

NONLINEAR EDUCATIONAL PRACTICES OF RUSSIAN STUDENTS AS A FACTOR IN ENRICHING THEIR HUMAN CAPITAL

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Abstract

Many educational practices in modern Russian universities are traditional and ineffective. They cannot form the required quality human capital. The purpose of the research is to study nonlinear educational practices as a factor in students' accumulation of human capital. An empirical study was carried out in 2019-2021 using a mass survey of university students (n = 953, quota sample), focus group (n = 5), expert interviews with teachers from universities (n = 30) in the Sverdlovsk region. Differences of linear and nonlinear educational practices: in the characteristics of objectivity-subjectivity, priorities in education, methods and resources, achieving educational results. Described types of nonlinear educational practices: individual and group, depending on the subject; designed for oneself or others, depending on the object; by the vector of implementation in the framework of educational and scientific or other strategies; compliance with formal norms. Favourable conditions and sociocultural factors: the possibility of manifestation of student initiatives; independence; activity beyond formal education; support the values of knowledge, science, education, connection with the broader social context and prospects of students in developing cognitive, behavioural and social resources.

Key words: nonlinear educational practices, students, universities, human capital.

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Introduction

Educational practices are a factor in the formation of students' actual competencies. The effective educational practice transforms these social and professional competencies into the human capital of learners, which requires a broad socio-economic context. Many educational practices in modern Russian universities are traditional and ineffective. These practices can be called linear since they are implemented at the initiative of universities and cannot fully satisfy students' interests. Therefore they cannot form human capital of the required quality. A

systemic crisis has matured in Russian higher education, requiring a change in the fundamental approaches to its management (Zborovsky, 2018). It manifests itself primarily in the growth of student educational failure and leads to a decrease in the quality of human capital in higher education (Zborovsky & Ambarova, 2019). In this regard, the study of new nonlinear educational practices is relevant.

Nonlinear approaches to education are discussed in connection with the search for conditions conducive to the unlimited success of students in their ability to increase human capital. Pedagogical practices are studied in a modern aspect to increase the internal motivation of students (Moy et al, 2016), the effectiveness of teaching students, expanding their choice (Renshaw et al, 2010), developing the individual qualities of students, the ability to make decisions, and critical thinking (Tan et al, 2012).

The theoretical framework of our study of nonlinear educational practices is based on the theory of human capital and the activity approach. In the modern sense, human capital, including education, is associated with a person's success and can be determined by various factors and investments (Lee, 2005). In particular, in higher education, an essential factor is educational communities, teachers, students. It can also be self-investment of students associated with the search for adequate educational resources that contribute to the growth of their human capital (Penev et al, 2009).

The human capital of students in our study is understood as the accumulated resources that contribute to their educational success based on their activities, interaction through the development of the benefits created by education (Zborovsky & Ambarova, 2021). The capital structure includes objective and subjective cognitive results, objective educational achievements and satisfaction with them; motivation and ability to design future social and professional perspectives; value orientations, attitude to education and knowledge. In the study of the mechanism of human capital enrichment, we rely on the ideas of Bourdieu. We consider it as a transfer of cultural models of behaviour. Also, we used Bernstein's ideas about institutional habitus to understand and overcome students' inequalities in education (Fitz, 2007; Donnelly, 2018). To increase human capital, students perform traditional academic activities, achieve objective signs of academic success, and master the appropriate educational and symbolic resources.

Educational practices should be focused on the needs of student youth as a new generation that is emerging in the era of digital culture and the Internet. In this regard, the study of changing student educational practices is relevant. New, nonlinear educational practices appear in contrast to the outdated linear educational practices implemented at the

initiative of universities. Linear educational practices based on authoritarian principles cannot meet the educational needs of modern students.

The purpose of the study was to study nonlinear educational practices as a factor in the accumulation of human capital by students. To achieve the goal were solved the following tasks:

1. Comparison of linear and nonlinear educational practices in terms of their impact on the human capital of students;
2. Classification of nonlinear educational practices, depending on their ability to contribute to the accumulation of human capital by students;
3. Determination of conditions and factors contributing to the accumulation of human capital, cognitive, behavioural, social resources of students in nonlinear educational practices.

1 Method

The empirical research was carried out in 2019-2021 using sociological research's quantitative and qualitative methodology. A mass survey of university students in Yekaterinburg and the Sverdlovsk region was carried out (n = 953, quota sample). Focus groups were conducted with undergraduate and graduate students (n = 5); expert interviews with teachers (n = 30) of higher educational institutions of the Sverdlovsk region.

