

EDUCATIONALLY UNSUCCESSFUL STUDENTS: HUMAN CAPITAL AND BEHAVIORAL STRATEGIES

Anna Drozdova

Abstract

The scale of educational failure among students actualizes the need to study the behavioral strategies of educationally unsuccessful students. According to various estimates of researchers, the share of educationally unsuccessful students can be up to 30%. The criteria of educational (un)success of students are considered: academic performance (academic results); motivation to study. The purpose of the article is to characterize the behavioral strategies of educationally unsuccessful students. Based on the results of an online survey of university students in a large Russian region (N = 921, 2021), several behavioral strategies of educationally unsuccessful students are described: "imitation", "resource-intensive", "corrective" and "complementary/secondary". The share of students with low academic results is 11%, 72% of them have no desire to study. Obtained results underline the importance of motivation for learning as a factor of educational success and human capital increasing. Mistakes in choosing a profession are considered as one of the significant grounds for "imitation" and "corrective" strategies.

Key words: educational failure, students, behavioural strategy, human capital

JEL Code: I23, J24

Introduction

The problem of academic, educational success / failure has been considered by researchers around the world for a long period of time, but it does not lose its relevance in modern conditions. Researchers at South African universities define high dropout and underperformance rates as a complex, permanent, and extremely difficult problem (Bokana, Tewari, 2014). However, such difficulties are faced not only by developing countries, but also by developed countries. On average among industrialized countries, 32% of tertiary students did not graduate from a programme at this level of education (OECD, 2013). In addition, on average "12% of students who enter a bachelor's programme full time leave the tertiary system before the beginning of their second year of study, this share increases to 20% by the

end of the programme's theoretical duration and to 24% three years later" (OECD, 2019). In the Czech Republic, one-fourth of college students have experience with unsuccessful studies (24.8%) (Mazouch et al., 2018).

The problem of educational failure is no less urgent for Russia. According to a study of the dropout factors of engineering students in Russian universities, every fifth student leaves the university (19%) after the first three semesters of study (Shmeleva, Froumin, 2020). Low academic performance remains the most common reason for dropping out of universities in Russia. In addition, Russian higher education is characterized by "latent academic failure" caused by such institutional factors as the student saving policy aimed at maintaining the student contingent, in accordance with which teacher rates are calculated. Thus, the share of educationally unsuccessful students can significantly exceed the formal indicators of student dropout due to academic failure and, according to various estimates of researchers, can reach 30%. The above data determine the relevance of the study of factors influencing academic success / failure, and the share of educationally unsuccessful students in the total number of students actualizes the need to study their behavioral strategies. Thus, the purpose of this article is to characterize the behavioral strategies of educationally unsuccessful students.

1 Literature Review

Researchers most often conceptualize academic failure as low academic achievement in the courses being mastered (less than fifty percent mark), failure to master the educational program on time, dropout from the university without obtaining any degree. (Sibanda, Iwu & Benedict, 2015). It is obvious that educational failure has its negative consequences at the individual, organizational (university) and institutional levels, since it has a close relationship with human capital, the development of which determines the socio-economic potential of the country. On the one hand, human capital is one of the predictors of educational success, on the other hand, the upward or downward vector of the development of students' human capital in the process of studying at the university is a marker of success or failure, according to which we can talk about the effectiveness of education, the prospects for realizing the potential of young specialists in the labor market, their contribution to the economic development of the country.

The scale and socio-economic consequences of academic failure of students in various countries have led to special attention of researchers to the problem of identifying predictors

