

Learning motivation of first-year students of a technical university

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Abstract. The concepts “motive” and “motivation” and their role in the learning process of the technical university are analyzed. The following types of motives were distinguished: internal learning motivation related to learning activities and their content and external learning motivation not related to learning activities and their content but determined by external factors and circumstances. Learning motivation is associated with various changes that occur in students during the learning process. To identify the motivation in first-year students, they were tested. Driving motives were identified. The results showed that students prefer real learning motives (to use acquired knowledge in life, to continue successful training in subsequent courses, to get good marks, to acquire deep knowledge and intellectual satisfaction). The authors examined motivating methods and techniques. Motivation is a tool used to improve the learning process.

1. Introduction

Choosing a profession is a complex motivational process. Professional activities are crucial for self-realization. A man loving his work creates the financial basis of well-being, feels useful for society.

An analysis of higher education institutions shows it is difficult for school graduates to choose a profession. This is due to their inability to design their life and professional path, personal qualities of students. The problem of motivation formation is an integral part of personality development.

Today, any young man strives to get a higher education, because this is one of the ways to build a successful career.

Correct identification of professional motives, interests and inclinations is an important prognostic factor in future satisfaction with a profession.

2. Materials and methods

In order to study peculiarities of the motivational sphere of first-year students, we used the following diagnostic tools: testing to diagnose learning motives, the level of development of professional motives.

The study was conducted in 2016 - 2019 in Nizhnevartovsk branch of Tyumen Industrial University. The study involved 40 first-year oil and gas and transport engineering students.

Learning motives were established using a test developed by the psychological service of Tyumen Industrial University. The nature of the learning motivation was identified taking into account “consequences of external and internal motives” [1].

Table 1 shows motives used in the test: internal learning motivation related to learning activities and their content and external learning motivation not related to learning activities and their content but determined by external factors and circumstances (see Table 1).

Table 1. Types of Motives

Internal motivation	Characteristics of motives	External motivation	Characteristics of motives
Dominant motives for entering a university	Interest in a profession; desire to obtain an academic degree, become a highly qualified specialist	Dominant motives for entering a university	Free education; parents' choice; unwillingness to join the army; get a diploma

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Actual learning motives	Get excellent marks; acquire strong and deep knowledge and use it	Actual learning motives	To keep up with fellow students; to gain respect of teachers; to become an example for fellow students, to avoid condemnation and punishment for bad marks
Relevant professional motives	To achieve professional success	Irrelevant professional motives	Desire to get a well-paid job and a well-paid managing position

3. Literature review

Motivation plays a crucial role in the modern educational process. The motives of university students are one of the most difficult pedagogical problems of modern education.

B.G. Ananyev, L.S. Vygotsky, E.P. Ilyin, A.N. Leontiev, M.G. Yaroshevsky, V.V. Davydov, L.I. Bozhovich, A.K. Markov and others studied the issues of motivation, its role, types of motives, content and their development. Issues of learning motives studies for schoolchildren. The motivation of university students was understudied. The motivation of university students is relevant as young people aged 17-22 are the most apathetic part of modern society. Most of the students do not perform regular purposeful learning activities due to problems of learning a

large volume of materials, gadgets, inability to express their thoughts and use their time for learning. Teachers need to constantly motivate students.

Motivational processes can and should be controlled: by creating conditions for the development of internal motives, stimulating students. The formation of learning motives involves creating conditions for learning motives. Students are encouraged to learn not by a separate motive, but by their whole system.

The article aims to study learning motivation of first-year students. The research object is motivation.

The motivation consists of two motives: learning and achieving success [2, 3]. It includes internal and external motives: professional, cognitive, spiritual, social, material, communicative, creative, etc. The authors' views on components of the motivation is presented in Table 2

Table 2 . The concept of "motive "

Definition	Author
Needs, drives, motivations	X. Heckhausen [4]
Desires, duty, habits, thoughts	P.A. Rudik [5]
Need	L.I. Bozovic [6]
Thoughts and moral-political attitudes	G.A. Kovalev [7]
Conscious and unconscious motives, experience, desires	A.N. Leontiev [8]
Targets and Needs Hierarchy	A. Maslow [9]
Motives which depend the focused nature of actions	V.S. Merlin [10]
Mental processes, states and personality traits	K.K. Platonov [11]
Purposeful motivation for the implementation of values, initiatives	W. Henning [12]
A complex integral (systemic) psychological formation that encourages conscious actions and serves as the basis for them	E.P. Ilyin [13]
A complex system of needs, ideals, interests, aspirations	A.K. Markov [14]
Congenital (organismic) needs for competence and self-determination	EL Deci, RM Ryan [15.16]
Integral psychological system	J. Lingart [17]
Abilities are needs	C. Goldstein [18]

