

Russian Youth in the Education System: From Stage to Stage

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Abstract. Official statistics from 1995–2016 are used to describe the dynamics of youth obtaining each subsequent level of education, from middle school to college. The following chronological changes are analyzed with regard to the size of different age cohorts: changes in the number of middle and high school graduates (full-time programs) and their distribution among further educational trajectories; changes in the number of entrants to secondary vocational education, separately for skilled and mid-rank-

ing worker programs, and their distribution between the modes of study as well as among the levels of competencies at the admission stage; changes in the number of entrants to full- and part-time higher education programs and their levels of competencies separately for each of the two modes of study. The Russian Longitudinal Monitoring Survey data is used to analyze the changes of 1995, 2005 and 2015 in the dynamics of the distribution of youth cohorts (ages 20–24 and 25–29) among the levels of education obtained. Academic achievement and mobility between educational trajectories are also discussed.

Keywords: youth, educational trajectories, middle school education, high school education, secondary vocational education, higher education.

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Social behavior of youth in education is largely contingent on the existing structure and institutional peculiarities of the Russian education system, which, in their turn, are defined by the state and dynamics of the economy and society, to the extent that they are subject to external regulation. On the one hand, it is society's needs captured in the education structure that determine the essential ratios of students at different levels of secondary and postsecondary education as well as those of majors, specializations, modes of study, etc. On the other hand, youth as a subject of education actualizes its own interests, attitudes and selectiveness at various stages of their educational trajectories. That is how the needs of youth and its selective behavior in education contribute to the transformation of the education system's structural elements. Besides, these interrelated processes are affected in specific ways by demography, i. e. the constantly changing population of age cohorts, now increasing with every year and then

suddenly falling. This set of factors shapes the ways that young people move from one education level to another through formal institutions of the education system. The major trajectories can be best illustrated through longitudinal analysis of statistical data from the last two decades¹.

Middle school, intramural program

Middle school education obtained under intramural programs is truly all-encompassing today. The proportion of middle school graduates from the number of first-graders who had enrolled nine years previously was 97.0% in 2000 and 97.9% in 2016, as compared to 81.2% in 1995.

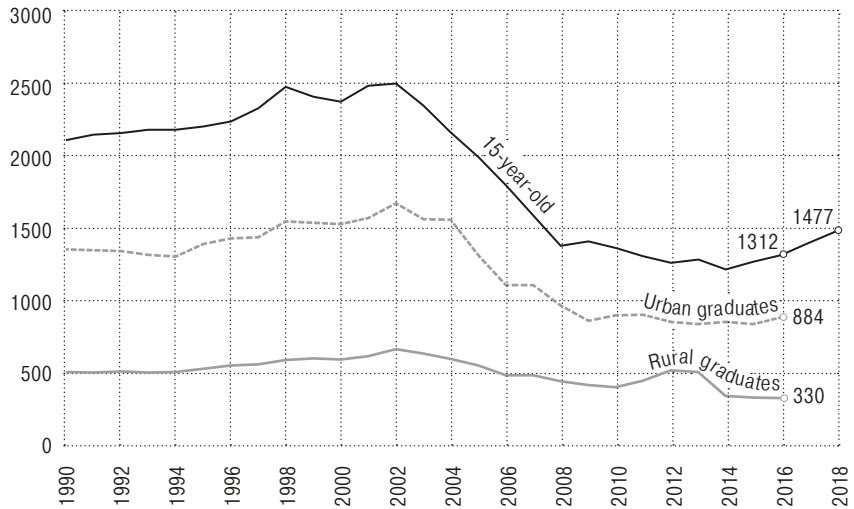
The dynamics of the middle school graduate population (intramural instruction will always be implied here) in both urban and rural localities has mostly been shaped by the demographic factor over the last two decades (Fig. 1): the growth curves for the population of urban and rural middle school graduates are largely consistent with the growth curve for the population of the conventional 15-year-old cohort² (15 years is the mode of the distribution of ninth-graders across age cohorts). As the population of 15-year-olds was growing (by 13.4% from 1995 to 2002), the number of middle school graduates increased faster in rural schools than in the city (by 31.6% as compared to 23.7%), and the subsequent sharp reduction of the 15-year-old cohort (by 44.8% from 2002 to 2008) decreased the number of rural and urban middle school graduates by 33.5% and 42.4%, respectively. As we can see, opportunities for graduating from middle school increased for all young people during this period, more so for rural dwellers than for urban students. The age cohort growth curve then reduces very little in the 2010s, but the year 2016 features an increase in the number of urban middle school graduates (5.5% more than the year before), while rural school indicators for this year are found to be the period's lowest. The previous years' drop in the proportion of youth stepping into responsible life is now ceding to the opposite trend of gradual, long-term growth of the relevant age cohorts. This trend will first manifest itself in the growing population of 15-year-

¹ The majority of the statistics and estimates in this article are based on raw statistical data obtained from the Federal State Statistics Service and the Ministry of Education and Science of Russia: raw statistical data on general education, initial and secondary vocational schools, and higher professional education for 1985–2010, reported by the Federal State Statistics Service to the Department of Sociology of Education of the Institute of Sociology of the Russian Academy of Sciences in 2008–2011; the website of the Ministry of Education and Science of the Russian Federation: <http://минобрнауки.рф/министерство/статистика>.

² Conventional 15-year-old cohort is understood as the number of people born 15 years ago. Mortality rate is usually low at this age and is overall insignificant for the purposes of a longitudinal study.

Figure 1. **The size of the conventional 15-year-old cohort and the population of urban and rural middle school graduates (1,000)**

Additional sources:
 [Goskomstat (2001) *Demograficheskiy yezhegodnik Rossii 2001. Stat. sb.* [Demographic Yearbook of Russia 2001. Statistical Book], Moscow: Goskomstat, p. 133; Rosstat (2015) *Demograficheskiy yezhegodnik Rossii 2015. Stat. sb.* [Demographic Yearbook of Russia 2015. Statistical Book], Moscow: Rosstat, p. 37].



olds (Figure 1 expects an increase in the population of middle school graduates in the years to come) and then will affect other levels of education as well (see below).

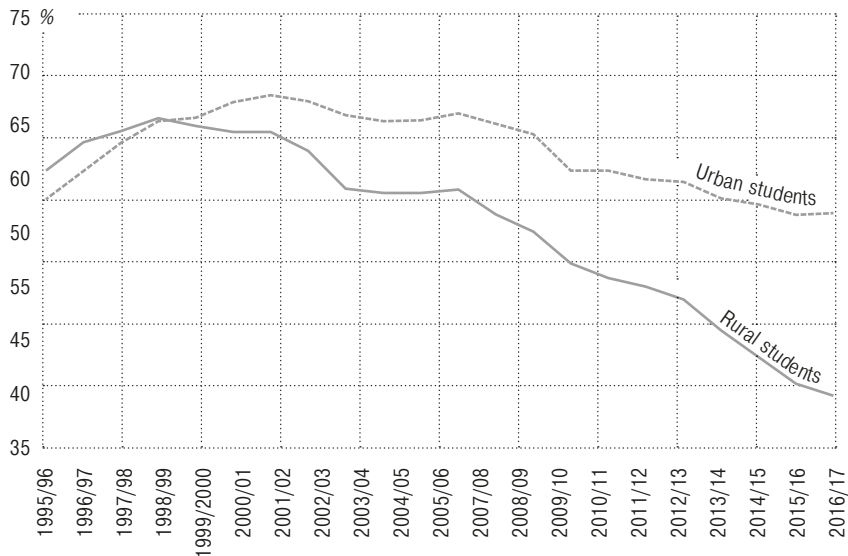
Graduation from middle school is followed by the first fork in youth’s educational choices, namely the split into two major educational trajectories: academic (transition to high school; most high school graduates enroll in college) and nonacademic (going to vocational schools³ and learning to be either skilled workers or mid-level specialists). The education system is designed in a way to allow vocational school graduates to continue learning and enhance their level of education.

