 54% have at least one parent with higher education, whereas among schoolchildren there are 41% such respondents. On the other hand, 11% of schoolchildren have parents with education no higher than general secondary education (10 grades), while among university students this percentage is 3%.

These discrepancies are not surprising. It has been demonstrated many times that students from families with parents' high professional and educational level have more chances to remain in higher education system and finish their higher education with better results and career perspectives (Бурдые, 2007; Redford, 2009). Without touching upon the mechanisms of this disbalance now, we can only affirm general consistency of data gathered here with previous findings in this field.

Parents' education is connected with having at home objects that help in learning (e.g., dictionaries or educational programs) as well as with parents' professional status. The Index of home educational resources combining in one indicator various educational resources at home obviously should also differ in two cohorts: we can expect that it will be higher for the sample of students. This assumed difference can be explained on the same basis as difference in education of students' and schoolchildren's parents: as many studies have shown, the filtering function of higher education lies in sifting out individuals with low social and cultural status (in the sense of parents' education, their professional position, and financial resources) to the prejudice of "low-status" individuals (see e.g. Бурдые и др., 2007).

This Index comprises data on whether objects of educational purpose are available at home and on parents' education. The Index could take on three values: high, medium, and low.

Table 3. The Index of educational resources distribution in two cohorts

Index values	Schoolchildren (percentage)	Students (percentage)
High	17,9	28,7
Medium	80	70,8
Low	2,1	0,5

Although in general the majority of respondents in both age groups has medium level of home educational resources, it can be seen from Table 3 that two cohorts significantly differ from each other in what regards high values of this Index: 17,9% of schoolchildren versus 28,7% of students. Thus, expected discrepancies have actually been revealed. As long as we stay within the framework of comparative "profile" research design and do not know what the social composition of student group at the turn of the 9th grade was, it is impossible to certainly establish that higher education is the factor which affects changing proportions of various socio-economic subgroups in the sample. However, we can well maintain that the data acquired are in entire agreement with conclusions that previous investigations have reached in this area (Komulainenbetal., 2006, Бурдые, 2007, Robbins, 2004, Redfordetal., 2009).

Information regarding parents' professional status was gathered through processing respondents' answers to the open question. Respondents' answers to the question as to where each of his/her parents work, were coded with a 4-digit ISCO (International Standard Classification of Occupation) code. The code was afterwards converted into International Socio-Economic Index of occupational status (ISEI)⁸. This index can take on values from 10 to 89, and it reflects the level of educational and economic resources typical for a given occupation. The higher the Index, the higher the level of education a given occupation requires and the higher the incomes of skilled specialists. The Index has been calculated separately for fathers and mothers and then an aggregate index was created—the Index of the highest professional status reflecting the highest professional status acquired among both parents.

Table 4 reflects the distribution of parents' socio-economic index of occupational status in students' and schoolchildren's groups. An aspect worth emphasizing here is high amount of missing values⁹ which limits interpretation of results.

Table 4. The distribution of the Index of parents' socio-economic occupational status.

Percentiles		Socio-economic index of occupational status (ISEI)					
		Schoolchildren			Students		
		Mother	Father	The highest	Mother	Father	The highest
	25th	33	36	36	38	36	39
	50th	42	37	42	51	40	51
	75th	63	49	63	66	52	66

⁸Ganzeboom, H.B.G., P.M. de Graaf and D.J. Treiman, (1992).A standard international socio-economic index of occupational status. *Social Science Research*, 21, 1-56.

⁹ In students' sample there are 40% of missing answers regarding father's occupation and 32% of missing answers regarding mother's occupation. In schoolchildren's sample there are 42% of missing answers regarding father's occupation and 30% of missing answers regarding mother's occupation.

A common tendency can be noticed for both schoolchildren and students: mothers' ISEI values are higher than fathers'. For example, more than a half of students had mothers with ISEI higher than 51, while only among 25% students fathers' ISEI was higher than 51. Comparing two cohorts—schoolchildren and students—we can see that parents' ISEI in students' group is higher than in schoolchildren's group which is especially prominent when juxtaposing quartiles: the 25th percentile for schoolchildren corresponds to ISEI equal to 36, whereas for students—to 39. The 50th percentile corresponds to ISEI equal to 42 for schoolchildren and 52 for students, the 75th percentile corresponds to ISEI equal to 63 and 66 respectively.

Since studying at an institution of higher education has always implied some selection, the data given above look rather logical, characteristics of schoolchildren's and students' families somewhat differ. Nevertheless, it should be pointed out that differences between these two groups are not so manifest as we could have assumed. In fact, everyone who graduates from secondary school today is able to enter the university, but it would be premature to speak about evidence on increasing social equality (Рощина, Другов, 2002, с. 27).

Decrease of social origin's significance in entering the university is supported by other observations as well, for instance, by D.L. Konstantinovskiy's long-term research in Novosibirsk Oblast.

