CHALLENGES TO ACCESS EDUCATIONAL INSTITUTIONS

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Abstract*. The welfare is heavily influenced by the level of education attained by people. Accessibility may be observed at the country level and also it can be seen at the individual level. Therefore, the purpose of this paper is to evaluate some characteristics of educational institutions in the Republic of Moldova, mainly from the perspective of the beneficiary. As research methods were used the analysis, synthesis, induction and deduction. Used data sources are the statistical data of the National Bureau of Statistics of Moldova and the results of a survey elaborated by the authors. The study's findings reveal an overall drop in the number of institutions, teaching staff and students. However, respondents to the survey rated relatively highly, but not very highly, the teaching staff, the quality of hygienic-sanitary conditions, the quality of teaching, the technical-material basis, and the professional-pedagogical qualities of the staff, but they were less satisfied with the quality of the institution's food products and the living conditions in the dormitory. During the years of study, a significant proportion of respondents stated that they paid additional payments in addition to the contractual ones. This paper was developed and financed within the Scientific Project for the period 2020-2023, registered in the State Register of Science and Innovation Projects of the Republic of Moldova with the code 20.80009.0807.29 State Program Project "Improving the mechanisms for applying innovative tools oriented towards the sustainable growth of the welfare of the population of the Republic of Moldova".*
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Introduction. Education is one of the pillars that supports the basis of the social and economic development of any society. Specifically, education also

contributes to the improvement of the welfare of population. Therefore, a better accessibility to education will increase chances for a subsequent welfare growth. Evaluation of the accessibility to educational institutions can be done at institutional or regional level, but also at individual level, from the point of view of the ones who participated themselves in educational process. Since in many cases first approach is more used, the second approach is used less often. This generates a gap of understanding of accessibility to education from the person himself/herself, which this paper strives to cover up to a degree, using Republic of Moldova as a country case study, by analyzing the results of a survey based on a questionnaire regarding the assessment of the accessibility of the population of the Republic of Moldova to the educational infrastructure. The survey is part of the Project State Program 20.80009.0807.29 "Improving the mechanisms for applying innovative instruments aimed at sustainable growth of the welfare of the population of the Republic of Moldova" (2020-2023). The survey was used as an additional approach to the one where accessibility is studied at macro level.

Data sources and methods. For the analysis of accessibility of the population of the Republic of Moldova to the educational infrastructure were used two approaches. First approach was to use the administrative data on pupils and schools given by the National Bureau of Statistics (NBS, 2023) and calculate it at macro level and the second approach was to design a survey that will generate data on accessibility to educational infrastructure at the level of the individual, at micro level. At the survey participated 560 persons, from which 55.9% - women and 44.1% - men. From them 80.0% were 18-34 years old, 10.7% - 35-44 years old, 9.3% - 45-59 years. By the last level of education completed, or if the student is currently studying -the current level of education, 4.3% were with secondary school, 15.7% - high school, 37.9% - college, 18.6% - bachelor studies, 10.0% - master studies, 12,9% - doctorate studies. From all respondents 30.7% used private educational services, 69.3% - public.

Literature review. There are many studies that have as a subject of research various aspects of the access to education. Some recent studies focus on the access to education services by online delivery as a perspective direction of education and as a solution to increase access to education in ways traditional educational services can't. Goodman, Melkers, and Pallais (2019) shows that educational options that are cheaper, in online format and of high quality can offer educational opportunities for people that would in other cases not pursue them. Of the same opinion are Xu and Xu (2019), where they add the convenience for adults with many responsibilities and a tight schedule, helping in getting additional education. The pandemic induced developments in adoption of online learning (Prabaningtyas, Pudjiastuti, Alami and Farhana, 2023). As online learning expanded, there is in countries, like Republic of Moldova, a trend of reduction of number of educational institutions and students, mainly due to reasons of low birthrate and emigration. In this paper the focus is on the analysis of evolutions in the educational institutions, emphasizing some accessibility aspects.