Rural middle school graduates moved to high school more often than their urban peers up until the 1990s (Fig. 2).

The proportions of middle school graduates proceeding to high school met at the level of 66.3% for both urban and rural schools in the academic year 1998/99, dropping to 59.0% in urban schools

³ Since the Law on Education in the Russian Federation was adopted in December 2012, vocational education has included two stages, which used to be discriminatory. The former system of initial vocational education is now represented in vocational education by skilled worker programs (SWP), while the former system of secondary vocational education is now part of vocational education in the form of mid-level specialist programs (MLSP). The existing terminology will be applied to retrospective data as well in order to avoid confusion in referring to the two levels at different periods. At the same time, previous terms will be sometimes used and explained to describe situations of the past.

Figure 2. **The proportion of middle school graduates proceeding to high school**



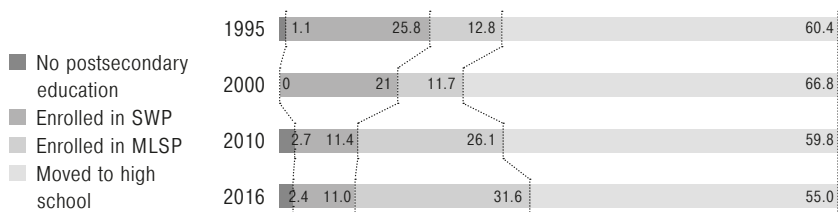
Additional sources:
[NRU HSE2014:252].

and 44.3% in rural ones by 2016/17. A number of factors induced this change. The reorganization of rural schools, launched in 2001, implied, in particular, reorganizing high schools into middle schools⁴. As a result, rural students became more likely to move on to vocational schools or high schools in nearby cities. The demographic factor also played a role here, as small-sized age cohorts increased middle school graduates' chances of getting admitted to vocational schools. The rate of enrollment (the ratio of the number of students enrolled to the population of 15-year-olds) in vocational education increased from 34.2% in 2000 to 38.6% in 2012 for skilled worker programs and from 35.1% to 50.8% for mid-level specialist programs [NRU HSE2014:23]. Even though these coefficients dropped somewhat due to the reduced enrollment in vocational schools (which are stronger in its skilled worker programs), accessibility of vocational education is still high.

The 1990s saw the following distribution of middle school graduates across educational trajectories (Fig. 3): 60.4% moved to high school, about 25% entered institutions of initial vocational education (MLSP), and 12.8% engaged in secondary vocational education (SWP).

⁴ Resolution of the Government of the Russian Federation No. 871 of December 17, 2001 On the Reorganization of the System of Rural Secondary Schools (as amended on February 1, 2005). Available at: <http://docs.cntd.ru/document/901807007>

Figure 3. **The distribution of middle school graduates across educational trajectories (%)**



As a result of the growing requirements of youth in education, more and more ninth-graders in the second half of the 1990s–early 2000s aspired to go to high school, i. e. opted for the main trajectory towards higher education: 66.8% of middle school graduates moved to the tenth grade in 2000, thus reducing the population of those applying to vocational schools.

The distribution across educational trajectories has been changing since the mid-2000s due to the reduced population of relevant age cohorts. There was a decrease in transition to high school (from 66.8% in 2000 to 59.8% in 2010), while the proportion of middle school graduates choosing MLSP was growing (from 11.7 to 26.1% within the same period). Such a dynamic was partly prompted by the growing popularity of MLSP vocational schools; besides, it was also a product of the considerably reduced enrollment in SWP, which brought down the proportion of middle school graduates applying for this kind of education (from 21% in 2000 to 11.4% in 2010). 2010 saw the continuing growth in the number of students enrolled in mid-level specialist programs and the ever decreasing population of high school students. Even though admission discounts for the transition from vocational MLSP to college were cancelled in 2014, this educational trajectory remains an alternative strategy for subsequent transition to higher education for some of the youth. Mid-level specialist programs are now used to avoid the USE (Unified State Examination). The proportion of middle school graduates moving to high school reduced even further in 2016 (to 55.0%), in contrast to the ever growing population enrolled in MLSP (31.6%). An essential drop in SWP enrollment (see the statistics below) reduced the proportion of middle school graduates opting for this type of vocational education from 25.8% in 1995 to 11.4% in 2016. However, the current proportion of middle school graduates opting for this trajectory remains the same as in 2010, despite the drastic reduction in MLSP enrollment that continued from 2010 to 2016.

The decreasing proportion of middle school graduates moving to high school and the growing percentage of those who opt for mid-level specialist programs in vocational schools are quite an indicative tendency of the 2000s-2010s. It indicates specifically that the trajectory

“through vocational school to university” has become a popular educational and social mobility strategy in the context of social, economic and demographic transformations as well as the Russian education system’s peculiar mechanics. A sociological survey conducted in St. Petersburg and Leningrad Oblast shows that ninth-graders follow risk avoidance strategies when making their educational choices [Aleksandrov, Tenisheva, Savelyeva 2015]. In doing so, they rely on their own perceptions about the benefits, costs and risks implied. Those who consider getting into college through high school and the USE as a risky way choose to retain their family status by enrolling in MLSP instead of adopting the strategy of enhancing the status. A diploma of vocational education adds to the confidence in the labor market and opens up opportunities for engaging in higher education. As Daniil Aleksandrov and his co-authors established, the trajectory “through vocational school to university” is mostly used by social groups between those reproducing the status of a skilled worker and those reproducing the status of a highly-qualified professional. According to the Monitoring of Education Markets and Organizations, on average 31% of MLSP graduates from 2001–2014 enrolled in college the same year they graduated [NRU HSE2016:1].

**High school,
intramural
program**

The population of graduates from intramural high school programs has also been invariably affected by the yearly changes in the size of relevant age cohorts. The conventional cohort of 17-year-olds (17 years is the mode of the distribution of eleventh-graders across age cohorts) increased gradually from 1.848 mln in 1986 to 2.5 mln in 2004 (Fig. 4), followed by a sharp six-year drop to 1.379 mln in 2010. The trough of 1.215 mln observed in 2016 gave way to a slow rise in the cohort of 17-year-olds, potential high school graduates. As early as 2016, the population of urban high school graduates slightly exceeded the rate for the previous year for the first time since 2004 (rural school rates kept going down). Further increase in the number of high school graduates is expected in the years to come, according to the 17-year-old population growth curve.

The ratio of high school graduates to middle school graduates—the so-called “run-up” rate—was growing during the demographic “up-phase” (from 51.2% in 1995 to its maximum of 62.6% in 2002 and 2003) and declining as the cohort reduced (to the lows of 56.1% in 2010 and 51.8% in 2016). At the first stage, it was probably the increasing qualification and professional hiring requirements that prompted students and their parents to invest more in secondary education, which opened up broad access to higher education opportunities. Later on, the “run-up” rate was reduced by the increased popularity of MLSP with middle school graduates and the beginning of the decline in the population of relevant age cohorts, which boosted chances for admission to vocational schools.