of academic success / failure of students in general, as well as by specialties, educational programs, courses. Among such factors, the authors highlight “socioeconomic status, past performance, attendance, self-efficacy, social support, self-regulatory strategies and certainty of study choice” (De Clercq, 2012). Scholars identify individual and contextual factors of academic success / failure. Bouillet and Gvozdanovic, in their study, confirm the hypothesis that students explain their academic failure both by individual characteristics and by unfavorable learning conditions (Bouillet, Gvozdanovic, 2008). Roman as the main causes of student failure identified: “internal (personal) factors and external factors (family situation, social pressure, economic pressure) but also factors as disciplines difficulty, teacher’s exigency, pedagogical and economic difficulties” (Roman, 2014). Sibanda, Iwu and Benedict divided the factors of academic failure into 8 groups “with regard to what they are related to: lecturer and personal; person-related; lecturer-related; resourcesrelated; personal and external; personal and socio-economic; related to curriculum; and environment related factors” (Sibanda, Iwu & Benedict, 2015). Person-related factors ranked first in terms of frequency of mentioning among all categories (63%). Bokana and Tewari come to the conclusion that educational unsuccess / failure is a complex, multifaceted phenomenon and becomes a consequence of the action of various types of factors, both personal and environmental (Bokana, Tewari, 2014).

An integrative approach for studying academic achievement was proposed by M. De Clercq et al. Authors “conceptualized achievement as the result of an interplay between background, cognitive, social, volitional, motivational, contextual and behavioural variables” (De Clercq, 2012). The study involved first-year students from two faculties, “the results showed that past school failure, parental education and self-efficacy beliefs predicted achievement in both programs” (De Clercq, 2012). Lecture attendance; regular study; effort; and tutorials have been identified as most influential in academic performance in the study of students at a university in South Africa (Sibanda, Iwu & Benedict, 2015). According to the results of a study of Russian engineering students, academic integration is also a significant factor in academic success, since the risk of dropping out from the university is significantly lower for students who attend most classes and often interact with teachers in and out of the classroom (Shmeleva, Froumin, 2020).

It is necessary to note studies that directly examine groups of educationally unsuccessful students. Mazouch and colleagues studied a specific group of unsuccessful students who re-enroll of unsuccessful students who re-enroll (they did not finish the tertiary study in the past, but after some time they returned to education). Students who definitely do

not study at their preferred college are 6.3 times more likely to have unsuccessfully completed tertiary education in the past than students who study definitely in their preferred university (Mazouch et al., 2018). Based on the results of a study of bachelors from a large German university who were expelled without a degree, Bluethmann, Lepa and Thiel identified 4 clusters of students clearly diverse problems and are accordingly labeled as “overtaxed” (25%), “disappointed” (18%), “wrong choice” (36%), and “strategic change” (21%) (Bluethmann, Lepa & Thiel, 2012).

It is important to identify and research groups of educationally unsuccessful students at risk of dropping out in order to implement preventive measures. In their study, Sarra, Fontanella, and Di Zio attempted to identify students at risk of academic failure. Students in the cluster with the highest dropout risk are more likely to report very low levels of motivation and satisfaction and higher difficulty in understanding and remembering topics (Sarra, Fontanella & Di Zio, 2018). However, the behavioral strategies of students with a sufficiently high risk of dropping out, behavioral strategies of educationally unsuccessful students seem to be insufficiently studied in the scientific literature.

2 Research Methodology

The central concept of our research is the educationally unsuccessful students. By educational failure, we mean “a qualitative characteristic of the educational activities of pupils and students, reflecting the degree of discrepancy between their personal achievements and public expectations from their activities in the field of education” (Zborovsky, 2020). We identified educationally unsuccessful students in our study according to the following parameters: 1) low academic results, low academic performance; 2) motivation to learn, desire to learn (can be both low and high).

A behavioral strategy was understood as a stable complex (system) of actions chosen (preferred) by the subject of activity to achieve a certain goal and solve specific tasks corresponding to it. The purpose of this article is to characterize the behavioral strategies of educationally unsuccessful students based on empirical data.

The article analyzes the data of a massive online survey of educational communities (high school students, students of secondary and higher education), implemented in January - February 2021. The general population included representatives of the student youth of the Sverdlovsk region: schoolchildren (students in grades 9-11), students of secondary vocational education and university students. The total sample size was 2489 people. For the survey of

university students, a quota sample was used (the error in quota characteristics did not exceed 2%). The sample was formed on the basis of open statistical data on the number of young people studying in one of the large Russian regions (Sverdlovsk region). A quota selection was used, it was carried out according to two independent criteria: 1) the direction of training (engineering and technical, natural science, humanitarian, socio-economic) and 2) the level of training (bachelor's, specialty, master's degree). Within the framework of this article, we consider only a subsample of higher education students (N = 953). For statistical analysis, we used the following approaches: frequency and cross-tabulation.