Results and discussions. For the evaluation of the accessibility to educational institutions from an objective standpoint were used the following

indicators from NBS of Moldova: the number of educational institutions in the Republic of Moldova, the number of students in them, number of computers per one pupil used by them, the number of pupils per one teacher and some indicators calculated based on primary indicators of NBS: share of computers used by pupils in total computers in institutions and the average neighborhood area per educational institution (the district area divided by the number of educational institutions in the district) – the smaller it is the bigger is the accessibility.

According to NBS data, the number of educational institutions in total in Moldova decreased from 1760 in the year 2000/01 to 1329 in 2022/23, including the number of the general schools (from 1573 to 1195), secondary vocational schools (from 80 to 43), higher educational institutions (from 60 to 47), postsecondary vocational schools (from 47 to 21).

The number of pedagogical staff in educational institutions in total in Moldova decreased from 51937 in the year 2000/01 to 33815 in 2022/23, including in the general schools (from 42380 to 26272), in secondary vocational schools (from 2330 to 1372), in higher educational institutions (from 5286 to 3772), while it increased in postsecondary vocational schools (from 1941 to 2399).

The number of students in educational institutions in total in Moldova decreased from 753046 in the year 2000/01 to 437231 in 2022/23, including in general schools (from 631263 to 334542), secondary vocational schools (from 22804 to 14357), higher educational institutions (from 79082 to 56758), but increased in postsecondary vocational schools (from 19897 to 31574).

Provision of computers in institutions of primary and general secondary education has improved. The number of pupils per one computer on whole country of Moldova has decreased from 25 in 2008/09 to 15 in 2022/23. The smallest values of the indicator in 2022/23 could be seen in: Cantemir (7), Nisporeni, Leova (9 each), Edinet, Cahul, Cimișlia, Hincesti (10 each), but highest in: Chisinau municipality (30), T.A.U. Gagauzia (20). Another indicator of access of pupils to computers is the share of computers used by pupils in total computers in educational institutions. This share on whole country reduced from 89% to 49%, in Chisinau municipality it decreased from 84% to 38%. In other districts in decreased from 80-97% to 39-66%, smallest being in Basarabeasca (39%), biggest in Edinet (66%).

The number of pupils per one teacher in institutions of primary and general secondary educational institutions in Moldova per whole country has increased from 11 in 2013/14 to 13 in 2022/23, more in Chisinau municipality (from 11 to 15), less in Northern Region (from 10 to 11), Center Region (from 12 to 13), South Region (from 11 to 12), T.A.U. Gagauzia (from 10 to 12), without any big differences between districts.

In general schools in Moldova the average neighborhood area per institution has increased from 22.28 km^2/unit in 2008/09 to 27.79 km^2/unit. In Chisinau Municipality it increased from 3.40 km^2/unit to 3.69 km^2/unit. In North Region it increased from 20.31 km^2/unit to 25.35 km^2/unit, in Balti Municipality from 2.60 km^2/unit to 3.12 km^2/unit. From North Region districts a bigger increase it is seen in Falesti (from 21.03 km^2/unit to 31.55 km^2/unit). In Center Region it increased from 19.92 km^2/unit to 25.88 km^2/unit. From Center Region districts a bigger

increase it is seen in Calarasi (from 17.94 km^2/unit to 28.98 km^2/unit) and Soldanesti (from 19.30 km^2/unit to 29.92 km^2/unit). In South Region it increased from 27.26 km^2/unit to 34.77 km^2/unit. From South Region districts a bigger increase it is seen in Cimislia (from 25.53 km^2/unit to 45.68 km^2/unit) and Taraclia (from 30.62 km^2/unit to 39.63 km^2/unit). In T.A.U. Gagauzia it increased from 34.23 km^2/unit to 41.08 km^2/unit.