Figure 1. Those who have entered the university (group percentages). Novosibirsk Oblast (Константиновский, 2008, с. 206)

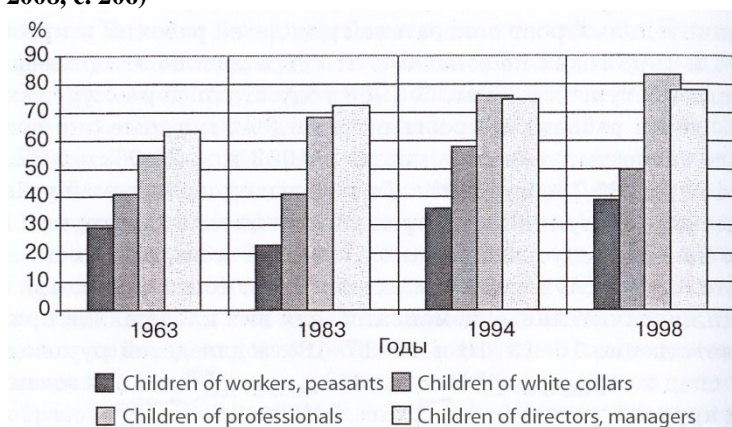
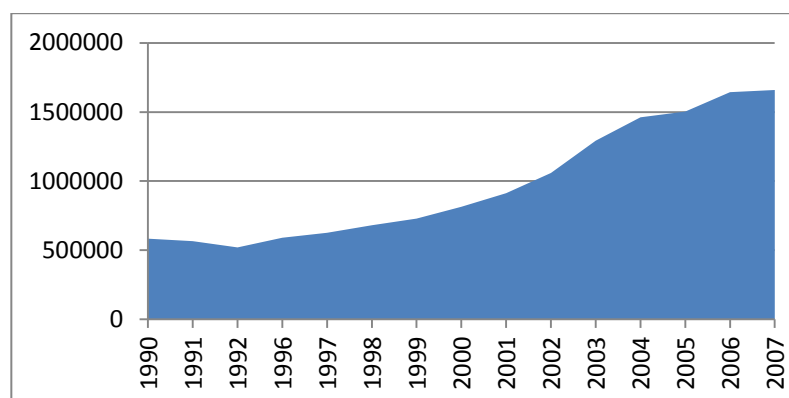


Figure 1 shows that in 1998 almost 40% of children from workers' and peasants' families entered the university, which is much higher than it was during the Soviet times. Let us underscore the fact that, beginning with the mid-90's, the number of those entering the university is constantly growing even in spite of decreasing general number of young people in Russia caused by demographic crisis:

Figure 2. The number of those whose enter Russian universities (source: Rosstat)



By the present moment, the number of entering the university has become equal to and even exceeded the number of secondary school graduates. In addition to this, studying at a university still provides a considerable pay rise: those holding university diplomas on the average earn 60-70% more than those without higher education (Капелюшников, 2006, с. 192). And, with the course of time, university diplomas do not lose in their economic value.

The current situation may seem paradoxical and, with no doubt, requires scientific comprehension and understanding. From our standpoint, the following may be offered as hypotheses.

Russian education-labor market system is by no means insulated. The labor market, especially its lower segment, is fed by specialists who were educated outside of Russia. Many migrants are ready to do jobs which do not require high qualification without expecting big remuneration for their labor. Besides, the Russian system of specialized secondary education has lost its authority in both employers' and employees' eyes. Russian professional technical schools' and colleges' graduates prove to be unable to find decently paid jobs which forces them to continue their education at universities and stimulates schoolchildren to enter the university directly.

It has become a feature of Russian universities that a significant part of them (25% on the average and in certain segments—agricultural specialties, technical and engineering specialties—this part goes up to 30-40%) expresses readiness to perform jobs not requiring higher education (Гимпельсон, Капелюшников и др., 2009, с. 186). In fact, a certain segment of higher education system has turned into a substitute for "non-prestigious" specialized secondary education. According to the same source, the portion of university graduates whose work is in line with their specialty is on the average approximately 50%. This means that the remaining half of graduates will acquire necessary professional skills right at their workplaces. For employers in this situation a university diploma becomes not only a guarantee of having sufficient professional skills, but also a general evidence of the fact that a prospective employee is properly socialized and possesses a set of general skills (knowing language, ability to learn, certain responsibility and purposefulness etc).

The first findings: schoolchildren's and students' planned professional and labor trajectories.

As was said above, the present research is aimed at revealing typical life trajectories among young people. But since only the first measurement was taken, the advantages of longitudinal design (for example, the ability to establish causal character of changes) are currently unavailable to us. We analyzed the data gathered at this stage of the research following the logic of the cross-sections method which consists in studying several age cohorts at several points of their courses of life. Without laying claim to detecting any causal dependencies, the "cross-sectional" design employed enables to analyze life plans of two cohorts' representatives (schoolchildren and students) with invoking their main social characteristics. Comparing life plans may give ground for inferring on what changes in respondents' group first in the course of time and second with transition to the "senior" status. Unfortunately, in cross-sectional design it is impossible to "unglue" these two factors common for all respondents—the time factor and the social status factor—in the sense of separating their effects. In other words, within the framework of this work thus far it is impossible to ascribe a detected change in a certain group characteristic either to the process of growing up or to social stratification.

Schoolchildren: planned education

The questionnaire's structure allows to describe the survey results in terms of what schoolchildren include in their planned educational trajectories. The analysis of planned trajectories was based on schoolchildren's answers to the following survey questions:

- What are you going to do after the 9th grade?
- What do you plan to do in three years?
- What level of education do you deem necessary and sufficient for success in life?

The following educational levels were used as answer options for the last survey question:

- 1) Post-primary education (9 grades)
- 2) High education (11 grades)
- 3) Primary professional education
- 4) Specialized secondary education
- 5) BA (4 years of university education)
- 6) Higher education (5 years of university education)
- 7) MA (6 years of university education)
- 8) Second higher education
- 9) Graduate school and an academic degree

The following pathways can be discerned when looking at plans concerning stages of education (Figure 3).

