

Research of Academic Motivation at the Stage of Forming a Threshold Level of Mastering Competences

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ABSTRACT

The relevance of researched problem is caused by the society requirement to form and implement educational and creative potential of a student as a conductor of changes that set a high level of motivational behavior. The aim of this article is to develop a structural model of motivational behavior of students that allow carrying out modeling of specific characteristics and their practical application. The leading approach to the research of this problem is the provision of the theory of self-determination on basic needs that allow considering basics of intrinsic motivation. The results of the research are: the structural model of motivational behavior is considered in the article, the questions are selected and the questionnaire on educational motivation is developed for the poll of student's groups "Economy and Management". The development and approbation of multi-profile software programs are "Students' Questionnaire" to implement on-line poll or interviews with students on academic motivation. The results of the research can be useful for specialized structural divisions of the university, teachers, and also for the students in case of further research of the issues of academic motivation and individual educational paths.

KEYWORDS

Structural model, motivational behavior, academic motivation, university

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Introduction

Establishing a context

In the conditions of objective, natural distribution process of achievements of different countries and also building-ups of competitive advantages of the Russian economy, one of key characteristics of potential of implementing social,

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political and economic transformations is a human resource which is provided not by just faceless labor forces, but by individual characteristics of each person. The opportunities of human resources development are determined by an education system isostasy including those achievements which positive experience continues to remain valuable and essential, but modern conditions set the trends of other high-quality level. In this regard it is necessary to solve a problem of quality assurance of modern education on the basis of synthesis of its fundamental nature and new challenges of relevant and perspective needs of a many-sided personality for the needs of the region, state and world community.

This task can be solved by means of mechanism creation of a sustainable development of an education system that occurs against the rates acceleration of technology updating, change of elitism and selectivity of higher education, the entry of Russia into all-European educational and scientific space (Polonyankin, 2010).

Literature Review

The materials that define a vector of higher education development on Russian (The State program, the Federal law, 2012), and international levels, emphasize the necessity to train a new generation which is capable to life-long education and self-education. The penetration into the universities of entrepreneurial initiatives creates new modes. The direction of "a new managerealism" for the university means that an educational institution accepts the rules that exist in the sphere of business and entrepreneurship (Dim, 2004). The new trend of a modern university of entrepreneurial type allows it to cope with the challenges of the modern world and to develop in the conditions of uncertainty due to commercialization of innovative products and services (Clark, 2011). The publications indicate that an individual approach of professionals training is formed. It means that the teams which are capable to set and solve interprofessional problems in the conditions of dynamically developing requests of innovative economy (Tukhbatullina & Safin, 2013). At the same time there is a problem to form personal qualities including academic motivation.

Establishing a research gap

One of the relevant research aspect of academic motivation is a lack of a unique student's approach to university education and to their personal preparation, in particular (Zyolko, 2011). There is a number of research of academic motivation that disclose its key regularities and mechanisms (Gordeeva, Sychev & Osin, 2013). Despite a huge contribution of researchers to the development of the considered issue, it isn't solved yet, and many significant factors and aspects remain insufficiently considered. There is a lot of examples which prove that, undoubtedly, there are students who are interested in classes, and who tries to solve complex academic problems with teachers, who are engaged in research work with a research supervisor, who do their homework, and also who are involved in nonlearning work. However, there is also an opposite interest group: these are the students, who systematically miss classes, do not meet the requirements to check work. It is possible to assume that for this group university education and an involvement into education are necessary to observe formalities.

Aim of the study

In this regard, the academic motivation is of a great interest and an important problem in education as it gives the chance to build an approach conceptually to determine a role of university environment, student behavior and preparation results. Research results of academic motivation can be used to develop multi-profile software package "Students' Questionnaire", that allow conducting on-line surveys or interviews on educational process, and also to assess the efficiency of implementation of new educational technologies, approaches and workshops.

Methods

Research methods

In the course of research the following methods were used: common scientific methods (abstract and logical; dialectic; unities historical and logical, generalization; method of analogies); diagnostic methods (questioning; interviewing); system and complex analysis; empirical methods (studying of work experience of educational institutions of higher education, regulatory framework and educational and methodical documentation); methods of mathematical statistics and graphic representation.

Experimental research base

The pilot and experimental base of research is Federal State Budgetary Educational Institution of Higher Education "Samara State Technical University".