The average number of students per institution per whole country reduced from 286 students in 2008/09 to 275 students in 2022/23, while in Municipality Chisinau it increased from 511 to 652 students, in North Region it decreased from 238 to 207 students (an exception being Municipality Balti – an increase from 513 to 630), in which it decreased most in Glodeni (from 288 to 196) and Briceni (from 266 to 193). In Center Region it decreased from 255 to 225 students (exceptions being Orhei – an increase from 222 to 227 and Straseni – an increase from 299 to 325), in which it decreased most in: Anenii Noi (from 283 to 236), Criuleni (from 283 to 228), Dubasari (from 325 to 238), Hincesti (from 297 to 206), Nisporeni (from 238 to 163), Telenesti (from 241 to 176). In South Region it decreased from 267 to 203 students, in which it increased most in: Basarabeasca (from 330 to 212), Cahul (from 274 to 213), Cantemir (from 219 to 164), Causeni (from 323 to 245) and Stefan Voda (from 331 to 212). In T.A.U. Gagauzia it decreased from 407 to 352 students.

In the secondary vocational institutions in Moldova the average neighborhood area per institution on whole per country has increased from 451.28 km^2/unit in 2008/09 to 787.12 km^2/unit in 2022/23. In Chisinau Municipality this indicator increased from 30.09 km^2/unit to 51.97 km^2/unit. In North Region it doubled (from 357.66 km^2/unit to 715.33 km^2/unit), it increased most in Floresti (from 277.05 km^2/unit to 1108.19 km^2/unit) and Soroca (from 347.66 km^2/unit to 1042.99 km^2/unit). In Center Region it doubled as well (from 708.99 km^2/unit to 1329.35 km^2/unit), it increased most in Hincesti (from 491.71 km^2/unit to 1475.13 km^2/unit). In South Region it increased, as well (from 719.75 km^2/unit to 1028.21 km^2/unit), it increased most in Causeni (from 592.58 km^2/unit to 1185.16 km^2/unit) and Stefan Voda (from 499.19 km^2/unit to 998.38 km^2/unit).

In the postsecondary vocational institutions in Moldova the average neighborhood area per institution did not change between 2008/09 and 2022/23, because the number of institutions didn't change, with just a few exceptions when the number of institutions increased or decreased by 1 unit. The average number of students per postsecondary vocational institution from 2008/09 to 2022/23 decreased from 695 to 672 persons. It decreased more in the Chisianu Municipality (from 944 to 907 persons). In North Region it decreased from 462 to 458, while in some northern districts this indicator reduced significantly: Briceni (from 412 to 236 persons), Donduseni (from 437 to 260 persons), in some others it increased: Edinet (from 217 to 419 persons), Soroca (from 372 to 400 persons). In Center Region it decreased from 517 to 413 and only in Ungheni it increased from 376 to 400. In South Region it increased from 745 to 816. In T.A.U. Gagauzia it increased from 414 to 570.

The average number of students per institution on whole country in Moldova increased from 324 students/unit in 2008/09 to 334 students/unit in

2022/23. In Municipality Chisinau it increased from 423 to 491 students. In North Region it decreased from 303 to 293 students (more in Balti Municipality – from 604 to 437 students), while in some districts of this region it increased significantly: Briceni (from 88 to 167 students) and Singerei (from 184 to 268 students). In Center Region it decreased from 277 to 243 students, more in Calarasi (from 370 to 86 students), while it increased significantly in Hincesti (from 191 to 285 students). In South Region it decreased from 292 to 272 students, more in Cahul (from 493 to 388 students) and Cimislia (from 280 to 56 students), while it increased significantly in Causeni (from 229 to 388 students). In T.A.U. Gagauzia it increased from 219 to 336.

For the evaluation of the accessibility to educational institutions in Moldova from a subjective standpoint a survey was used and a number of questions were given to respondents about such aspects like: satisfaction with the educational services received (*Figure 1*), with the teaching staff (*Figure 2*), approximate time usually needed to get the respondent to the educational institution where he/she studies or the last one he/she attended (*Figure 3*); rate (from -5 the lowest to 5 – the highest) of the quality of the hygienic and sanitary conditions within the educational institution (*Figure 4*), teaching (*Figure 5*), the technical and material base of the institution (*Figure 6*), the professional-pedagogical qualities of the staff (*Figure 7*), the quality of the food products in the institution (if it offers them, e.g. in the canteen) (*Figure 8*), the living conditions in the dormitory (in the case of accommodation in the institution's dormitory) (*Figure 9*).