2 Main results

2.1 Influence of linear and nonlinear educational practices on the students' human capital

The analysis of nonlinear educational practices on human capital development was carried out based on comparison with linear educational practices. The empirical identification of these two types of practices was based on the differences in the severity of students' educational needs. Educational needs can be defined as an active-activity attitude of a social subject to the sphere of knowledge, an essential characteristic of its development, self-determination and self-realization.

The educational practice carried out by students is understood by us as a regularly repeated daily activity related to the development of knowledge, skills, skills and competencies, implemented based on typified social and individual educational resources, leading to quantitative and qualitative changes in student characteristics. The result is the

achievement of 1) formal, visible, social, and 2) interiorization of informal, informal and meaningful educational results. Educational practices are viewed as linear and nonlinear, depending on the prevalence of 1 or 2 components.

The main difference between the expressed educational resources is an increase in the educational resources of students and a corresponding desire to expand educational resources. Linear educational practices are implemented by students who are content with a formal framework.

According to our research, students who implement linear and nonlinear educational practices make up approximately the same number (42.1% and 43.3% of this group of students). The rest of the group implements practices that are not directly related to education: "The knowledge that I receive does not matter for my future life and work; it is enough to get an official document on education." The latter group is not analyzed in our study.

Students, depending on their needs, show the quality of subjectivity-objectivity, set priorities, and use various educational processes. As a consequence, they achieve different educational outcomes. The table below shows the main differences between linear and nonlinear educational practices.

Tab. 1: Differences between linear and nonlinear educational practices

The basis for comparison	Linear educational practices	Nonlinear educational practices
Characteristics of subjectivity-objectivity of position in education	Objectivity - passive position	Subjectivity - active position
Learning Priorities	Necessity	Self-Realization
Methods and resources of educational activities	Within the framework of formal practices	Combination of formal, informal and informal practices
Educational outcome	Uncertain	Human capital enrichment

Source: created by the author

Characteristics of subjectivity-objectivity

Linear educational practices are characterized by the passive position of students in teaching or by the characteristic of objectivity. Some students are not very active in teaching,

who believe that they "have enough of the knowledge I get during lectures, seminars and practice." They believe that the knowledge that they receive during traditional forms of education is enough for them.

Nonlinear educational practices are characterized by pronounced student activity, that is, subjectivity. "I highly value knowledge; I try not to miss the opportunity to be engaged, including in science and self-education". Such students highly value the knowledge they acquire and try to find new learning opportunities.

Learning priorities

Students who implement linear educational practices learn as necessary, although there is no particular desire (56.9% of the respondents). Only half of these students strive to acquire knowledge and improve education (49.1%). That is, many of this group learn formally and do not strive for meaningful results.

The majority of students who implement nonlinear educational practices strive to achieve meaningful results, gain knowledge, and improve education (69.7%). They want to learn because it gives them pleasure and increases their self-esteem (76.8%). An important priority that guides the activity of these students is the satisfaction of the need for self-realization.

Activity methods and resources

Less than half of the students who implement linear educational practices consider additional training useful for themselves (46.4% of this group of students). They are often limited in preparation for exams, test materials of lectures, seminars. Only half of this group of students are motivated in connection with the need to improve their level of knowledge (47.9%).

More than half of the students who implement nonlinear educational practices consider additional training useful for themselves (65.6%). Almost all of them are engaged in self-education (94.9%). The need to improve their level of knowledge motivates these students (66.6%).

Educational results

Half of the students pursuing linear educational practices study to obtain a diploma of education (49.9%). Many of them believe that education has now lost its importance and its presence does not guarantee success in life (43.1%),

Students who implement nonlinear educational practices study because they want to get the knowledge they need for further study and work (80.1%), strive to learn something

new (63.9%), want to be educated, cultured people (52.8%), strive to develop as a creative person (39.5%).

2.2 Classification of nonlinear educational practices

We have identified the following nonlinear educational practices based on their ability to contribute to students' human capital accumulation.

According to the subject, the nonlinear educational students' practices can be divided into *individual and group* ones.

Individual students' practices implement individual educational practices through:

- self-education;
- independent work;
- Search for additional information;
- participation in competitions, Olympiads.

The trajectory and outcome of learning are determined by the individual goals and resources of the student.

Group students' practices implement group educational practices through:

- scientific project of a group of students;
- scientific student club;
- social or business project.

In *group educational practices*, the process and the result are related to the goals and resources of all participants.

According to the object, practices can be divided into those constructed for *oneself and others*.

Educational practices "for yourself":

- satisfy the needs for the development of the student's educational resources;
- contribute to the achievement of individual goals.