Investigation stages

Problem research was conducted in three steps:

— at the first stage the theoretical analysis of historical development of motivational activities, existing methodological approaches in pedagogical, sociological and psychological scientific literature, dissertation works on the researched issue, standard legal documentation in the sphere of higher education was carried out; the research hypothesis is determined, the aims and methods of research are defined, the plan of pilot research is created.

— at the second stage the structural model of motivational behavior was developed; the analysis of classification of academic motivation is carried out; the pool of questions for study groups was systematized; multi-profile software package "Questioning trained" is presented that is based on a software product start; the obtained data were subject to the experimental work providing forming of reporting data, analysis and data verification.

— at the third stage experimental work was completed, theoretical and practical results are specified, the obtained data are generalized and systematized.

Results and Discussions

Structure and model content

The concept "motivation" from the point of view of modern psychology is not unitism, and it is presented in double meaning: as a system of factors determining behavior and as the process feature which stimulates and maintains behavioral activity at a certain level. The motivation, thus, can be

determined as a set of reasons of psychological nature explaining personal behavior, orientation and activity (Solodyankina, 2012; Kovalevskaya 2015).

Modeling of academic motivation is reasonable to be carried out taking into consideration known methods of diagnostics, experienced and experimental work and reliability of the results which were received at each stage of the experiment. Structural characteristics of a model provide: 1) institutional parameters (habitat, universal and cultural values, society environment, economic environment), i.e. the motivators determine a living space of students; 2) measurable quantity characteristics of motivation (objective and subjective indicators of motivation); 3) motivation typology; 4) types of academic motivation define the actions of students; 5) factors of academic activity (Figure 1).