Figure 4. The size of the conventional 17-year-old cohort as compared to the population of urban and rural high school graduates (1,000)

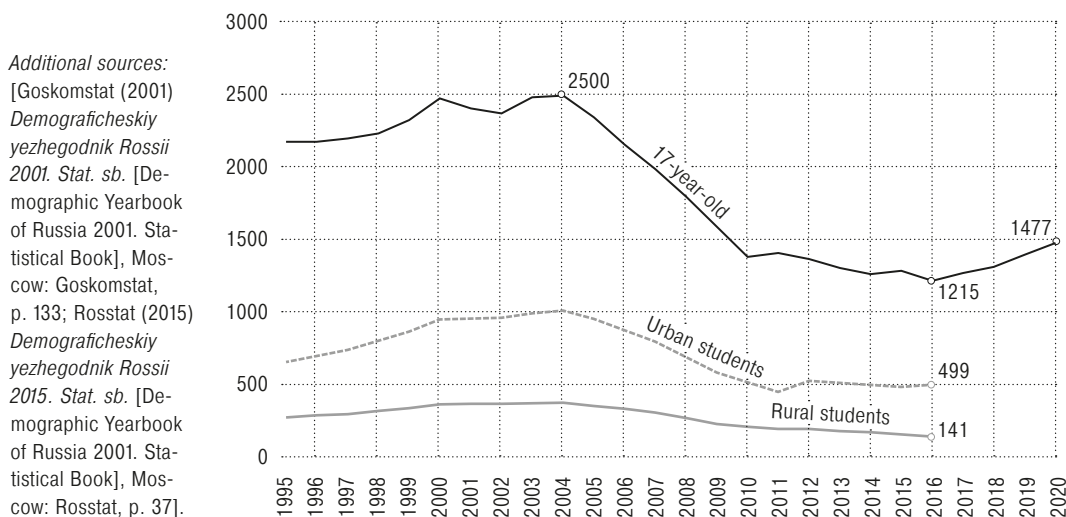
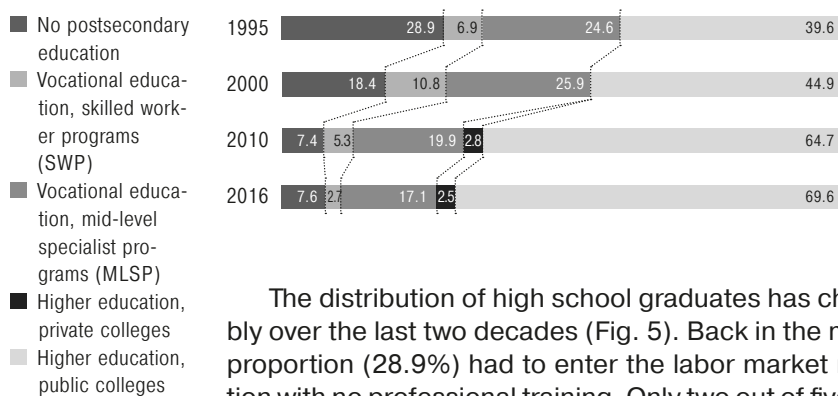


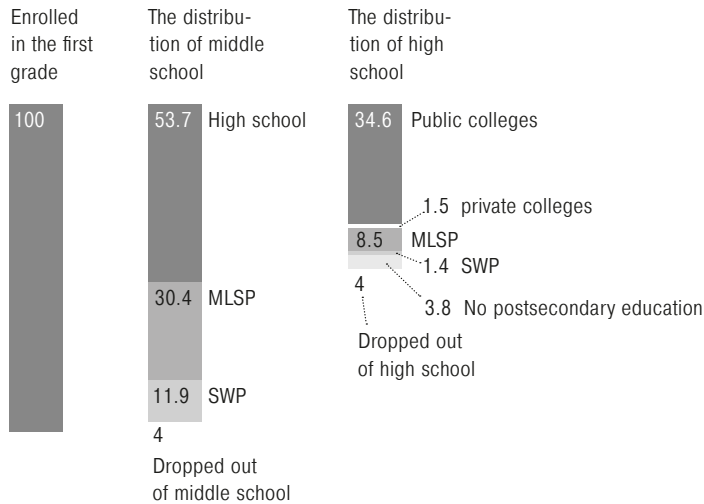
Figure 5. The distribution of high school graduates across educational trajectories (%)



The distribution of high school graduates has changed considerably over the last two decades (Fig. 5). Back in the mid-1990s, a large proportion (28.9%) had to enter the labor market right after graduation with no professional training. Only two out of five graduates made it to college, about 25% went to trade schools (now mid-level specialist programs in vocational education), and 6.9% enrolled in vocational colleges (now skilled worker programs in vocational schools). Youth engagement in various forms of postsecondary education increased significantly as the population of the age cohort was gradually growing and the systems of vocational and, most importantly, higher education, evolved. By 2000, the college enrollment rate had amounted to 44.9% and the proportions of high school graduates choosing SWP and MLSP had slightly increased as well.

During the first decade of the 21st century, the distribution of high school graduates came against the background of the ongoing ex-

Figure 6. **The distribution of students enrolled in the first grade in the academic year 2005/06, across educational trajectories as middle school graduates in 2014 and high school graduates in 2016 (%)**.



pansion of the higher education system and the dramatically (especially in 2004–2010) decreasing population of the age cohort. The number of high school graduates had approached college enrollment rate by 2010: 756,300 as compared to 659,600, respectively. As a result, the proportion of high school graduates enrolled in college increased by 22.6 percent, from 44.9% in 2000 to 67.5% in 2010. It was current-year graduates from high school intramural programs who made up the majority of students enrolled in full-time public college programs (79–81% throughout the 2000s). As compensation for this boost, the proportion of high school graduates enrolled in MLSP and SWP decreased (from 25.9% and 10.8% in 2000 to 19.9% and 5.3% in 2010, respectively) due to the reduced enrollment in skilled worker programs and, since 2004, in mid-level specialist programs as well. In general, most high school graduates of the early 2010s enrolled in college the same year they graduated.

The considerable drop in the population of potential college students was reflected in the education system structure: college enrollment started reducing in 2008 (slightly behind time), a tendency that intensified after 2009. Nonetheless, the trends in the dynamics of distribution of high school graduates shaped in the 2000s persisted for six more years. The proportion of high school graduates enrolled in colleges kept growing until it reached 72.5% in 2016, while the percentage of those opting for vocational schools kept going down for both MLSP (to 17.1%) and SWP (to 2.7%). The proportion of high school graduates outside the system of postsecondary education remained at low levels in the 2010s (7.6% in 2016).

The year 2016 was that of the lowest population of the conventional cohort of 17-year-olds (1.215 mln). Colleges enrolled 531,300 students to full-time programs, while the population of high school graduates was 619,100, hence the ratio was 1:1.17 (as compared to 1:1.15 in 2010). The population of 17-year-olds started creeping upward in 2017, so higher education may start becoming less accessible for high school graduates, provided that enrollment remains the same in full-time-programs and drops in extramural ones (see below).

Figure 6 provides data on the educational choices that the generation enrolled in the first grade in 2005/06 made as middle school graduates in 2014 and as high school graduates in 2016. The figure sheds light on the proportions in which educational trajectories are distributed within a generation. These starting points in education will be developing as a result of using the opportunities offered to youth by different levels and modes of postsecondary education.

Vocational education: skilled worker programs (SWP)

Initial vocational education, now referred to as skilled worker programs in vocational schools, used to be quite an encompassing avenue of vocational education before the 2000s. This educational subsystem has reduced a lot over the last two decades, first as a result of a massive cut in government funding, and recently due to the decreasing age cohort (the number of applicants is diminishing significantly, since smaller cohorts have better chances of getting to college). SWP enrollment rates have quickly decreased over the years: by 11.3% from 1995 to 2003 (from 928,000 to 823,000), by 26.0% in the next seven years (from 823,000 in 2003 to 609,000 in 2010), and by 63.3% in the following six years (from 609,000 in 2010 to 224,000 in 2016). Overall, SWP enrollment decreased 3.8 times between 2000 and 2016. The ratio of the population of SWP students to that of 15–17-year-olds dropped from 22.5% in 2010 to 19.4% in 2013 [NRU HSE2014:300].