Individual practices can be associated with improving future professional and social opportunities. They can be achieved through the student's participation in the competition of scientific works, scientific conferences.

Educational practices "for others":

- associated with the development of the student's subjectivity;
- changing the social vector of education.

In this regard, the student can become the initiator of the project, attract his classmates to participate in it, and receive the support of interested persons. As a result, the educational

project is transformed into significant a scientific or one for actual production/business project.

In terms of the vector, educational practices can be considered as being carried out within the framework of various educational - research related to *additional education* and *other - strategies*.

The focus on education is realized through:

- development of competencies;
- complementing the missing knowledge;
- implementation of individual plans;
- meeting the education needs.

The students attract educational resources, organizes their research and educational activities. *The focus on other*, not related to education, goals is realized through:

- communication with classmates;
- self-realization as a leader
- participation in a social (volunteering, leisure, etc.) project.

The students can participate in various activities, competitions to meet their social needs. The educational need of a student is not always the leading one. There is a redistribution of emphasis on the vector of educational practices; the social activity becomes dominant.

By nature (content), nonlinear educational students' practices either correspond to the norms (requirements) of standards, educational programs or turn out to be an alternative to them. Therefore, nonlinear educational practices can be implemented by students in various forms:

- self-education aimed at deepening and supplementing the knowledge gained in classroom lessons.
- additional education, carried out simultaneously with the main one.
- autonomously implemented educational practices lead to achieving their own goals, not related to formal education. It can be learning how to grow your own business.

2.3 Conditions and factors contributing to the accumulation of human capital

The enrichment of human capital occurs under the influence of sociocultural factors in specific educational conditions. We can fix the influence of these factors and conditions on the development of human capital through a complementary impact on the qualitative characteristics of educational communities. It appears in the priorities of students' educational

activities related to their development, the expansion of cognitive, behavioural and social resources.

Cognitive resources are manifested in students implementing nonlinear educational practices in their current academic success. It manifests itself in students' assessment of objective achievements and self-assessment of their success. Students' success in implementing nonlinear educational practices is manifested in the assessments of their objective achievements associated with academic performance. Many of them study for "excellent" (14.0%), "good", and "excellent" (65.1%). The overwhelming majority of students who implement nonlinear educational practices (88.9%) consider themselves successful. They are satisfied with the volume and quality of knowledge, skills developed (76.0%). Students interested in an active search for educational resources positively perceive the addition of traditional educational interaction with new opportunities and new technologies. "Currently, we have all possible resources for distance learning; we can communicate via video link or, as now, in parallel, together with the group, to carry out tasks. This kind of interaction is interesting and makes it possible to learn the topic unusually.

Behavioural resources are manifested in the motivation of students, an increasing interest in learning, the search for additional educational opportunities, activity and initiative. The overwhelming majority of students who implement nonlinear educational practices have not deteriorated recently and have improved their attitude to learning (80.2%). Most of these students noted that they want to study; it gives them pleasure, increases their self-esteem (76.8%). More than half are engaged in additional types of education (49.0%), and almost all practice self-education (94.9%). According to students who implement nonlinear educational practices, "the best form of education is the one that interested students come up with themselves. This way, they are more involved in the process. We need to give students some leverage and opportunities to create the classes themselves."

Social resources are manifested in the value of knowledge, education, value with prospects, success, striving for self-realization. "My education allows me to realize myself, to achieve the goal that I am pursuing. These can be good grades and subsequent employment for the desired position or organization I wanted to join. " Students who implement nonlinear educational practices strive for self-realization in their future profession. "My future professional activity should be such that the work maximizes my abilities and talents." Education gives them confidence in the future (36.3%). They believe that it is easier to find a job with an education (31.0%). They believe that life is more interesting for an

educated person (35.4%). A noticeable part of this group of students pay for their education on their own (41.9%). Many of them deliberately invest their funds in increasing their capital.

Conditions and factors contributing to the accumulation of human capital support the development of nonlinear students' educational practices:

- actualize the needs of students for self-realization, self-development;
- help students find a connection between the value of education and the prospects for their future professional activities, mobility;
- expand the internal and external boundaries of educational activity and communication, contributing to self-improvement and self-realization of students.

Conclusion

Nonlinear educational practices lead to a more significant increase in human capital than linear ones. They are constructed by the student with pronounced priorities in learning related to meeting the needs for self-realization. Such students are not limited to formal educational frameworks; they participate in various forms of additional education the study additionally, independently. As a result, such students successfully acquire the necessary educational resources for further study and work.

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