3 Results

3.1 Educationally unsuccessful students

Among the students surveyed, 11% of the respondents have low academic results, most often their grades correspond to “satisfactory” (40-60%) and they regularly have a risk of non-certification for the courses. At the same time, 64% of them, with varying degrees of confidence, consider themselves unsuccessful in their studies. Only 28% of students with low academic results have a desire to learn, learning gives them pleasure, and increases self-esteem. Moreover, every third student in the sample noted that in the last 1-2 years of study, his desire to study has decreased. Among the problems they encountered in the course of their studies, the respondents most often noted their own unwillingness to study at a university (36.2%), the discrepancy between the organization of the educational process and their expectations (25.7%). More than half of educationally unsuccessful students (58%) devote a significant part of their time to leisure, only every second respondent noted that they spend a significant portion of their time on study. Every second student of the study group is not satisfied with the quality of knowledge, skills and abilities acquired during training (53.3%), as well as the ability to apply the acquired knowledge in practice (50.5%). In accordance with the results obtained, it is difficult to talk about an increase in human capital in the process of studying at the university.

3.2 Behavioral strategies of educationally unsuccessful students

To characterize the behavioral strategies of educationally unsuccessful students, respondents with low academic results were divided into groups in accordance with their motivation for learning (presence / absence of desire to learn). Thus, two groups were formed: 1) with low

academic performance and lack of motivation to learn (72%); 2) with low academic performance, but with a desire to learn (28%). Consider the behavioral strategies of each of the designated groups below.

“Imitation” behavioral strategy is typical for students with low academic performance and lack of motivation to learn. The “imitation” strategy is characterized by a formal attitude towards education, an orientation towards getting a “paper” and minimization of learning efforts, a tendency to academic fraud, and is mainly replaced by a leisure behavioral strategy. Every third student in the group often faces the threat of non-certification. Every second student in this group agrees that useful knowledge is acquired in practice, and education is needed only for “paper” (Tab. 1). In comparison with the second group, twice as many students in this group claim that they are studying because they want to receive a diploma (68.4%). 64.5% of the respondents in this group devote a significant part of their time to leisure. Significantly more students in this group are not satisfied with the choice of their future profession (43.4% versus 6.9%), 18.4% of the respondents in this group accidentally got into the educational program they study (they followed friends).

Tab. 1: Characteristics of the “imitation” strategy for two groups of educationally unsuccessful students

	Do you agree that useful knowledge is acquired in practice, and education is needed only for "paper"?		Total
	No	Yes	
With low academic performance, but with a desire to learn	75,9%	24,1%	100,0%
With low academic performance and lack of motivation to study	48,7%	51,3%	100,0%
	“I am studying because I want to get a diploma”		Total
	Yes	No	
With low academic performance, but with a desire to learn	69,0%	31,0%	100,0%
With low academic performance and lack of motivation to study	31,6%	68,4%	100,0%
	“I devote a significant part of my time to leisure”		Total
	Yes	No	
With low academic performance, but with a desire to learn	58,6%	41,4%	100,0%
With low academic performance and lack of motivation to study	35,5%	64,5%	100,0%
	Are you satisfied with the choice of your future profession?		Total
	Rather satisfied	Rather not satisfied	
With low academic performance, but with a desire to learn	93,1%	6,9%	100,0%
With low academic performance and lack of motivation to study	56,6%	43,4%	100,0%

Source: authors' calculations.

This group of students is not characterized by an increase in human capital in the process of studying at the university, 57.9% of them are not satisfied with the quality of knowledge, skills and abilities acquired during training, and 55.3% are not satisfied with the ability to apply the acquired knowledge in practice, which is slightly higher than for the sample as a whole. In addition, 43.4% of students noted that their desire to study has decreased in the last 1-2 years of study. It is obvious that this group of students is experiencing difficulties with professional self-determination, and the need for more effective career guidance work at school is actualized.