Consumers of educational services in skilled worker programs are represented by middle and, more rarely, high school graduates who are enrolled in middle- and high-school-based programs, respectively. Middle school graduates have consistently accounted for the majority of SWP student population (66.4% in 1995; 69.0% in 2010), their percentage having grown to 79.6% by 2016 (Table 1).

Interestingly, the proportion of current-year middle school graduates among students enrolled in middle-school-based programs came down a little (from 61.1% in 1995 to 59.5% in 2016), whereas that of middle school graduates with certificates obtained in previous years increased significantly (from 5.3% to 20.1%), so the ratio between current-year and previous years' middle school graduates is now 3:1 in the population of students enrolled in middle-school-based SWP. The percentage of students enrolling in high-school-based programs has been quite stable: 26.0% in 1995 and 27.8% in 2016. However, it also reveals a reduction in the proportion of current-year graduates (from

Table 1. Levels of education of students enrolled in skilled worker programs of vocational schools (%)

	1995	2005	2010	2016
Total	100	100	100	100
Including:				
Middle school, interrupted	7.7	4.9	6.8	
Middle school, graduation in the current year	61.1	62.8	52.2	59.5
Middle school, graduation in previous years	5.3	8.4	16.8	20.1
High school, graduation in the current year	18.7	18	9.1	7.6
High school, graduation in previous years	7.3	5.8	15.1	11.7
Vocational/higher education	—	—	—	1

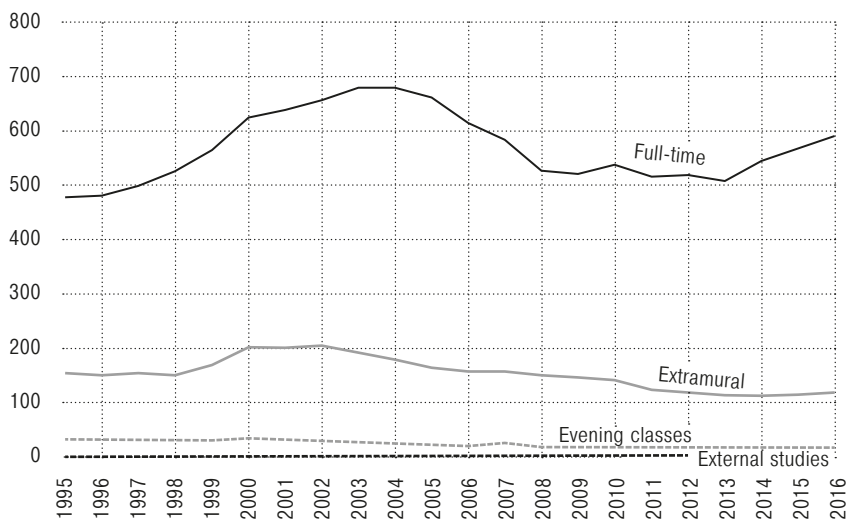
18.7% to 7.6%) and a slight increase in that of previous years' graduates (from 7.3% to 11.7%). Before the system of initial vocational education was reorganized into SWP, vocational colleges had also admitted applicants who dropped out of middle school: 7.7% in 1995 and 6.8% in 2010. Nowadays, this very small group of youth can learn vocational skills by engaging in vocational training.

Vocational education: mid-level specialist programs (MLSP)

Vocational schools offering mid-level specialist programs have always been popular among young people, especially middle-class students. Admissions during the 2000s were most competitive in 2003 with 153 applicants per 100 places, falling to 131 in 2008. The average number of applicants per 100 places in 2010 was 143.1, with 162.1 applicants per 100 government-funded places. These indicators increased in 2016 to 198.3 and 215.8 respectively. As for middle-school-based programs, the average number of applicants per 100 seats was 201.8 for government-funded places and 152.7 for self-paying students, which is lower than in high-school-based programs—278.6 and 171.9 respectively.

Figure 7 presents the dynamics of MLSP enrollment across the modes of study. Data analysis will be based on annual 17-year-olds' population estimates specified earlier in this article, as the modes of distribution of students enrolled in middle- and high-school-based programs are 16 and 18 years, respectively. Enrollment in full-time programs increased from 477,600 in 1995 to 680,100 in the academic year 2003/04 (by 42.4%), which exceeded the growth in the population of 17-year-olds (by 14.7%). A sharp reduction in the size of the cohort (by 44.8%) in 2004–2010 resulted in MLSP enrollment shrinking as well from 680,100 to 537,900 (by 20.9%). That is, although the chronological fluctuations in the enrollment in full-time mid-level spe-

Figure 7. **Enrollment in mid-level specialist programs of vocational schools across modes of study (1,000).**



Additional sources:
 [NRU HSE2014:320].

cialist programs were affected by demographic change, they indicate an increase in the involvement of 17-year-olds in education of this type. The population of the age cohort kept decreasing in 2010–2016, yet slower than during the previous years (by 11.9%). Meanwhile, enrollment in full-time MLSP, which had remained pretty much the same in 2010–2013, increased by 16.5% over the next three years, from 507,200 to 590,700 (in 2016). Therefore, the involvement of 17-year-olds in this type of vocational education has increased noteworthy over the 2010s, especially over the last three years.

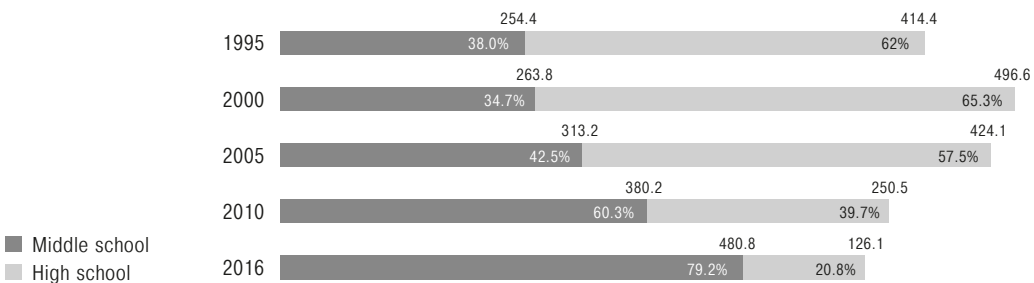
Enrollment in extramural mid-level specialist programs does not depend that much on the size of the 17-year-old cohort, as the distribution of admitted students across age cohorts is much more dispersed here than in full-time programs. Chronological enrollment fluctuations were insignificant: an increase from 154,100 in 1995 to 205,300 in 2002—the highest point in the whole two-decade period—was followed by a slow decline to 141,200 in 2010 and 118,800 in 2016.

The structure of enrollment broken down by the modes of study has been quite stable (Fig. 8), with slight chronological fluctuations not changing the overall ratio between full-time and extramural students as such. Throughout the whole period, the proportion of full-time enrollments was gradually growing (from 71.9% in 1995 to 81.3% in 2016) while that of extramural enrollments was naturally falling (from 23.2% to 16.3%). The normally low percentage of enrollment in evening classes dropped even more, from 4.9% in 1995 to 2.4% in 2016. The growing enrollment rate in full-time programs captures the priority that students give to more comprehensive training, which is

Figure 8. Enrollment in mid-level specialist programs of vocational schools across modes of study (%).



Figure 9. The number and proportions of middle and high school graduates in MLSP enrollment (1,000; %).



also in line with the policy for active involvement of younger labor market entrants in education.