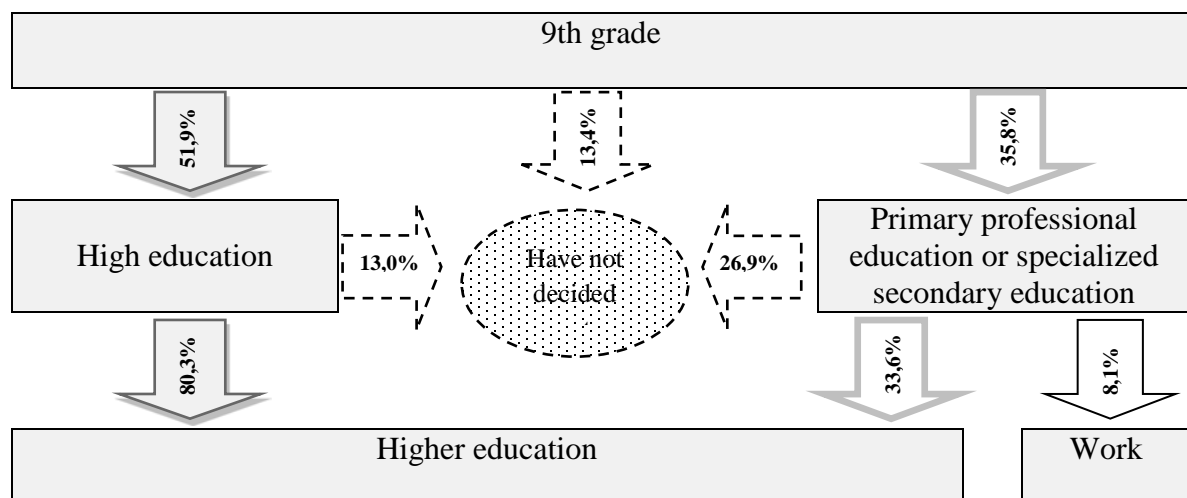


Figure 3. Schoolchildren's planned educational trajectories.

Arrows of the same type demonstrate the same trajectory.

We can see a few of the most widespread pathways of planned movement across educational stages. The first pathway includes the following: going to the 10th grade and getting high education (51% of the 9th graders), then entering the university and getting higher education¹⁰ (80,3% of those who plan to go to the 10th grade). The second pathway, a little bit

¹⁰ Although the questionnaire allows to differentiate students according to their intent to acquire BA, MA, or a specialist diploma, as a matter of fact, the vast majority of the 9th graders chooses only the last option. This, for instance, may imply that the 9th graders have a rather vague idea of the two-stage higher education system that has been launched in Russian Federation several years ago. In any event, we stick to this distinction in order to preserve compactness of exposition and proceed without serious loss of credibility.

less widespread, consists of entering the 9th grade at an educational institution providing primary professional or specialized secondary education (35,8% of the 9th graders) and then entering the university (33,6% of those who plan to finish high education not at school). And, finally, the least widespread but quantitatively still representative pathway: after acquiring primary professional or specialized secondary education respondents plan to finish education and confine themselves to work only (8,1%—after graduating from an institution of professional education).

Also, it is definitely worth noting that a big portion of respondents have not decided yet neither as to the period after the 9th grade (13,4%), nor as to the period after acquiring secondary education, be that primary professional or specialized secondary education (13,0% and 26,9% respectively). This, though explainable via respondents' age, but still significant part of the sample does not fully enable us to evaluate the aforementioned planned pathways of professionalization from the standpoint of their real prevalence. Making a decision by this undecided part may lead to crucial changes in presence of each "type" in respondents' population or even form some additional "typical" trajectory. Moreover, it is not unlikely that if this group of respondents will further retain the "have not decided yet" position until the moment when it is actually necessary to decide (or even beyond that moment), then it will become a separate group with its own "typical" trajectory.

Do representatives of each type of educational trajectory differ in what level of education they deem sufficient for "success in life"? The questionnaire enables to describe this connection in the following way.

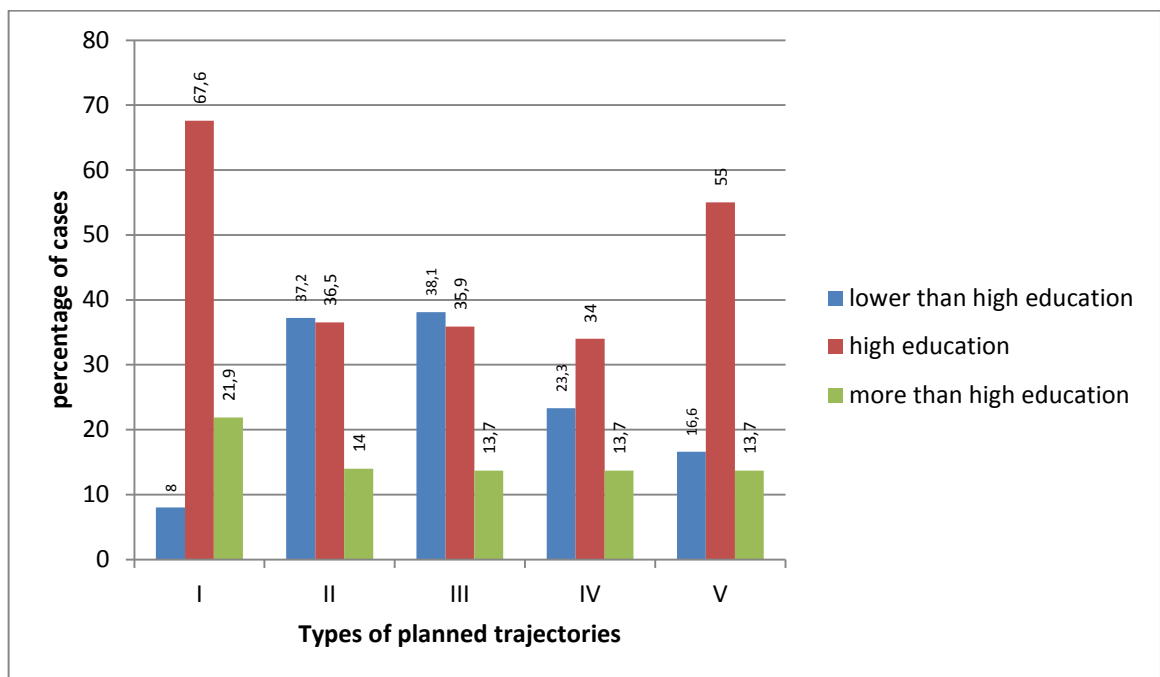


Figure 4. Schoolchildren's attitudes towards "sufficient level of education" and planned trajectories.