In China, university education began in 1978 and has become a priority. 95% of Chinese people learn always and everywhere. Compared to European students, they have no bad habits, don't drink or smoke, and live in hostels. One of the main motives of Chinese students is to work for the good of their country discover their own resources, not caring for their own benefit. Chinese universities educate young professionals, patriots who are open to world experience.

In China, in order to increase the motivation of students, there are ideological education courses on the theory of Marxism and Leninism, special academic courses for freshmen, student communities on the basis of general interests and needs of students in personal development. Student communities are an important part of the education system. They are self-organizing formations based on real needs of students [19].

Motivation is energy that encourages cognitive activities, active development of knowledge. Motives are a mobile system that can be controlled. If the future bachelor did not choose his profession on his own, the teacher can help him in his professional adaptation.

A thorough study of motives for choosing a future profession makes it possible to correct the learning motives and influence the professional development of students.

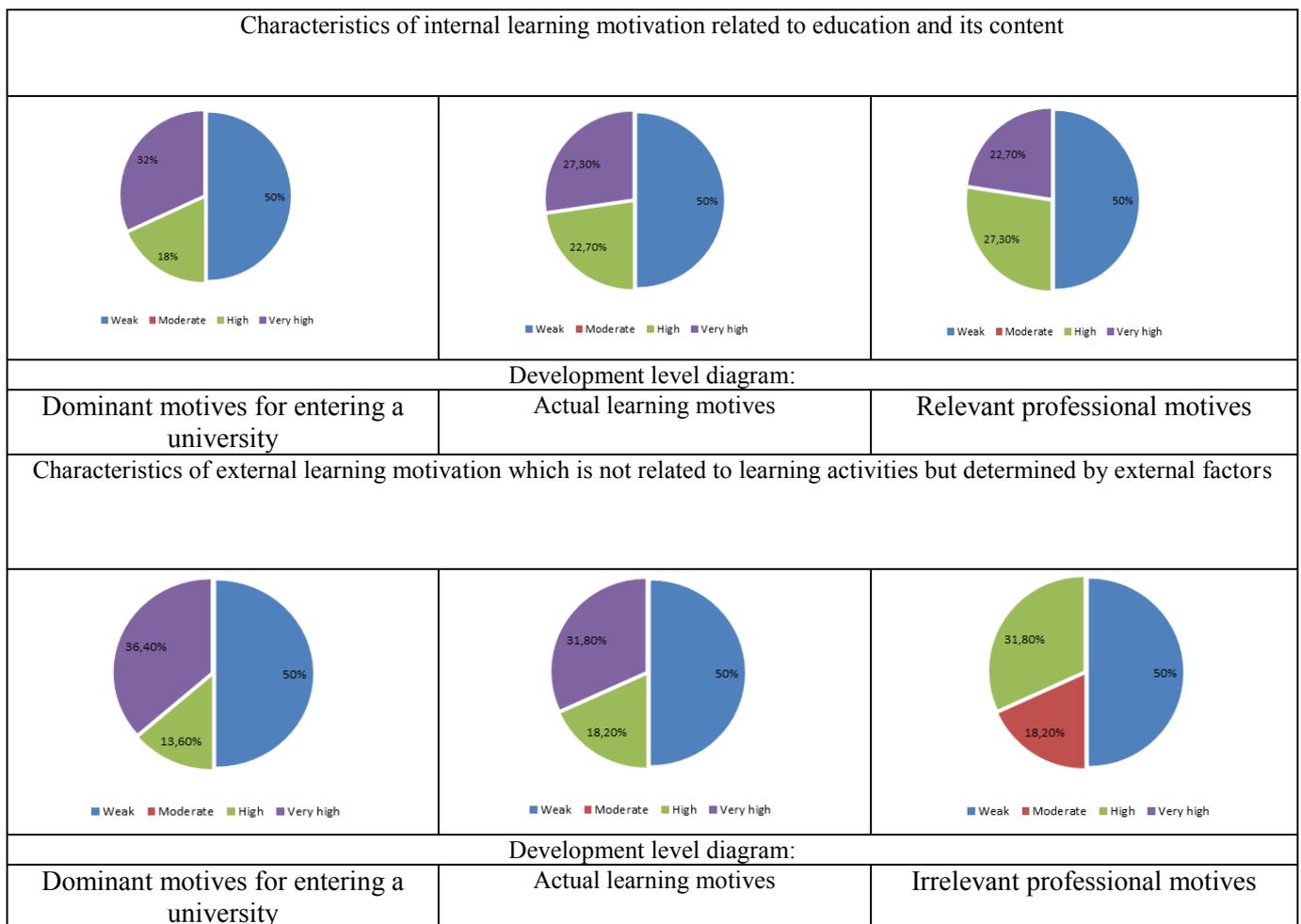
The educational process is a complex activity, there are a lot of learning motives which cannot manifest separately in each person, but merge into a single one, forming complex motivational systems.