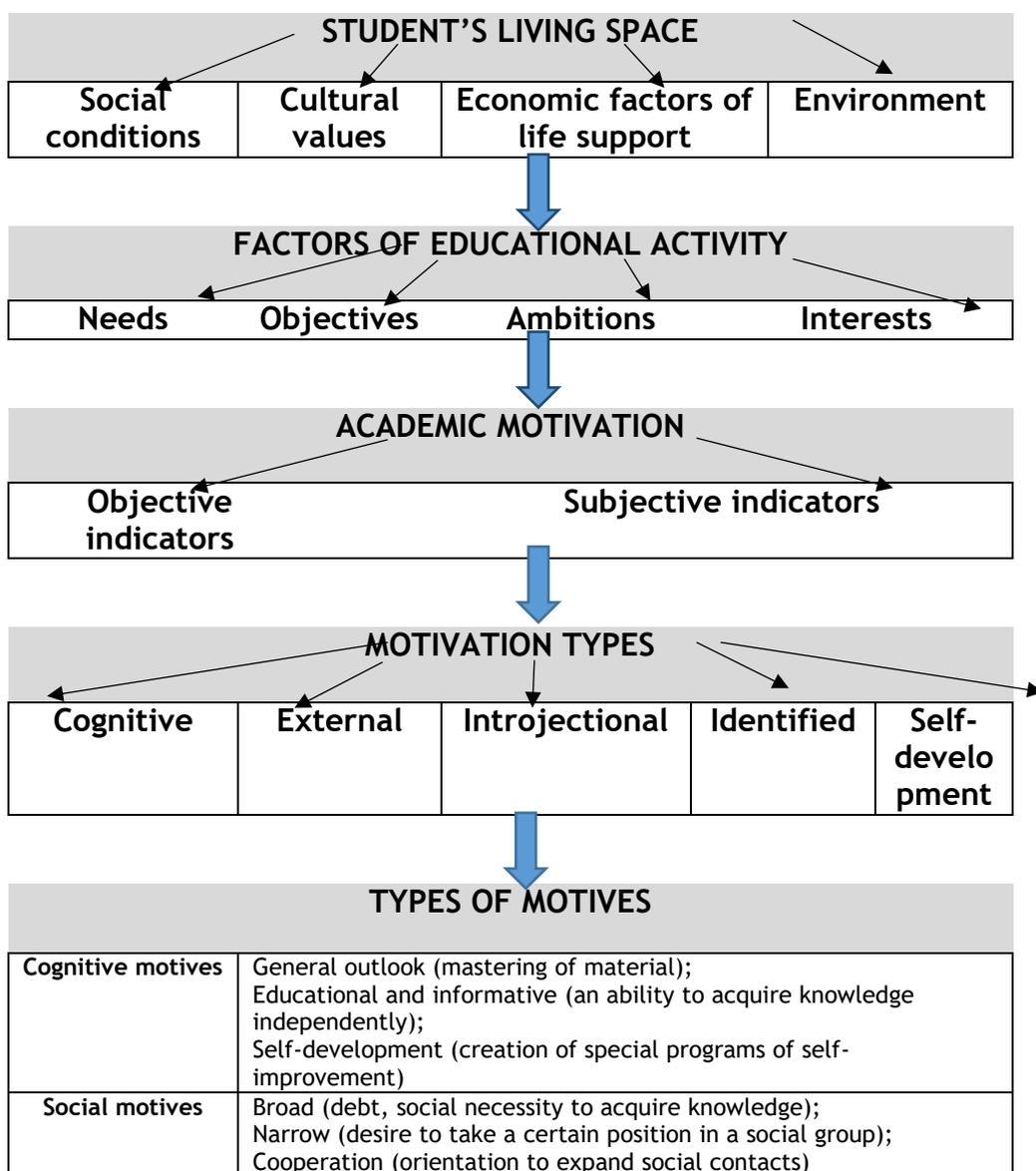


Figure 1. Structural model of students' motivational behavior

The structural model of motivational behavior of the students have to be directed to decrease disagreement in consciousness and motivators' activation connected with content and training process (forming common cultural, professional and over-professional abilities, knowledge and skills), socially important motives (motivational personal qualities and motives of self-determination, self-realization) and personally significant motives of influence, affiliation, social approval, recognition of merits, education prestige.

Stages of model implementation

Implementation of this model provided carrying out the following stages of experimental work:

— initial level of modeling of motivational activities: when designing training process of students the complex of didactic conditions is created (aim of educational activities; content of training material, forms, methods and tutorials; selection and development of means of forming academic motivation; analysis of process and results of academic motivation).

— development and approbation of multi-profile software package "Students Questionnaire", to implement on-line poll or interviews on academic motivation.

— diagnostics of aims of academic activities; designing of means to form academic motivation; analysis of dynamics to form academic motivation.

The stating stage

Forming academic motivation and valuable competitive orientations in educational process in the system of higher education is an integral part of development of a student identity. The academic motivation is determined by a number of factors:

— it is created by university and its educational system and institutional environment;

— it is developed by the requirements of educational process;

— it is determined by subjective features characteristics of students;

— individual and personal traits of a teacher and students to a subject;

— specifics of a subject (Loginov & Musafirova, 2010; Maltseva, 2013).

We carried out questioning among 1st – 4th year students of Samara State Technical University that allowed revealing the interest and motives inducing students to educational activities; educational progress and satisfaction with a chosen profession and an educational institution. Questioning is conducted by means of multi-profile software package "Students' Questionnaire UGSN 38.00.00 Economy and Management in SSTU" and it was launched in a pilot mode at the assessment stage of academic motivation. The number of respondents made 148 people.

1st, 2nd, 3rd year students allocate family and study with priorities, and for the 4th year students family and work become main priorities, study takes the 2nd place (Figure 2).

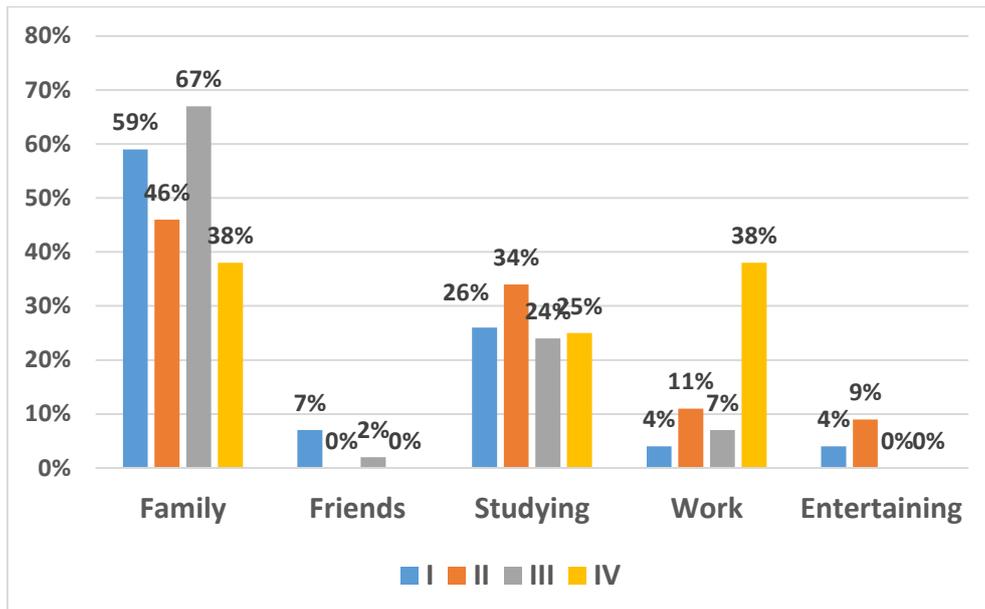


Figure 2. Life priorities of students

1st, 2nd, 3rd year students are interested in getting education and consider education to be essential and crucial. 4th year students think that just being a student is not enough for them and there is no interest in education. It can indicate that undergraduates are more motivated during this period on getting an income and therefore try to work more than to study.