I—the 11th grade → university;

II—primary professional/specialized secondary education → university;

III—primary professional/specialized secondary education → work;

IV—have not decided yet as to the period after the 9th grade;

V— have not decided yet as to the period after the 11th grade.

From the results we can see that value of higher education, as well as "more than higher" (i.e., getting second higher education or an academic degree) can be met more frequently in the

group of schoolchildren that have decided to enter the university after finishing 11 grades at a comprehensive secondary school. For schoolchildren who are plan to enter the university after a technical school, subjective importance of higher education is significantly lower, but, interestingly, this value is declared by more than a third of respondents who are not going to get it. Furthermore, 13,7% of those schoolchildren who plan to finish studying at the level of primary professional or specialized secondary education highlight the importance of second higher education or an academic degree for success in life. It is obvious that this contradiction between declaration and own plans calls for further analysis, probably with using more "subtle" qualitative methods.

All in all, provisionally we can single out (and this is visually prominent on the diagram above) two "clusters" of attitudes towards "sufficient" level of education. The first "cluster": marked preference for value of higher education. To this "cluster" are drawn those schoolchildren who define themselves as future university students and it is also approached by the group of schoolchildren who are sure that they are going to general high education at school but who do not know what they are going to do in future. The second "cluster" of attitudes is approximately equal balance between higher and "prior to higher" levels of education. Those schoolchildren who have decided to leave walls of school after the 9th grade and who have not decided as to their plans after the 9th grade are close to this "cluster". If we assume that trajectories develop according to values, then we can put forward a hypothesis that the first group of "undecided" (without plans as to after the 11th grade) will go the way close to that of those who already know that they will enter the university after graduating from school, and the second group of "undecided" (without plans as to after the 9th grade) will develop a trajectory similar to that of schoolchildren who enter technical schools.

Schoolchildren: influence of family's social status on level and trajectories of planned education

Is the level of a schoolchild family's educational and cultural characteristics connected with his/her claims to own level of education? And if so, is this connection linear?

In order to answer this question, we have run logistic regression analysis for two dependent variables. In the first case, "planned study in the 10th grade" became the dependent variable. The independent variables were level of educational resources, the Index of parents' highest level of education, the Index of parents' socio-economic occupational status. Their influence was the subject of assessment in this part of our analysis.

In the second case, with the same independent variables, "planned entering the university" became the dependent variable. Figure 5 presents the results of the regression analysis.

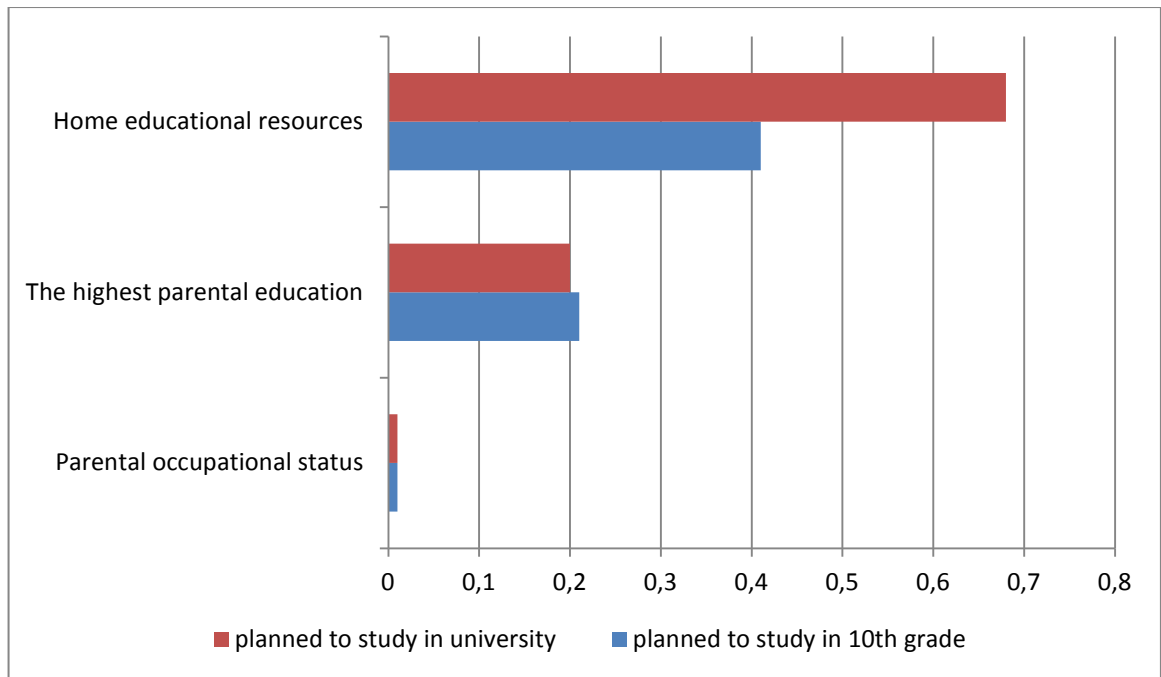


Figure 5. Family characteristics' input into the 9th graders' plans concerning further education.
Total variance explained=10%.