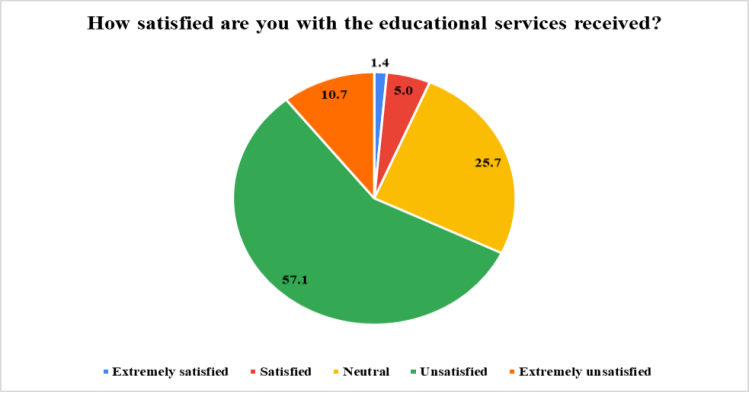

Figure 1. **How satisfied are you with the educational services received?**
Source: Elaborated by authors based on survey's data

Two thirds of respondents were unsatisfied by educational services received and 1 in 10 – extremely unsatisfied, while only 1 in 16 was satisfied or extremely satisfied. It's not a polarization, but a clear emphasis on unsatisfaction. It's a general question, encompassing many aspects of educational institutions, it doesn't say much. It can be just a general feeling, considering the bleak perspectives of education in the country.

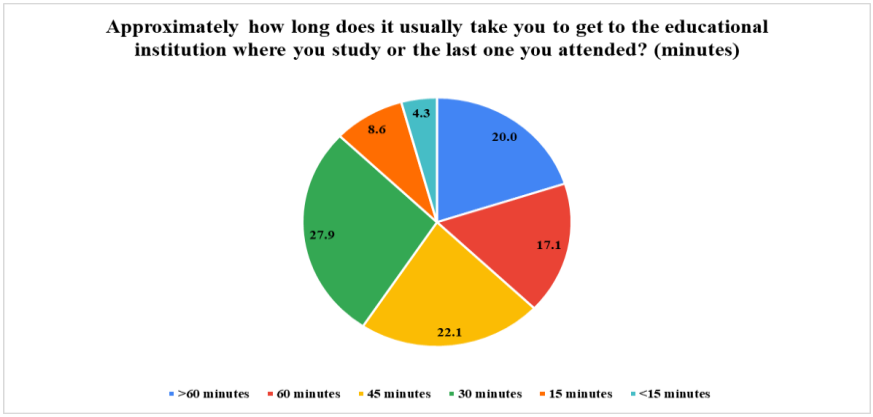

Figure 2. **Approximately how long does it usually take you to get to the educational institution where you study or the last one you attended? (minutes)**
Source: Elaborated by authors based on survey's data

The respondents had a very varied approximate time they usually need to get to the educational institution where they study or the last one where they attended. Only a small part of them were very close to the educational institutions (15 minutes or less) – 12.9%. A third of respondents reached the institutions an hour or more. Half of respondents could do it in 30-45 minutes.

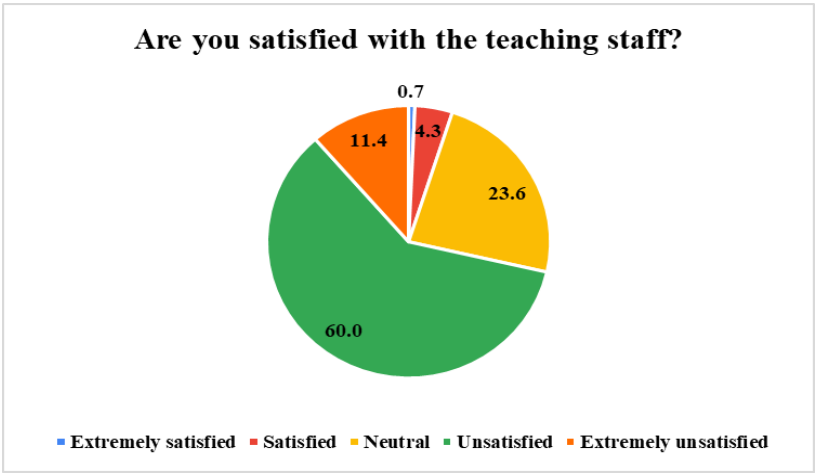

Figure 3. **Are you satisfied with the teaching staff?**
Source: Elaborated by authors based on survey's data