“Resource-intensive” strategy is typical for students with low academic performance, but with a desire to learn. In this group, only 6.9% of respondents often face the threat of non-certification. “Resource-intensive” strategy is characterized by a significant investment of students' efforts to achieve not the highest academic results, focus on additional resources (self-education, additional education). Significantly more students in this group, in comparison with the first group, highly value the knowledge that can be obtained in the education system and try not to miss the opportunity to engage in scientific activity and self-education (44.8% versus 19.7%). 69% of students in this group are engaged in some kind of additional education, and 93% are engaged in self-education (Tab. 2). 72.4% of students in this group devote a significant share of their time to study.

Tab. 2: Characteristics of a “resource-intensive” strategy for two groups of educationally unsuccessful students

	Are you currently pursuing any kind of additional education?		Total
	No	Yes	
With low academic performance, but with a desire to learn	31,0%	69,0%	100,0%
With low academic performance and lack of motivation to study	67,1%	32,9%	100,0%
	Are you self-educating?		Total
	Yes	No	
With low academic performance, but with a desire to learn	6,9%	93,1%	100,0%
With low academic performance and lack of motivation to study	27,6%	72,4%	100,0%
	“I devote a significant part of my time to studying”		Total
	Yes	No	
With low academic performance, but with a desire to learn	27,6%	72,4%	100,0%
With low academic performance and lack of motivation to study	57,9%	42,1%	100,0%

Source: authors' calculations.

Among the students of this group, the share of those who are satisfied with the quality of knowledge, skills and abilities obtained during training (58.6%), as well as the ability to apply the knowledge gained in practice (62.1%), is significantly higher. Moreover, 41.4% of respondents noted that their desire to study has increased over the past 1-2 years. We can talk about an increase in human capital among students of this group. However, given the low academic results, the intensity of human capital growth cannot be considered high, despite the fact that students in this group concentrate on their studies, make additional efforts and invest resources. In working with this category of students, it is important to pay attention to the organization of independent work, as well as to ensure the individualization of the educational trajectory, taking into account the peculiarities of the perception of information and the intellectual abilities of students.

From our point of view, it is extremely important to designate another group of students, which includes students with high academic results (academic performance), but they have no desire to learn. According to formal criteria, we cannot consider students of this group as unsuccessful, since their academic results in general cannot be called low, however, the lack of motivation to learn is an alarming marker and a significant reason for an increased risk of declining academic performance and drop out in the future. The share of this group among all surveyed students was 40% (381 people). Students of this group are similar in many characteristics to the previously analyzed group of students with low academic results and lack of motivation to learn. 48.1% of students in this group are not satisfied with the quality of knowledge, skills and abilities acquired in the course of training, every second is not satisfied with the ability to apply the acquired knowledge in practice.

Students with rather high academic performance but lack of motivation to learn are characterized by “corrective” and “complementary / secondary” behavioral strategies. “Corrective” strategy involves the adjustment (change / correction) of the professional choice / choice of an educational program, caused by untimely professional self-determination, disappointment in the chosen specialty, and a mistake in professional choice. Approximately 30% of students in the group are not satisfied with the choice of their future profession. Considering the fact that 37% of the surveyed students in this group noted that their desire to study has decreased over the past 1-2 years, despite good academic achievements, we cannot consider this group educationally successful, and there is no intensive increase in human capital either. Students of this group are characterized by a high risk of expulsion due to the transfer to another specialty, to another university. From our point of view, changing the training program in such a situation is a necessary adjustment of the educational trajectory,

which is important for life and educational success, as well as building up human capital. The “complementary / secondary” strategy is characterized by a formal attitude to learning, at the same time the awareness of the importance of obtaining a diploma, caused by priority attention to competing behavioral strategies – sports, creative, social engagement, professional activity (work experience). 48% of students in this group believe that useful knowledge is acquired in practice, and education is needed only for a “diploma”. 61.4% of the respondents indicated that they are studying because they want to receive a diploma, despite their rather good academic achievements. 41.2% of students in this group work, and for 21.3% of respondents, work is a priority. Within the framework of this study, we did not set the goal of studying this category according to formal criteria, however, the identified characteristics of the group require further study within the framework of qualitative methods.