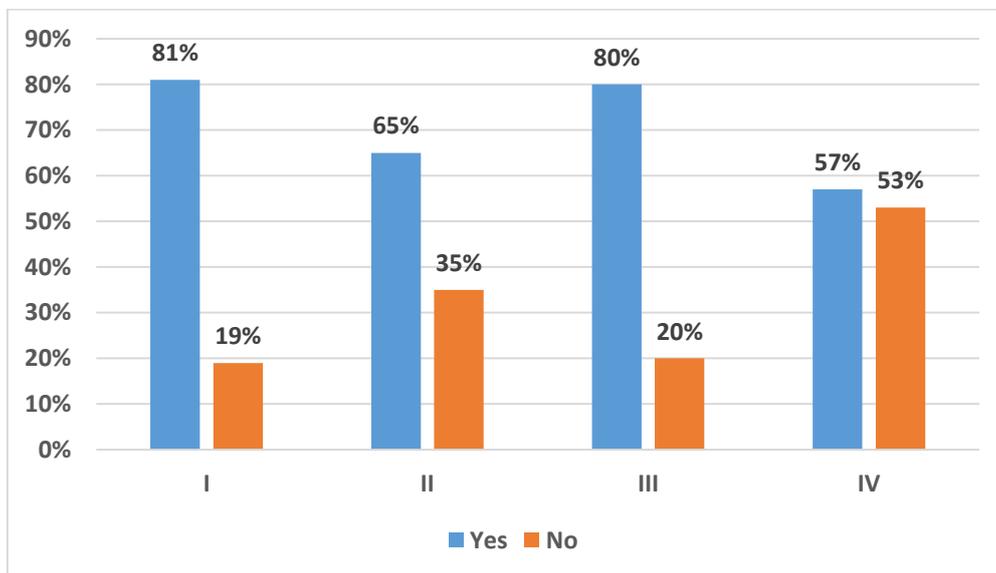


Figure 3. Distribution of answers to a question: it is interesting for you to study?

An incentive motive of choosing a profession for four-year students is that it will help you escape unemployment (Figure 4).

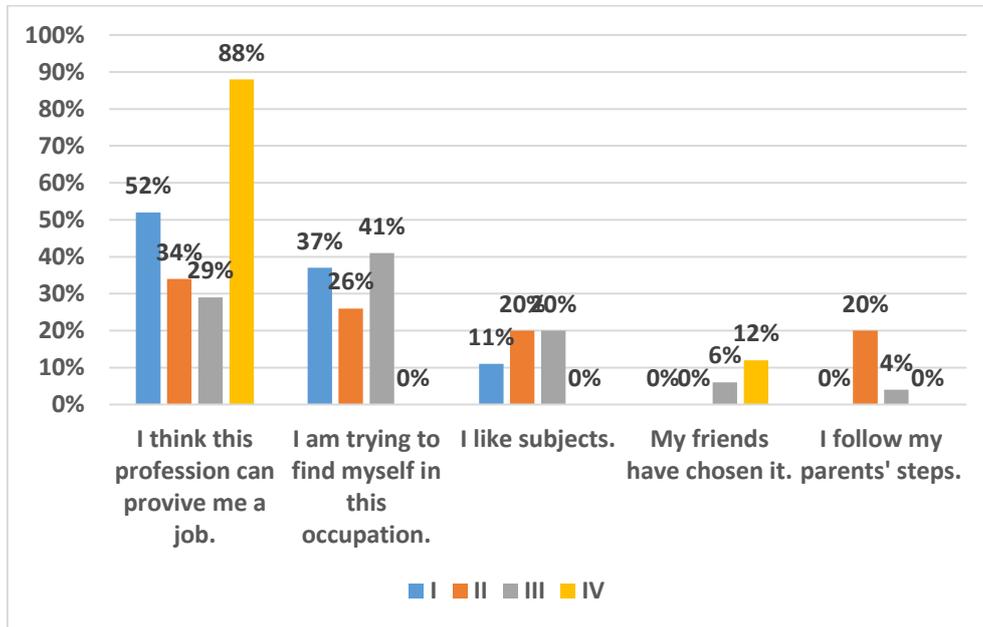


Figure 4. Priorities of choosing professional preferences.