A survey of students was conducted and opinions of teachers and curators of academic groups on methods used to increase the learning motivation were studied. Curriculum programs, methods and forms of motivation were adjusted .

4. Results

The aim of the study was to confirm that there are differences in the structure of motives for choosing a profession among students of different directions, which must be taken into account in the educational process. The motivation level of the first-year students can be enhanced by teachers.

Testing of students of groups NDb-16 and ETMbp-16 identified levels of motivations presented in Figures 1 and 2. The diagrams show the share of students who have a different level of motivation development.



Pic1. Results of the NDb-16 group diagnostics.

Analyzing the research data, we found that in group NDb-16, the internal and external motivation level is average.

In group NDb-16, internal motivation:

- according to the level of development of *dominant motives* : 50.0% - weak; 31.8% - very high; 18.2% - high;
- according to the level of development of *relevant professional motives*: 50.0% - weak; 22.7% - very high; 27.3% - high;
- according to the level of development of *real-life motives of learning* (educational and cognitive motives

and motives of self-education): 50.0% - weak; 27.3% - very high; 22.7 % is high.

External motivation

- according to the level of development of *motives for entering a university*: 50.0% - weak; 36.4% - very high; 13.6% - high;
- according to the level of development of *irrelevant professional motives* : 50.0% - weak; 31.8% - high; 18.2% - moderately expressed;
- according to the level of development of *real-life learning motives* (narrow educational and cognitive motives): 50.0% - weak; 31.8% - very high; 18.2% is high.