The regression analysis has shown that the two studied characteristics exert serious influence on schoolchildren's short-term and long-term plans, the Index of educational resources and parents' education have demonstrated statistically significant influence ($p \leq 0,0001$) on the 9th graders' answers as to their plans concerning education. "Parents' professional status" had very small input, even though it was statistically significant. Coefficients Exp (B) were higher than 1 meaning that as values of educational resources, parents' education level and professional status go up, the probability that a schoolchild will choose "go to the 10th grade" and "enter the university" increases. In general, these three variables explain 10% of variance in schoolchildren's answers concerning their plans. The results of our analysis support our hypothesis: as respondents family's social status rises, the probability that schoolchildren's educational plans will include the 10th grade and university increases.

Answers on plans concerning what would happen after finishing the 9th grade and long-term plans enable us to single out the most typical trajectories for schoolchildren with different values of the Index of educational resources (Table 5).

Table 5. Typical planned trajectories of schoolchildren in families with different values of the Index of educational resources.

Index of educational resources	Planned trajectories				
	the 10th grade— university	primary professional education— university	primary professional/speciali- zed secondary education—work	the 10th grade 10— have not decided yet	primary professional education—have not decided yet
Low	13%	12%	22%	10%	21%
Medium	40%	13%	13%	8%	11%
High	65%	11%	5%	5%	4%

The most typical planned trajectory for schoolchildren with high values of the Index of educational resources is "the 10th grade—university" trajectory. The same trajectory is preferred by 40% of schoolchildren with medium values of the Index, and only 13% with low values of the Index see their future as the way to the 10th grade and then to a university. For most of those with low measures of educational resources the typical trajectory is entering the technical school, and then trajectories go in different ways: to a university, to work, specialized secondary education (approximately in equal proportions).

It can also be noticed that characteristically schoolchildren from families with low educational resources more frequently, as compared to the other categories, have difficulties in realizing what their plans are, and they more frequently indicate that have not decided yet for themselves as to which way to choose. These predicaments more concern long-term perspectives: 18% of schoolchildren from families with low measures of educational resources with regard to their plans after the 9th grade indicated that they had not decided yet as to what to do further, whereas it was 49% of schoolchildren from the same category who noted concerning their plans after 3 years that they had not yet decided on their future. On the contrary, for children from families with high measures of educational resources it is characteristic to be well certain about their perspectives: only 9% of them could not tell what their plans were.

There also exists a connection between the Index of educational resources and the level of education that schoolchildren consider important to acquire: the higher the Index, the higher the level of education which schoolchildren deem necessary (Table 6). Also, as the Index goes up, the number of schoolchildren supposing that acquiring second higher education or an academic degree is necessary in order to be successful also increases.

Table 6. Schoolchildren's evaluation of necessary level of education and the Index of educational resources.

Index of educational resources	Level of education that is necessary and sufficient for success			
	High education	Specialized secondary education	Higher education	Second higher education or an academic degree
Low	13%	19%	23%	5%
Medium	7%	12%	41%	14%
High	3%	5%	53%	20%

Students: planned education and the influence of family's social status.

It is instructive to compare the data on schoolchildren's plans with the fourth-year students' plans. Their answers to our survey questions allow to describe their "typical" trajectories of moving across education stages and work activity spheres. As opposed to schoolchildren, students have already fulfilled a part of their pathways, and so trajectories described here bear partly factual (realized), partly planned character. Questions and response options in students' questionnaire, understandably, differed from their "school version". Replies to the following survey answers have been included into our analysis:

- What education did you have prior to entering your university?
- If you entered your university not in the same year you got your school-leaving certificate, did you work after getting it and before entering the university?
- What are you going to do in three years?
- If you do know where you plan to study, please indicate the expected place of study.
- Did you have to work/make some money on the side while studying at the university?
- What level of education do you deem necessary and sufficient for success in life?