The majority of students enrolled in MLSP—about 90%, with a peak of 95% in 2016—has been represented by middle and high school graduates throughout the two decades. The proportions of students enrolled to middle- and high-school-based programs are indicative of the major MLSP enrollment trends. Figure 9 provides data on the number and proportions of middle and high school graduates in MLSP enrollments. High school graduates, enrolled in relevant programs, constituted the majority up until 2009: 62% in 1995 and 65.3% in 2000 (the period’s highest), as compared to 38% and 34.7% of middle school graduates, respectively. The proportions became virtually equal in 2008, which was followed by an increase in the population of middle school graduates, who accounted for 60.3% of the cumulative population of middle and high school graduates in 2010 and 79.2% in 2016. Mid-level specialist programs in vocational education have shifted from the preferred choice of high school graduates into that of middle school graduates. Such a dynamic is in line with the changes mentioned above, namely the reduced proportion of middle school graduates moving to high school, especially in rural areas (see Figure 2), and the increased proportion of middle school gradu-

Table 2. **Levels of education among students enrolled in MLSP vocational schools (%)**

	1995	2005	2010	2016
Total	100	100	100	100
Including:				
Middle school (intramural program), graduation in the current year	35.6	36.1	48.9	52.7
Middle school, any type of institution, graduation in previous years	2.3	2.5	4.6	13.4
High school (intramural program), graduation in the current year	33.7	37.8	21.3	14.6
High school, any type of institution, graduation in previous years	20.1	14.5	14.2	14.3
Vocational school (SWP)	5.1	7.4	8	3.2
Vocational school (MLSP) / higher education	3.1	1.7	2.5	1.8

ates enrolling in mid-level specialist programs of vocational schools (see Figure 3).

Table 2 presents more detailed information on the educational level of students enrolled in MLSP vocational schools over the last two decades. The proportion of current-year graduates enrolled in middle-school-based programs increased by 17.1% (from 35.6% in 1995 to 52.7% in 2016), and that of previous-years' graduates increased by 11.1% (from 2.3% to 13.4%). In contrast, the proportion of current-year high school graduates in the population of students enrolled in high-school-based programs declined by 19.1% (from 33.7% to 14.6%), as compared to the 5.8% drop in the percentage of previous years' high school graduates (from 20.1% to 14.3%). As we can see, the proportion of middle school graduates was growing faster due to the increase in the number of current-year graduates (from middle school) among applicants, and the proportion of high school graduates was also reducing faster among current-year graduates (from intramural high school programs).

The trends described indicate, coupled with the data provided above (see Figures 3 and 5), that MLSP vocational schools become more and more attractive for current-year middle school graduates and less and less so for fresh high school graduates. Nearly all current-year middle school graduates going to MLSP vocational schools (98.5% in 2016) enroll in full-time education programs.

The population of high school graduates enrolled in MLSP vocational schools (28.9% of total enrollment in 2016) consists today of half fresh high school graduates and half earlier high school graduates. Full-time education programs are pursued by 82.2% current-year graduates, whereas 71.4% of previous years' graduates enroll in extramural programs. Therefore, mid-level specialist programs are becoming less popular among fresh high school graduates, while

middle school graduates entering the labor market turn to MLSP vocational schools feeling the need to learn specialized skills, while most often working full-time. In addition, mid-level specialist programs attract a very small number of graduates from SWP vocational schools (3.2% in 2016) as well as other MLSP vocational schools and colleges (1.8% in 2016).

The growing popularity of MLSP among specific youth categories and the reducing size of the relevant age cohort have increased the involvement of youth in MLSP vocational education over the last decade: the proportion of MLSP students in the total population of 15–19-year-olds increased from 21.9% in 2005 to 25.8% in 2010 and 28.5% in 2013 [NRU HSE2014:31]. The 2016 estimate indicator was 29.2% for those born 15–19 years ago⁵.

Higher education

Colleges are the most attractive trajectory of postsecondary education for youth, particularly graduates from intramural high-school programs. Admission to public colleges was as competitive as about 1.9 applicants per spot throughout 1995–2000, going up to 2.05–2.07 by 2006–2008 and then down to 1.3 in 2010 due to a sharp decrease in the population of the age cohort. Admissions to full-time college programs have always been more competitive, with an increase from 2.1 applicants per spot in 1995 to 2.9 in 2000, followed by a drop to 1.11 in 2010. There is no possibility to compare the dynamics of past years with current indicators, as admission requirements have changed, allowing candidates to apply to more than one college. Therefore, admission competitiveness will be described across different types of colleges and modes of study for the admission year 2016 (Table 3).

The cumulative indicator of college admission competitiveness is 4.7 applications per spot. Meanwhile, admissions to public colleges are much more competitive: 5.1 applicants per spot as compared to only 1.6 in private colleges. This gap becomes even wider as major categories of applicants are compared across the two types of colleges. While 62.6% of enrollment in public colleges (and 55.2% of total college enrollment) is accounted for by full-time programs with their 6.8 applicants per spot (including 9.1 applicants per government-funded spot), 78.4% of students admitted to private colleges (9.3% of total college enrollment) enrol in extramural programs with only 1.3 applications per spot, i. e. access to this type of education is virtually unfettered. Admission to extramural programs in public colleges is low-competitive too: 2.2 applications per spot, this higher education trajectory growing more and more popular among young people and accounting for 30.8% of total college admission. That is,

⁵ Rosstat (2015) *Demograficheskiy yezhegodnik Rossii 2015. Stat. sb.* [Demographic Yearbook of Russia 2015. Statistical Book], Moscow: Rosstat, p. 37].

Table 3. **Competition for admission to college in 2016: applications per place**

Mode of study	Public colleges	Private colleges
Full-time	6.77	2.76
Evening classes	3.13	1.69
Extramural	2.23	1.26
Total by college type	5.09	1.56
Total:	4.67	

about 40% of college applicants go through low-selective admission these days.

The labor market in Russia wants college-educated employees, so youth's demand for this type of education is growing. College enrollment boosted from 681,000 to 1,640,500 in 1995–2005 due to the growing population of potential applicants: the conventional cohort of 18-year-olds (18 years is the mode of the distribution of college entrants across age cohorts) increased by 116%, and the number of admitted students skyrocketed by 241% (Fig. 10). The years 2005–2011 saw a sharp 44.9% decrease in the population of 18-year-olds.

While enrollment in full-time college programs responded to the demographic change with a gradual decrease, more and more young people enrolled in extramural programs up until 2008. As a result, the total number of students enrolled in colleges reached its maximum of 1,681,600 in 2007.

Total college enrollment reduced by 26.4% between 2005 and 2011. Therefore, it increased faster and decreased slower than the population of 18-year-olds in its respective periods of rise and fall. Involvement of youth in education increased significantly during the period analyzed: the enrollment rate of 17–25-year-olds rose from 23% to 32.3% in 2000–2005 and then, despite the reducing age cohort, to 35.4% in 2010 and 33.7% in 2013 [NRU HSE2014:356].

After 2011, the conventional cohort of 18-year-olds reduced by only 11.8% to its lowest in 2017, followed by growth. Enrollment to full-time college programs became stable (673,400 in 2012 and 674,300 in 2016), while that to extramural programs dropped by 22.6% within the same period. The reason for this is quite obvious: small age cohorts only began to “run up” to extramural education programs during this period, as age distribution is much more dispersed here than in full-time college education. Seventy-two percent of students enrolled in extramural programs are aged 18–26, while 73.1% of those in full-time programs are 18 years old or younger.