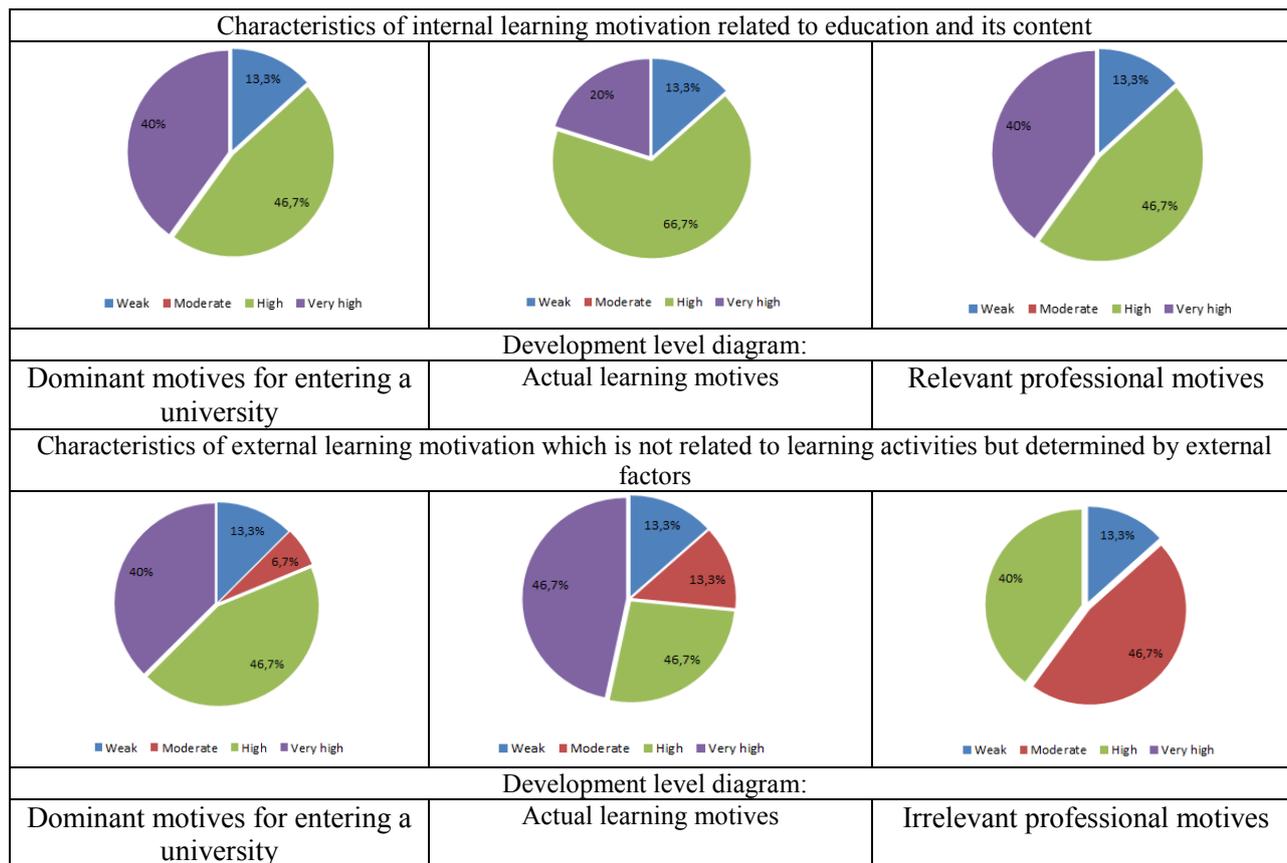


Figure 1. Testing results for Group ETMbp-16

In group ETMbp-16, internal motivation:

- according to the level of development of *dominant and relevant professional motives*: 46.7 % - high; 40 % - very high and only 13, 3% - low;
- according to the level of development of *real-life motives for learning*: 66.7 % - high; 20 % is very high and only 13.3% is low.

External motivation:

- according to the level of *development of motives for entering the university*: 46.7 % - high; 33.3 % - very high, 13, 3 % - low and 6.7 % - moderate e;
- according to the level of development of *irrelevant professional motives*: 40 % - high; 46.7 % - moderate, 13.3% - low;
- according to the level of development of *real-life learning motives*: 46.7 % - very high; 26.7% - high; 13.3% - moderate; 13.3% - weak.

To increase the external learning motivation (to

arouse students' interest in the profession), students were sent to the following events organized by oil and gas companies: a study excursion, a tour to the Rosneft corporate museum, career guidance events).

To increase the internal motivation, students participated in subject competitions and international scientific and practical conferences.

The survey on the learning motives identified that an increase in the educational allowance, opportunities to choose subjects, motivation of teachers can increase the level of motivation.

In the third year, we observe that students have become interested in their professions and motivated to be more active, take part in scientific, public, creative and sports events. As a result, students receive higher educational allowance, prizes from the head of Nizhnevartovsk, scholarships from the Government of the Russian Federation.

Thus, corrective measures implemented by the curators were efficient.

In these groups, practical-modular training was introduced for the first time. Students undergo practical training at the workplace as operators of oil and gas industry, assistant drillers, car mechanics, etc.

5 Conclusion

The list of recommendations to improve the motivation of first-year students is as follows:

- to explain students that knowledge obtained in universities will be useful in their professional activities;
- to explain students that the teacher is a mentor helping in the educational process;
- to formulate goals and tasks correctly;
- use laboratory and practical exercises, interactive methods (business games, round tables);
- to teach self-organization skills, develop the ability to manage their time;
- to use the score-rating systems when assessing student knowledge;
- to apply psychological trainings (group, individual).

Today, universities should be a source of professional and form personalities able to plan their activities, set goals and achieve them. The effectiveness of professional activities depends on motives, interests, and needs [19]. Learning motives, their formation mechanisms are priority in modern higher education.

The testing and survey results showed that there are a lot of methods for motivating students. But they require effective, organizational efforts from the teaching staff to increase the students' motivational sphere.

The prose writer and poet Paulo Coelho said: "Decide. Change. Strive forward. Think. Get up and act. Refuse stereotypes. Reach. Dream. Open. Believe. Stop. Listen to yourself. Grow. Win. Look at life with open eyes."

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