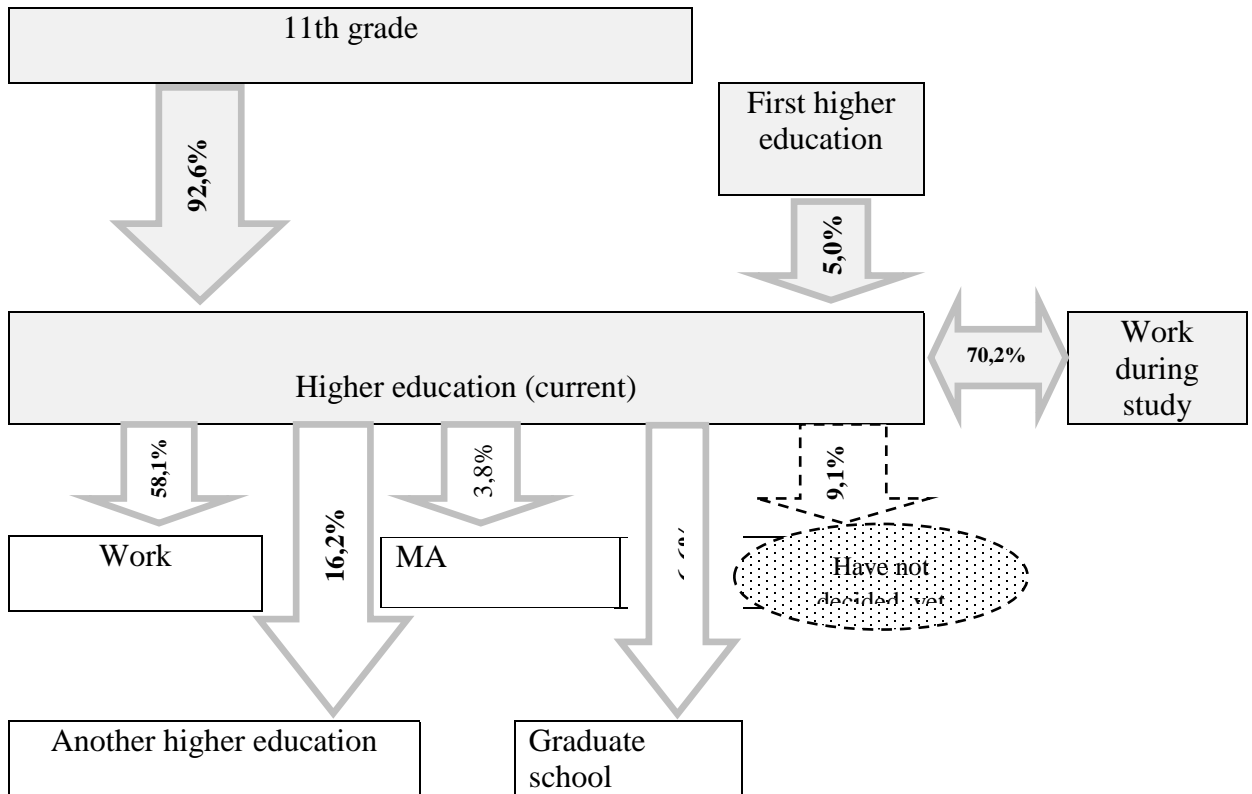


Figure 5. Students' educational trajectories

Dark filling—realized part of a trajectory; light filling—planned.

First of all, it should be emphasized that the absolute majority of the fourth-year students surveyed came to universities after the 11th grade of comprehensive schools and did not have any work experience prior to studying. While studying, most of the students set to work activity to various degrees (70%). As for planned career pathways, approximately 60% of students are going to finish their education along with finishing university ("work only"); and approximately a quarter of all the fourth-year students plan to acquire second higher education or enter the graduate school (16,2% and 6,6% respectively). The plans of those students making money on the side did not differ in any important aspect from the plans of those students who do not work while studying as well as from the plans of those students already having one higher education.

Thus, the following trajectories can be labeled as "typical": 1) school—university (+making money on the side)—work (58,1% of students); and 2) school—university (+making money on the side)—post-university education (22,8% of students). A group of students who do not have clear plans concerning their future also stands out (9,1% of all the fourth-year students—they can make up the third group).

As concerns each group's attitudes towards level of education which is considered sufficient for "success in life", they, on the one hand, are rather expectable: students declare attitudes which most closely describe their personal plans for future (see Figure 4). On the other hand, quite a significant percentage of cases reveals in which declared attitudes contradict not even plans but actually made decisions. Throughout the sample, 6,1% of the fourth-year students think that in order to succeed in life it is sufficient to reach the "under-higher" level of education. Apart from this, of some interest is comparing the attitudes of "decided" groups with those who have not made a decision concerning their future pathway yet. As can be seen from the diagram in Figure 6, where such comparison is laid out, students' plans also not always correspond to attitudes declared: 11% of those students who are not going to study after graduating from a university, nevertheless, believe that success in life calls for acquiring an academic degree or

second higher education. Moreover, as the diagram in Figure 6 shows, almost a half of those students who plan to pursue post-higher education think, however, that one higher education is enough to become successful in life.

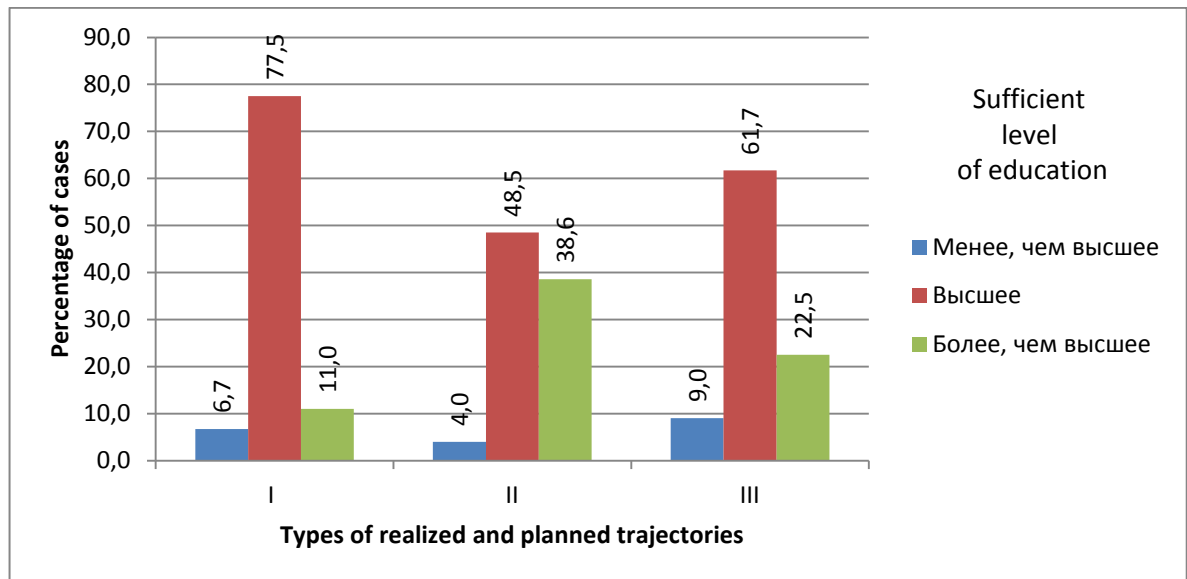


Figure 6. Students' attitudes towards "sufficient level of education" and planned trajectories.