Near three quarters of respondents were unsatisfied or extremely unsatisfied and just 1 in 20 respondents was satisfied or extremely satisfied. As it is seen, respondents were less satisfied in general with teaching staff in bigger numbers than with educational services in general.

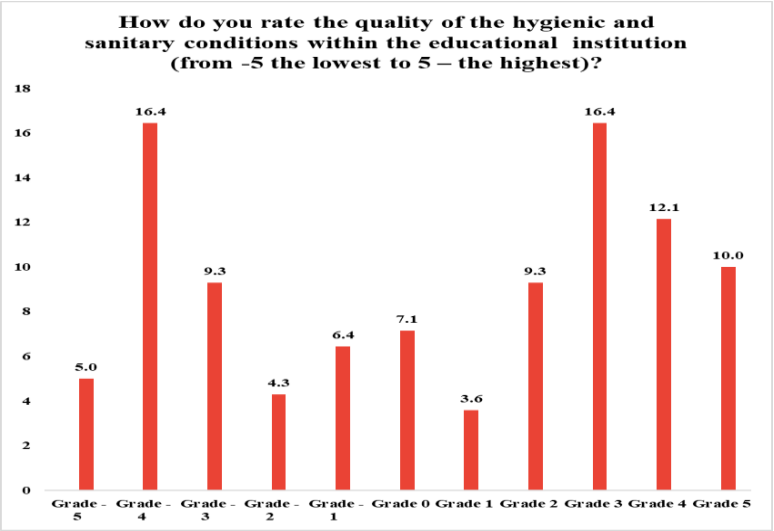

Figure 4. **How do you rate the quality of the hygienic and sanitary conditions within the educational institution (from -5 the lowest to 5 – the highest)?**

Source: Elaborated by authors based on survey's data

Being asked if they did additional payments in addition to the contractual ones during the years of study, only 29.3% recognized they paid. From those who said they made additional payments 12.9% paid for additional hours, 50.0% - for gifts and little attentions for teachers, 37.1% - for fees in intrainstitutional entities (class/group fund, institution fund etc.).

From all of the respondents 41.4% rated negatively the quality of hygienic and sanitary conditions within the educational institutions and 51.4% rated it positively. The distribution of rating shows the positive ratings were more evenly distributed showing more diversity, while the negative ratings were more polarized.

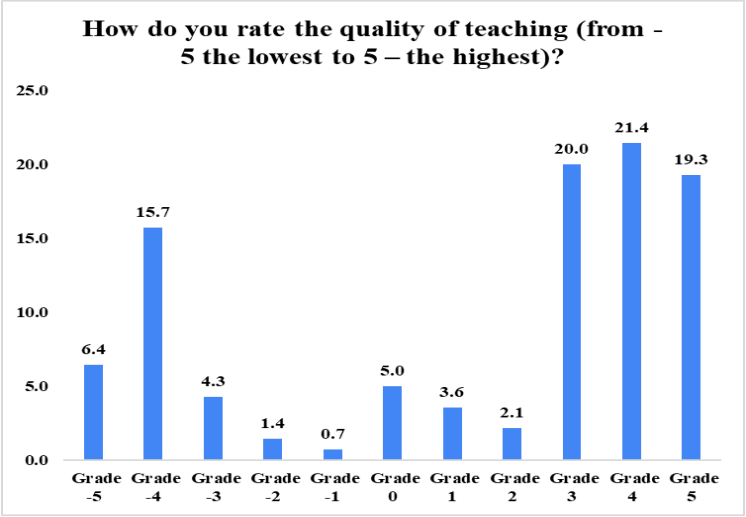

Figure 5. **How do you rate the quality of teaching (from -5 the lowest to 5 – the highest)?**

Source: Elaborated by authors based on survey's data

Much more respondents rated the quality of teaching positively (66.4%) than negatively (28.5%). The positive ratings were from medium to high. It's a different image than we had previously. Faced by concrete rating they were more exact in evaluation, forced to be more objective than being asked about satisfaction in general.