The ratio of the population of students enrolled in full-time college programs to the size of the conventional 18-year-old cohort (where

Figure 10. College enrollment across modes of study (1,000)

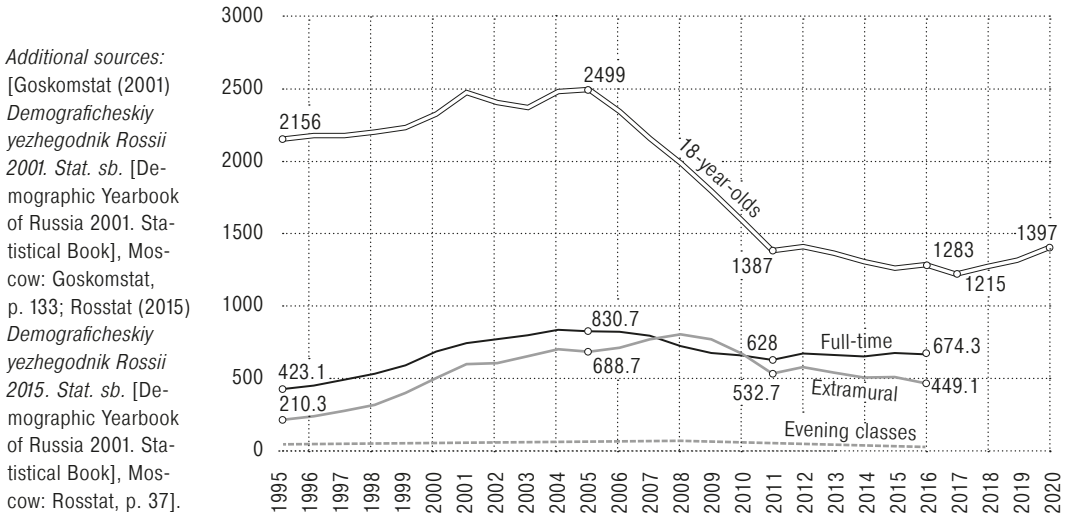


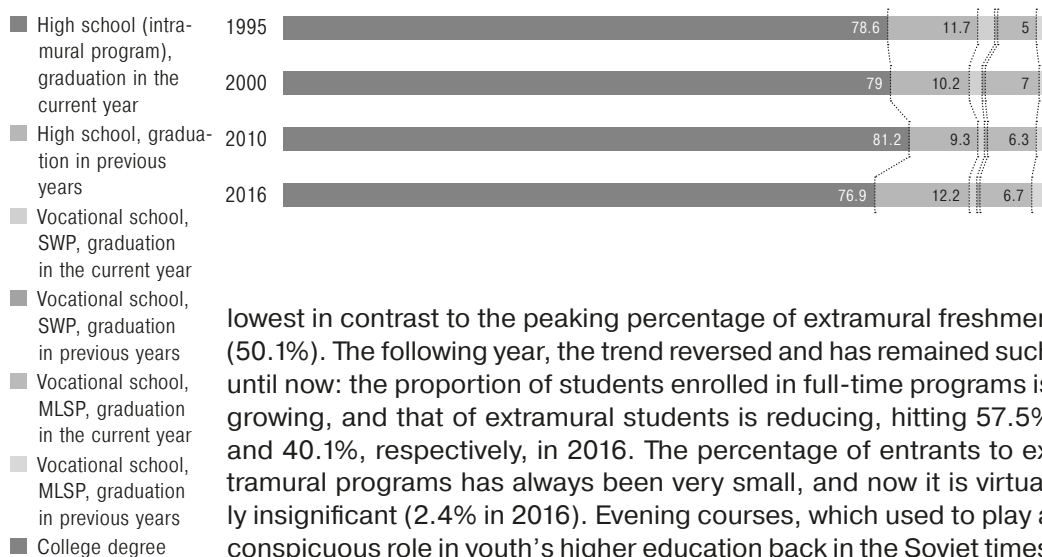
Table 4. College enrollment across modes of study (%)

	Total	Modes of study			
		Full-time	Extramural	Evening courses	External studies
1995	100	62.1	30.9	6.5	0.4
2000	100	53.2	38.9	6.3	1.5
2005	100	50.1	42.0	5.2	2.1
2009	100	43.9	50.1	3.8	2.2
2010	100	47.1	48.0	3.7	1.1
2015	100	55.3	41.7	3.0	-
2016	100	57.5	40.1	2.4	-

current-year high school graduates account for nearly 80% of enrollment) is estimated to assess the dynamics of youth involvement in higher education. This indicator is not equivalent to the more accurate one mentioned above—the college enrollment rate of 17–25-year-olds—and can only be used indirectly to evaluate the dynamics. This ratio increased from 19.6% in 1995 to 35.4% in 2005, then to 45.6% in 2011 and 52.6% in 2016.

The structure of college enrollment broken down by the modes of study underwent considerable changes throughout the two decades analyzed here (Table 4). Enrollment to full-time programs was on a downward trend, falling from 62.1% in the mid-1990s to 43.9% in 2009, the year when the proportion of full-time enrollments was at its

Figure 11. Levels of education among students enrolled in full-time college programs (%).



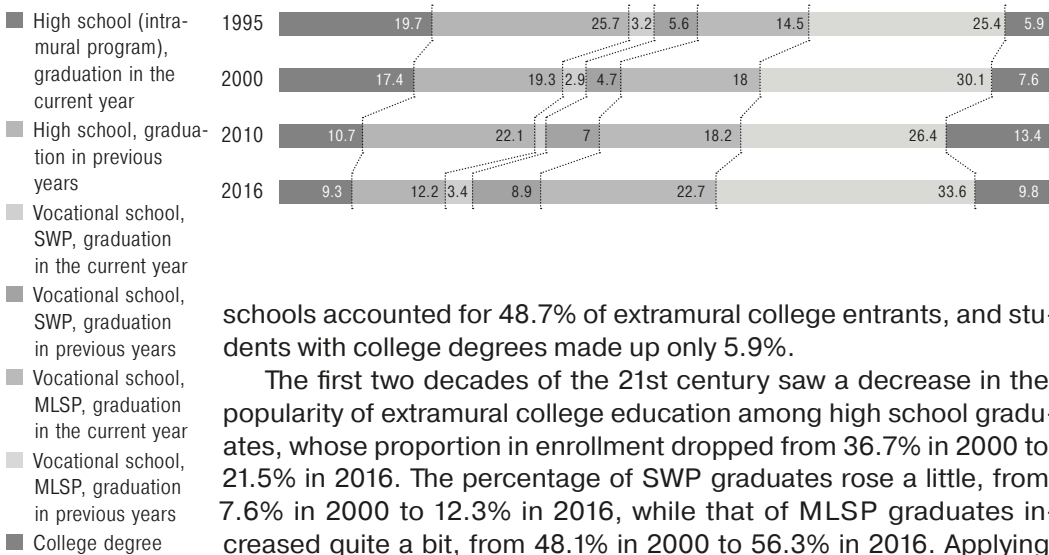
lowest in contrast to the peaking percentage of extramural freshmen (50.1%). The following year, the trend reversed and has remained such until now: the proportion of students enrolled in full-time programs is growing, and that of extramural students is reducing, hitting 57.5% and 40.1%, respectively, in 2016. The percentage of entrants to extramural programs has always been very small, and now it is virtually insignificant (2.4% in 2016). Evening courses, which used to play a conspicuous role in youth's higher education back in the Soviet times, have lost their importance today as full-time college students often engage in freelancing or even get major-related jobs.

Applicants to full-time and extramural programs differ significantly in their level of education at the stage of admission. The distribution of entrants to full-time college programs across levels of formal education has remained the same over the last 20 years, nearly nine out of ten being graduates from intramural high school programs (Fig. 11), i. e. students enrolled in full-time college programs are mostly fresh high school graduates.