Conclusion

The characteristics of educationally unsuccessful students presented in the article allow us to conclude that the increase in human capital in the learning process is insufficiently effective. This is becoming a serious problem both for the students themselves and for universities and governments. The behavioral strategies of educationally unsuccessful students identified and described in the article are not an exhaustive list of possible actions of the studied groups, but they represent an attempt to structure the educationally unsuccessful student community in order to minimize the risks of drop out and increase their human capital. Of course, the identified strategies need to be further explored using qualitative methods. Important current findings include: 1. Academic achievement is not an adequate identifier for student failure. Motivation is an important characteristic of the success of education and a factor of human capital growth. 2. Effective career guidance is critical to ensure early professional self-determination and minimize professional choice mistakes.

Acknowledgment

The reported study was funded by RFBR, project no. 19-29-07016.

References

Bluethmann, I., Lepa, S., & Thiel, F. (2012). Overtaxed, disappointed, wrong choice, or strategic decision? A typology of students failing to complete their bachelor courses of studies. *ZEITSCHRIFT FUR PADAGOGIK*, 58(1), 89-108.

- Bokana, K., & Tewari, D. (2014). Determinants of Student Success at a South African University: An Econometric Analysis. *ANTHROPOLOGIST*, 17(1), 259-277.
- Bouillet, D., & Gvozdanovic, A. (2008). (Un)successful Studies: Personal Choice or Consequence of the University Education System in Croatia. *SOCIOLOGIJA I PROSTOR*, 46(181-82), 241-264.
- De Clercq, M., Galand, B., Dupont, S., & Frenay, M. (2012). Achievement among first-year university students: An integrated and contextualised approach. *European Journal of Psychology of Education*, 28(3), 641-662. doi:10.1007/s10212-012-0133-6
- Mazouch, P., Hulík, V., Fischer, J., & Ptáčková, V. (2018). Students Who Have Unsuccessfully Studied in The Past - Analysis of Causes. *Journal on Efficiency and Responsibility in Education and Science*, 11(3), 65-71. doi:10.7160/eriesj.2018.110303
- OECD (2013), Education at a Glance 2013: OECD Indicators, OECD Publishing. <http://dx.doi.org/10.1787/eag-2013-en>
- OECD (2019), Education at a Glance 2019: OECD Indicators, OECD Publishing, Paris, <https://doi.org/10.1787/f8d7880d-en>.
- Roman, M. D. (2014). Students' failure in academic environment. *Procedia - Social and Behavioral Sciences*, 114, 170-177. doi:10.1016/j.sbspro.2013.12.679
- Sarra, A., Fontanella, L., & Di Zio, S. (2018). Identifying students at risk of academic failure within the educational data mining framework. *Social Indicators Research*, 146(1-2), 41-60. doi:10.1007/s11205-018-1901-8
- Shmeleva, E., & Froumin, I. (2020). Factors of attrition among computer science and engineering undergraduates in Russia. *Voprosy Obrazovaniya / Educational Studies Moscow*, (3), 110-136. doi:10.17323/1814-9545-2020-3-110-136
- Sibanda, L., Iwu, C. G., & Benedict, O. H. (2015). Academic success factors: Implications for teaching, learning and academic administration. *International Journal of Educational Sciences*, 10(2), 269-279. doi:10.1080/09751122.2015.11917658
- Zborovsky, G. (2020). Educational failure of students as a problem of Russian universities. *INTED2020 Proceedings*, 1858-1865. doi:10.21125/inted.2020.0586

Contact

Anna Drozdova

Ural Federal University

620002, Russia, Ekaterinburg, Mira st., 19

a.a.kuzminchuk@urfu.ru