I—school—university (+making money on the side)—work;

II—school—university (+making money on the side)—post-university education;

III—school—university (+making money on the side)—"have not decided yet".

As compared with schoolchildren's planned trajectories, seniors' are more homogenous. This first of all is explained by the fact that the choice realized (to acquire higher education) determines further "route", so the number of subjectively perceived degrees of freedom is very small: either to work or to get one more diploma. It can be assumed that, making a decision, people also make decisions concerning their further steps, i.e., a decision is made about a pathway on the whole and not its particular stages. Nonetheless, the existence of 9% of "undecided" can be considered a group for which predetermined typical steps are either problematic for some reason or are the subject-matter of evaluation and choice. It might also be the case that if the first decision (to enter a certain specialty program at a certain university) was being made without clear understanding of peculiarities and perspectives of studying, then further "transitions" on this way would be accompanied by the state of "uncertainty" concerning one's future. In a quantitative research it is impossible to find out whether these hypotheses can be accepted and to understand in the first place individual interpretations of own position and alternatives of future. Obviously, the question of why in some cases a student does not have a ready decision in this seemingly predetermined situation should be studied via qualitative methods.

Planned trajectories and characteristics of families

The analysis of schoolchildren's and students' planned trajectories has revealed that some of these trajectories are aimed at increasing level of education more than others. For example, those schoolchildren who are going to enter the 10th grade and then the university apparently plan to achieve higher level of education than those who are going to acquire primary

professional education or get a job after the 10th grade. The same can be said with respect to students' planned trajectories: a part of them is going to end their education and get a job, others intend to continue their education further in various forms.

Students: the influence of family's social status on a level and trajectories of planned education.

In order to establish what input educational resources of students' families make in their plans to continue studying after the 4th year, we have run regression analysis on a sample of students. "Continue studying" became the dependent variable. The independent variables were the Index of educational recourses, the Index of parents' highest level of education, and the Index of parents' socio-economic occupational status. On **The analysis has discovered only one variable having a serious input in students' educational plans—the Index of educational recourses. However, even this variable, though statistically significant, explained only 1% of variance.** Thus, it seems we can say that direct influence of family almost entirely diminishes by the end of the 4th year, and other factors (probably those connected with family characteristics, probably not) begin to play a leading role in making decisions concerning further educational perspectives.

Those discrepancies that were connected with family's educational resources became apparent in how students assess level of education which is, from their standpoint, necessary and sufficient for success in life.

Table 7. Students' evaluation of necessary level of education and the Index of educational resources.

Index of educational resources	Level of education that is necessary and sufficient for success			
	High school education	Specialized secondary education	Higher school education	Second higher education or an academic degree
Low	6%	-	64%	6%
Medium	1%	3%	61%	14%
High	2%	2%	56%	18%

Table 7 shows that main differences occur between choices of second higher education (and academic degree) among students with high and low Index (18% against 6%). Therefore, we can infer that students with high measures of the Index of educational recourses more often than others evaluate trajectories connected with increasing level of education as more desirable for themselves.

Discussion

The question of what factors can exert influence on schoolchildren's and students' educational perspectives and academic achievements is perhaps one of the most debated in foreign studies on education. Two broad strands of investigation can be discerned here. The first hinges on the discussion of what factors affect schoolchildren's and students' academic performance. GPA (Grade Point Average) and results of various standardized tests on separate subjects are widely used as indicators of academic performance in foreign literature. The second strand revolves around discussing factors influencing whether a student or a schoolchild will complete education (college, university) or give it up. These two strands are, of course, tightly interrelated at least due to the fact that, according to many studies, the most powerful predictor for finishing education is academic performance (in particular, high GPA) (Willingham, 1974; Zwicketal, 2005).

We can distinguish 3 types of factors that influence academic achievements as well as educational trajectories (Robbins, 2004). The first factor, family background, will be covered in more detail below. The second factor comprises personality factors, such as learning motivation, educational goals, self-evaluation and self-conception, and others. The third block of factors can be defined as social factors, since they are connected with ways in which a student interacts with social surroundings: communication style, degree of involvement into school (student) life, contact saturation, feeling of loneliness etc.

As far as family background's influence studies are concerned, the most frequently researches operate with the term "socio-economic status" understood as the indicator of economic, professional, and cultural standing of a family within society. In particular, international comparative studies PISA, PIRLS, TIMSS look at the influence of family's socio-economic status on students' educational achievements. According to these researches' findings, schoolchildren from families with higher socio-economic status and educational resources tend to demonstrate high results in PISA, PIRLS, and TIMSS tests, and this dependence is typical for all countries participating in studies, although it has various power (see, for example, OECD, 2010; Mullis, (2008)).

The notion of "cultural capital" is tightly intertwined with family's socio-economic status. Cultural capital is the term suggested by P. Bourdieu for description of habits, values, attitudes differing between social classes. Within each social class, parents actively teach children to appreciate certain cultural symbols. This is how they, as Bourdieu saw it, classes manage to reproduce themselves (Бурдьё, 2007). Membership of a particular class affects family tastes and relations which constantly define how families rear children and how children behave at school. When children enter the school, cultural capital acquired at home helps them get certain academic achievements and influences how parents communicate with teachers. In addition to this, teachers who share middle class values treat schoolchildren differently depending on what class the latter belong to. On the whole, schoolchildren belonging to upper class and middle class have higher academic achievements.