The ratio of current-year and earlier graduates among college entrants was the most imbalanced when admissions were the least competitive in 2010–2011 (81.2% to 9.0%). In 2016, it was 76.9%: 12.2%. Other levels of education are very rare to find among students enrolled in full-time college programs, e. g. graduates from SWP vocational schools accounted for as little as 2.7% in 1995 and 1.5% in 2016. A slight increase in the proportion of MLSP graduates is observed in this period: from 2.2% in 1995 to 9.0% in 2016. Therefore, current-year graduates from intramural high school programs are certain to win the competition for places in full-time college programs.

The distribution of youth applying to extramural college programs across levels of education is different from that of full-time program applicants, which is explained by the specific age composition (Fig. 12). This distribution has changed considerably over the period analyzed. Twenty years ago, 45.4% of extramural college entrants were high school graduates, mostly of previous years (25.7%), i. e. those who failed (or never tried) to enter a college the year they graduated from high school. Graduates from SWP and MLSP vocational

Figure 12. Levels of education among students enrolled in extramural college programs (%).



schools accounted for 48.7% of extramural college entrants, and students with college degrees made up only 5.9%.

The first two decades of the 21st century saw a decrease in the popularity of extramural college education among high school graduates, whose proportion in enrollment dropped from 36.7% in 2000 to 21.5% in 2016. The percentage of SWP graduates rose a little, from 7.6% in 2000 to 12.3% in 2016, while that of MLSP graduates increased quite a bit, from 48.1% in 2000 to 56.3% in 2016. Applying to college with a MLSP diploma has thus become an alternative trajectory towards higher education [Aleksandrov, Tenisheva, Savelyeva 2015]. The proportion of fresh MLSP graduates among extramural college entrants is rather high today, accounting for 22.7% of enrollment in 2016. While mid-level specialist diplomas are economically inferior to college degrees in the labor market, they open up the opportunity for professional growth through obtaining higher education while working full time. Employees with MLSP diplomas of previous years also engage actively in extramural college education (33.6% of enrollment in 2016). As we can see, extramural college education is predominantly the strategy pursued today by graduates from MLSP vocational schools, most of whom are employed already.

Obtaining a second college degree is becoming more and more widespread these days. The law only allows for doing so in extramural form. The percentage of college-educated students enrolled in extramural college programs was 7.6% in 2000 and 9.8% in 2016.

The growing popularity of higher education during the period analyzed was largely contingent on the emergence and wide range of tuition-based educational services delivered both by private colleges and under tuition contracts in public educational institutions. Enrollment in private colleges increased from 47,200 in 1993 to 297,600 in 2007 and then declined gradually to 109,300 in 2016. The percentage of students enrolled in private colleges in total college enrollment increased from 8.0% in 1993 to 17.2% in 2008, showing the most rapid growth in extramural enrollments (from 10.0% to 25.6%), which was followed by a drop under the influence of the demographic trough. Students enrolled in private colleges in 2016 accounted for 11.8% of

total college enrollment and 23.1% of all entrants to extramural programs.

Self-paying students enrolled in public colleges accounted for over 40% of total college enrollment in 2000, increasing to 53.4% in 2013 and slightly decreasing to 52.2% in 2016. The proportion of full-time students enrolled in public colleges under tuition contracts is 39.3% (37.5% in Bachelor's degree programs and 45.4% in Specialist's degree programs), while that of extramural self-paying students is as high as 74.6% (in both Bachelor's and Specialist's degree programs).

Levels of youth education

So, what is the outcome of youth generations moving from level to level in the education system? Let us use the Russian Longitudinal Monitoring Survey data (RLMS)⁶ to illustrate the situation. Figure 13 shows the distribution of 20–24-year-olds by confirmed levels of education in 1995, 2005 and 2015. It should be taken into account, however, that education is still pursued by a large proportion of young people at this age, mostly those enrolled in college and to some extent those in MLSP vocational schools. Wave-like distribution curves shift to the right with time, indicating a growing proportion of better-educated people in this cohort. Twenty years ago, almost half the cohort (46.2%) remained at the level of high-school education, those with MLSP diplomas only accounted for 36.4%, one out of ten had a middle-school background only, and college degrees had been obtained by only 7.1%. The ratio of the high-school-educated and those with MLSP diplomas is inverse today: 27.7% to 43.0%. Along with the data provided earlier in this article, this dynamic marks the intermediary role that MLSP vocational schools now play in the mobility between educational trajectories for a substantial proportion of youth. The percentage of college-educated people in the cohort is 2.6 times higher today than 20 years ago (18.7%); the proportion of the middle-school-educated has remained the same, but most of them have also obtained some vocational training.

As for the cohort of 25–29-year-olds, the same data for which is presented in Figure 14, the majority of young people have already completed their formal education at this age. The distribution across levels of education in this cohort provides a much more accurate picture of youth's educational attainment than in the 20–24-year-old cohort. The distribution curve also shifts to the right over time, yet it looks more like a semi-wave, the peak shifting from the median indicators (the level of high school) to the highest ones (college education).

⁶ Russian Longitudinal Monitoring Survey—Higher School of Economics (RLMS-HSE) <http://www.hse.ru/rlms/spss>

Figure 13. Levels of education among 20–24-year-olds, RMLS data (%).

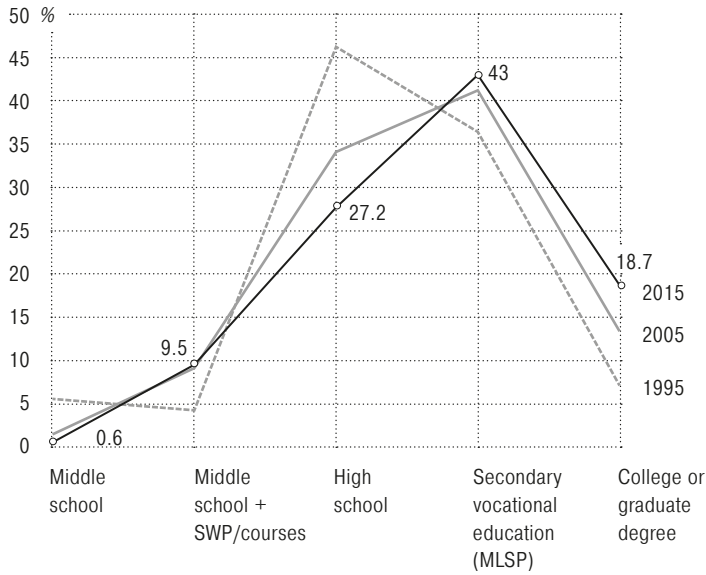
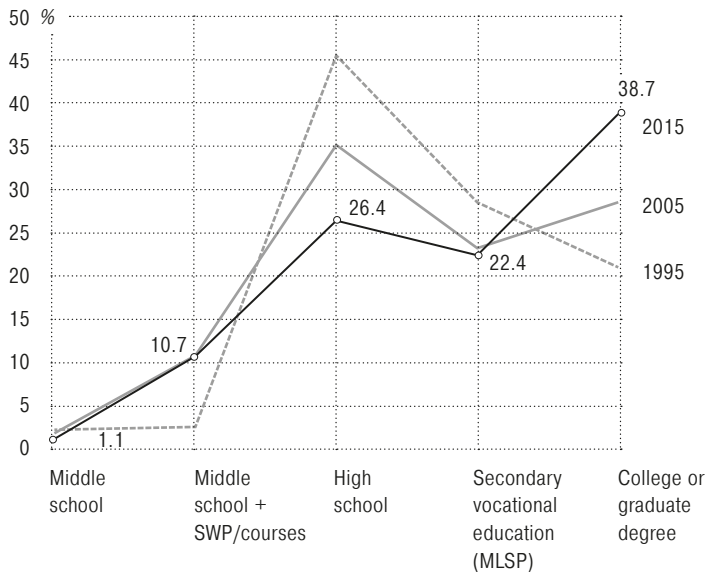


Figure 14. Levels of education among 25–29-year-olds. RMLS data (%).