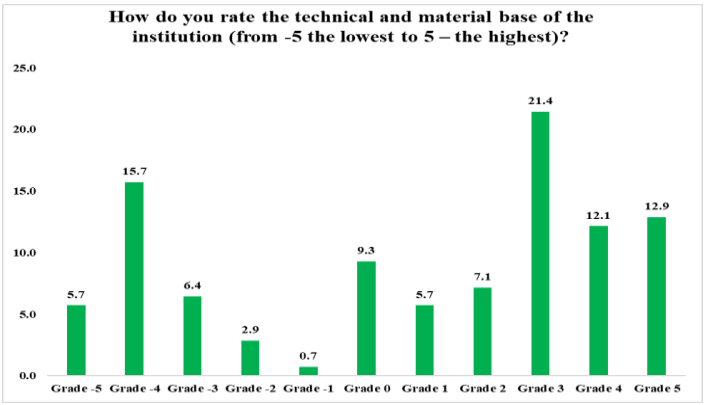

Figure 6. **How do you rate the technical and material base of the institution (from -5 the lowest to 5 – the highest)?**

Source: Elaborated by authors based on survey's data

The technical and material base of the institution was rated positively (59.2%) in more cases than negatively (31.4%). The positive rating was mostly medium, while the negative rating was mostly medium-to-high. Here should be mentioned that respondents highlighted the rich libraries.

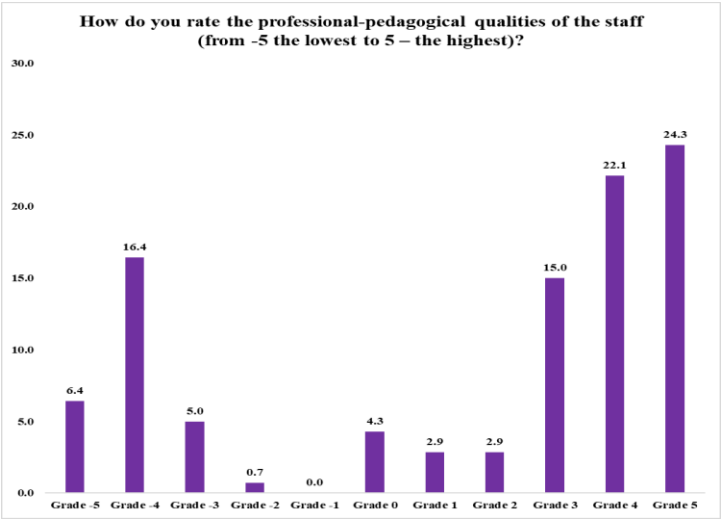

Figure 7. **How do you rate the professional-pedagogical qualities of the staff (from -5 the lowest to 5 – the highest)?**

Source: Elaborated by authors based on survey's data

When asked specifically about the professional-pedagogical qualities of the staff of the institution 67.2% of respondents rated them positively, with the mention that a higher number of respondents rated them higher, while only 28.5% rated the professional-pedagogical qualities negatively, with mostly medium-to-high rating.