In A. Lareau's studies (Lareau, 2003) continuing the idea of cultural capital it was hypothesized that in different social classes there exist distinct forms of rearing children. In particular, representatives of upper and middle class often employ the "concerted cultivation" form, whereas representatives of less-well-off classes and working people prefer the form of upbringing that was labeled as "natural growth". "Concerted cultivation" implies structuring of a child's activity, language development and discussion of family members' affairs at home, parents' active participation in school concerns. This form of upbringing implies development of a child's skills, controlling child mainly via discussions, not directives, taking part in educational activity, involving children into active recreation and extraschool activities. Children's activities in such families are purposefully organized, and a child has little time for leisure and free play. Natural growth primarily utilizes directives and instructions, children are not viewed as a project which should be developed. The main concern is providing a safe place where a child could

grow and develop on his/her own. Activities here are less structured, children are granted more time for freedom and communication with friends. A study conducted by Redford and his colleagues (Redford et al., 2009) has supported Lareau's hypothesis that cultural capital and such form of upbringing as "concerted cultivation" are closely connected with children's subsequent educational achievements. In particular, the Index of "concerted cultivation" is a powerful predictor for GPA results and standardized tests on reading and math: the higher the Index, the higher schoolchildren's and students' educational achievements.

Connected with socio-economic status (SES) is degree of parental involvement in a child's educational activity and school life in general. Middle and upper class parents are more likely to offer their help at school, are more persistent in searching for ideal school conditions. Parents with higher SES are more involved in school life. Researchers constantly find supporting evidence for the fact that parental involvement is an important predictor for academic achievements (Redford et al., 2009; Johnson, 1997).

The analysis conducted in this part of the article has shown that influence of family factors on choosing further trajectories is more significant on the level of schoolchildren than of students. Most probably, discrepancies between students with different family characteristics will reveal themselves in other characteristics (for instance, in choosing a work place or expectations from work), whereas in what regards plans of further education they remain homogenous. Perhaps, beside the sorting function that the university performs (concentration of students with certain level of family educational resources at fourth years), it also plays an essential socializing role. This, in particular, can explain more similarity of plans concerning further education between the fourth-year students than within the cohort of the ninth graders. Socializing influence of the university should apparently become the focus of further investigation.

Higher education per se is a significant achievement for a big number of students regardless family characteristics—this is why, apparently, the majority of students plan to start working after finishing the 4th year.

Another explanation of weak family influence on students' educational plans may be lesser dependence of students on family (socially, economically, psychologically) as compared with 9th graders. This group of students, perhaps, is promising from the standpoint of exploring other factors (group identity, socializing influence of university, personal factors) which by that moment start playing a key role¹¹.

From the analysis performed it can be clearly seen that the influence of home educational environment occurs, among other things, in how a young person sets goals of acquiring a certain level of education and planning educational trajectory. It is impossible so far to compare the significance of these factors of self-determination with other effects of family background (for example, knowledge preparation or verbal cognition development), but the role of self-constraint in planning one's future is, without any doubt, significant.

Conclusions

The present paper bears an overview character, it familiarized specialists working in the area of sociology of education and sociology of youth with a new longitudinal project aimed at studying typical life trajectories of young people in various regions of Russia. Since only the first measurement has been performed and the advantages of longitudinal research design are not

¹¹ Investigation of such factors within the framework of the "Monitoring..." project and its results have been shown in the paper entitled as "Individual psychological predictors in longitudinal research on educational and professional careers" (Вопросы образования, 2010, №4, с. 30-53).

available yet, the analysis of data obtained at this stage of the research is conducted in cross-sectional logic—when several age cohorts at several points of their life pathways are examined.

The study shows increasing availability of higher education, including for children from worker and peasant families. However, the suggesting itself conclusion on increasing social equality might be erroneous. As a matter of fact, there is occurring stratification of higher education system; both high-quality (and still less accessible) and "weak" university programs are in demand on educational market. Given this, a certain part of higher education programs is apparently substituting specialized secondary education which has lost its authority, and those graduated from such programs are ready to perform work requiring no university knowledge.

The data collected testify to the effect that the dominating trajectory of acquiring education by school-leavers is the pathway of finishing 11 grades of secondary school and entering the university. The most peripheral trajectory has proven to be acquiring high education or specialized secondary education with subsequent initiation of labor activity.

Young people descending from families with higher educational status possess a serious advantage over those whose parents have lower educational status to be among university graduating students.

In relation to schoolchildren, we can state significant influence of family educational status: children from families with good educational resources plan to get higher education more frequently than children born to parents with no higher education. This decision is practically not connected with parents' professional status but mainly with their education and home environment. Judging by our data, however, the influence of family educational capital is not of conclusive significance in our days: a considerable part of children born to parents who do not have higher education count on their entering the university and regard university preparation as a necessary element of "successful life".

As family educational status grows, schoolchildren's uncertainty in their future decreases. Here, the opposite also holds true: children from families with low educational status are those schoolchildren who are the least certain concerning their future.

The fact that virtually all the fourth-year students came to university fresh from school, the "the 10th grade—university" trajectory evidently should be acknowledged as almost the only one having prospects for acquiring higher education. From this point of view, the "roundabout" road to university walls (for example, through the system of vocational education) planned by approximately a third of the ninth graders looks rather utopian in the light of our data. With this fact registered by us, it seems that the reasons of why vocational education systems do not provide young people desiring to and capable of finishing university are worth being specially scrutinized.

For senior students the role of family almost reduces to zero, and its influence does not show in planning post-university education. We relate this phenomenon first of all to preliminary repeated selection though which the fourth-year students have gone. In fact, by the fourth year, the overwhelming majority of students is people from families with high and medium educational status. By the moment of graduation from university they are substantially equalized by their family origin. Apart from this, options of post-university education are "grasped" by our research in only a limited fashion: this is actually only second higher education and an academic degree. It might be the case that with more detailed study of educational plans after university (for instance, taking plans of some special short-term study or study abroad into account), family effects would immediately take effect.

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