Today’s 25–29-year-olds outstrip their coevals of 20 years ago in their level of formal education. Middle-school education was the most widespread level back in 1995 (45.5% of youth), whereas college degrees are predominant today (38.7%). The proportion of college-educated people in the cohort correlates positively with the size of popu-

lated locality, being 49.6% in regional capital cities, 34.0% in all other types of cities and 22.4% in rural settlements. People with a high-school background only accounted for a little over 25% in 2015, while over 10% had middle-school diplomas (coupled mostly with vocational training), and 22.4% were graduates from MLSP vocational schools. As we can see, the percentage of the MLSP-educated is almost twice as low among 25–29-year-olds than among those aged 20–24.

Of course, these are two different generations, and this data only marks the downward trend in the proportion of mid-level specialists in the transition from one cohort to the other. Nevertheless, this data is also very indicative of how MLSP vocational education is becoming used more often as a bridge to the system of higher education and how MLSP graduates tend to enroll in extramural college programs.

Conclusion and post-reflection

The trends in youth educational trajectories and the mobility between them in the last two decades reveal a stable expansion of education systems in Russia. Demand for higher education increased the most rapidly before the mid-2000s due to a surge in the youth population. The dramatic reduction in the size of age cohorts stepping into responsible life caused a decrease of absolute enrollment indicators in vocational and higher education systems. Meanwhile, the relative indexes of college accessibility remain very high due to the shrinkage of the age cohort. This is made possible by the Russian education system's institutional characteristics, which allow for not only pursuing the “high school—college” academic trajectory but also accessing higher education through vocational schools thanks to the opportunity for mobility between educational trajectories. In particular, the last decade has seen a growing popularity of the “middle school—trade school—university” trajectory, where MLSP education is obtained on a full-time basis and higher education is either accessed by transition from trade school to a full-time program or, most often, obtained under extramural programs. This trajectory serves as an alternative, safe channel of social mobility for strata with limited (as compared to those following the academic trajectory) resources. It owes its popularity to the combination of low risks (admission without the USE) and benefits in the labor market, which consist in earlier access and guaranteed mid-level specialist status. As a result, about 40% of today's young people obtain college degrees by the age of 30.

On the one hand, the wide spread of higher education satisfies the social and economic need for highly qualified professionals, while on the other hand it entails certain devaluation of college diplomas in the labor market. According to RMLS data, 30–39-year-olds employed in mid-level specialist positions in 2015 included 61.6% of college-educated people, 29.9% of vocational school graduates and 6.8% of those with a high-school background, the rest having inferior levels of education. Among “customer service clerks”, 32.7% had college de-

grees, 25.0% had vocational school diplomas, and 30.8% were high school graduates. College-educated people accounted for 25.7% of sales assistants, 13.4% of skilled manual workers and 15.8% of skilled machine operators. To what extent using highly qualified professionals in such jobs is required by the production process is beyond the scope of this article. It is obvious, however, that a certain proportion of college-educated workers did not succeed in finding a job to match their confirmed level of education, so their diplomas turned out to be subjectively devalued.

Diplomas from higher education remain out of use due to the imperfect mechanism of how labor market needs, consumer demand for education and response from the market for educational services interact under the new conditions. Russia's modern labor market shows a growing demand for knowledge, high qualifications and, in the first place, being capable of and at ease with learning new things and acquiring new skills and competencies. With the boom of the service industry, in its broad sense, came the need for a large number of employees with good soft skills, and college-educated people gained the best part of such jobs as a result of competition. This way, a college diploma has come to indicate the possession of universal competencies and an adequate degree of socialization. According to a survey conducted by the Russian Public Opinion Research Center (VTsIOM) in 2003, nearly half of the companies employing young people with college degrees made use not so much of their domain-specific knowledge as of their social competencies acquired as part of their higher education. Demand for these competencies has been demonstrated by employers who deal with the recent social need for taking social communication to a new level to fit into the urbanized post-industrial society [Levinson 2005:119–120].

This recent demand for knowledge and soft skills together with the labor market's signal of higher economic returns (salary bonus) on college degrees [Gimpelson, Kapelyushnikov 2011:78] spurred youth's demand for higher education, thus inducing mass higher education largely supplied by business entities. This gave rise to the sector of low-quality or sometimes even pseudo-education. Since businesses are focused not so much on labor market needs as on demand from major consumers—college degrees as such or specific majors perceived by consumers as popular,—the population of college graduates turned out to be disproportionate in terms of both its size and the relevance of majors. These disproportions contributed further to the devaluation of college diplomas.

Along with the increased demand for college-educated employees, the demand for skilled workers and mid-level specialists also remains high in today's labor market. According to a national survey (conducted as part of the Monitoring of Education Markets and Organizations) of employers that hire workers of general trades and specializations, 29% of surveyed companies hired MLSP graduates and

31% gave jobs to SWP graduates in 2014–2015. For comparison: recent college graduates were employed by one third of the surveyed companies [Bondarenko 2017:18]. A certain proportion of young people use vocational education under mid-level specialist programs as a detour road to college. Consequently, most of the vocational education system (mostly MLSP) does not actually serve its inherent purpose of supplying the economy and society with mid-level specialists.

Higher salaries are an important factor driving mid-level specialists to move from their careers to those of highly qualified specialists [Gimpelson, Kapelyushnikov 2007:368–370]. But there is more to it. Working outside one's major has become common practice for both college and MLSP graduates in the fast-changing labor market of today. Career conversion and aspiring to higher levels of education is becoming a relevant problem for many youth categories. A longitudinal (ten-year-long) study of educational and career trajectories of youth in Novosibirsk Oblast shows that types of career conversion differ across levels of education. When getting employed outside their major, college graduates normally take jobs matching their high level of education. Meanwhile, graduates from vocational schools who fail to find a job in their major are much less likely to get employed in positions requiring a mid-level specialist qualification, part of them having their social status degraded or even losing their skills (by engaging in low-skill manual labor). This way, college education builds cultural capital which, should a career conversion be required, can be traded for an occupation equivalent to higher education in the level of competencies. In contrast, MLSP vocational education does not develop a set of universal competencies, apart from technical specialization, that would be perceived as a mid-level specialist's qualification in the labor market [Cherednichenko 2016:305–310].

Therefore, educational trajectories pursued by young people, who move from level to level in the education system, and opportunities for mobility within the system are contingent on a complex web of many interdependent factors. The latter include the structure and institutionalization of the education system, educational needs, and the selectiveness of young people. These factors shift all the time, depending heavily on the economic and social demand for human resources of specific qualifications and majors as well as on the existing vector of technology and social development. Both the education system and the labor market must undergo a transformation to solve disagreements that inevitably arise between them. For instance, devaluation of college education and the sector of low-quality colleges cannot be fought successively in a situation where only one part of the labor market seeks highly-qualified professionals, while the other, mostly represented by service agencies and small and medium-sized businesses, is well-contented with a diploma's social function of indicating that a college graduate has acquired a set of social and cultural competencies. The situation will only change when the secondary

and the tertiary sectors actually express a demand for high quality of youth education and most structural elements of the economic system actually focus on intensification, modernization and innovations in their development. On the other hand, the system of vocational education (mid-level specialist programs) will keep playing the role of an educational bridge until it upgrades the program content essentially and begins teaching the universal competencies of a mid-level specialist in addition to technical specialization. The challenge faced by the education system today consists in carrying out such transformations as to develop human capital that not only includes knowledge, skills and specializations but also embraces some broader competencies as well as proactive attitude and transformational leadership skills.

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