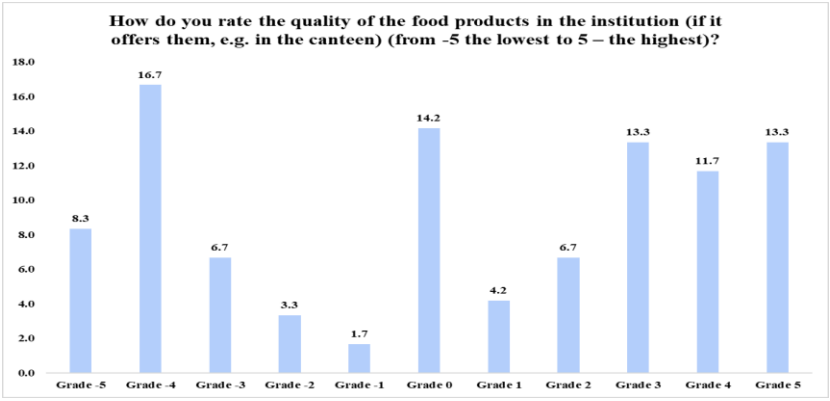

Figure 8. **How do you rate the quality of the food products in the institution (if it offers them, e.g. in the canteen) (from -5 the lowest to 5 – the highest)?**
Source: Elaborated by authors based on survey's data

Faced by the need to evaluate the professional-pedagogical qualities of the staff of educational institutions the respondents by reflex could have evaluated them more leniently, but based on comments they added the friendly community, professionalism, behaviour and the practice of the teachers were positive aspects, while other respondents highlighted the bad behaviour of teachers, bad quality of teaching.

Less than half of respondents (49.2%) rated positively the quality of the food products in the institution (if it offers them, e.g. in the canteen), equally medium and high, while 36.7% appreciated it negatively, medium-to-high. Here should be mentioned that an important part of respondents chooses to remain neutral towards it.

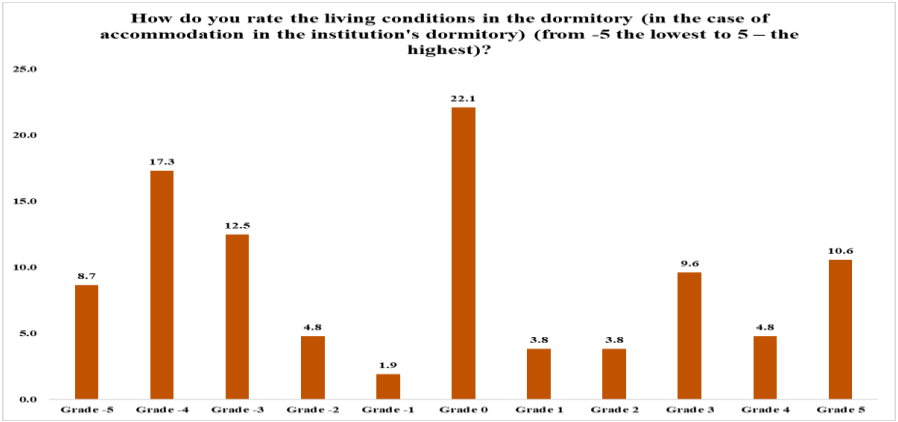

Figure 9. **How do you rate the living conditions in the dormitory (in the case of accommodation in the institution's dormitory) (from -5 the lowest to 5 – the highest)?**
Source: Elaborated by authors based on survey's data

Asked how they rate the living conditions in the dormitory (in the case of accommodation in the institution's dormitory), almost half of the respondents rated them negatively (medium-to-high and medium) and only a third (32.6%) – positively, the ratings being spread more evenly than in case of negative ones. Here a fourth of respondents (22.1%) were neutral in evaluating them.

Conclusions. The analysis of indicators of accessibility to education in Republic of Moldova has shown a general trend of reduction of number of institutions, pedagogical staff and number of students. The number of computers in educational institutions increased, and especially those that are not accessed by the students.

Food products in the institution and even more the dormitory conditions were appreciated less positively. The professional-pedagogical qualities of the staff of the educational institutions, and, in particular, the quality of teaching, were appreciated highly, but in general with the staff in general the respondents were unsatisfied, but the technical and material base of the institution and its quality of the hygienic and sanitary conditions – negatively or positively more or less evenly.

The continuous reduction of the number of students and consequently of the staff of institutions, especially in regional aspect, that determines the reduction of the number of educational institutions paints a bleak perspective on the accessibility od education and the future of education itself in the country, but the expanding online realm can offer opportunities that can compensate to a degree those developments, which can be an actual and also future domain of focus and investment.

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