Analyzing a group of questions directed on research of students' attitude to classes. Results are in many respects surprising, for example, 1st year students are active at classes when they understand material, and graduates are active during certification (Figure 5).

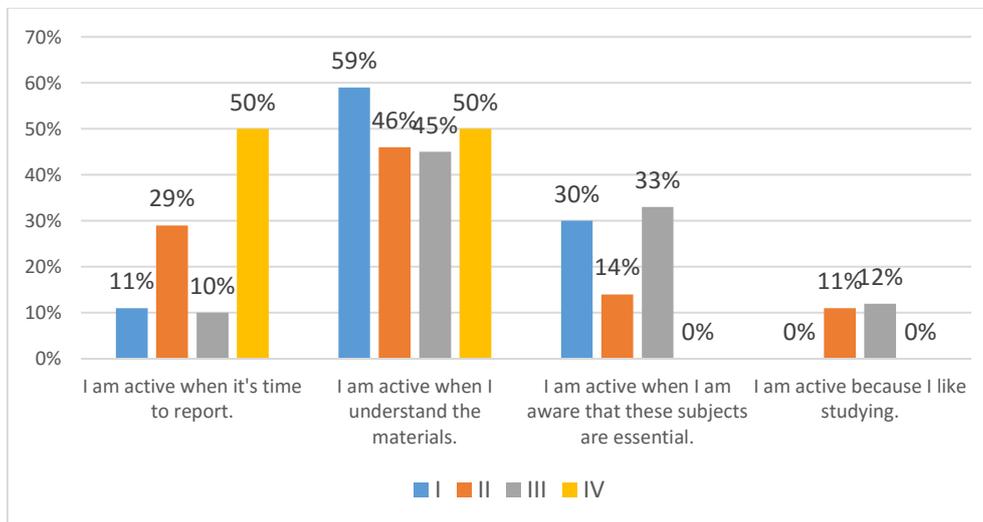


Figure 5. Students' attitude to classes

The special attitude to educational process was shown by the students of different years. So, for example, for third year students the main thing is to gain knowledge and to be involved in innovative training methods; fourth year



students specified knowledge and participation in nonlearning work, first and second year students are happier with the organization of educational process (Figure 6). And almost all students expressed negative attitude to a great amount of workload.

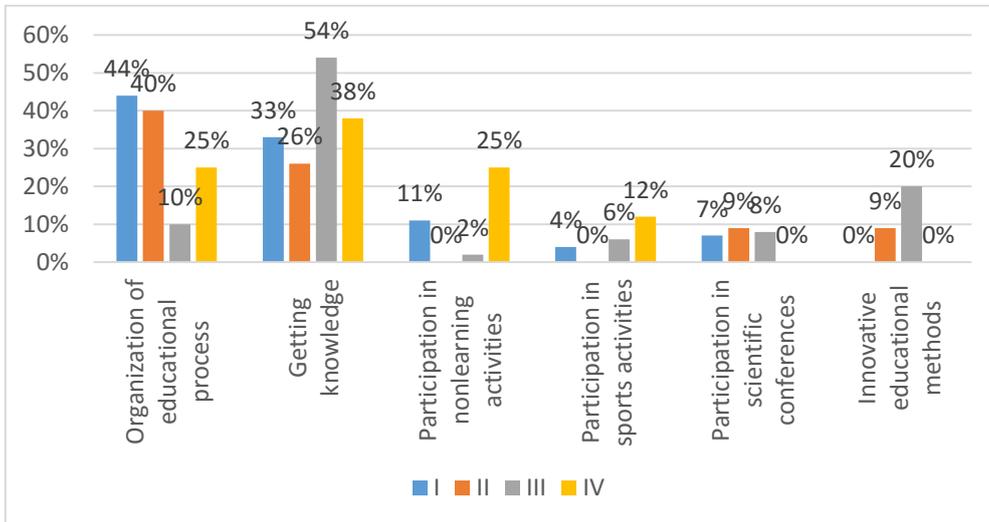


Figure 6. Demonstration of main interests to education

One of the widespread incentives for all students is self-realization and self-development, but also there were differences, for example, second-year students were interested in material incentives (Figure 7).

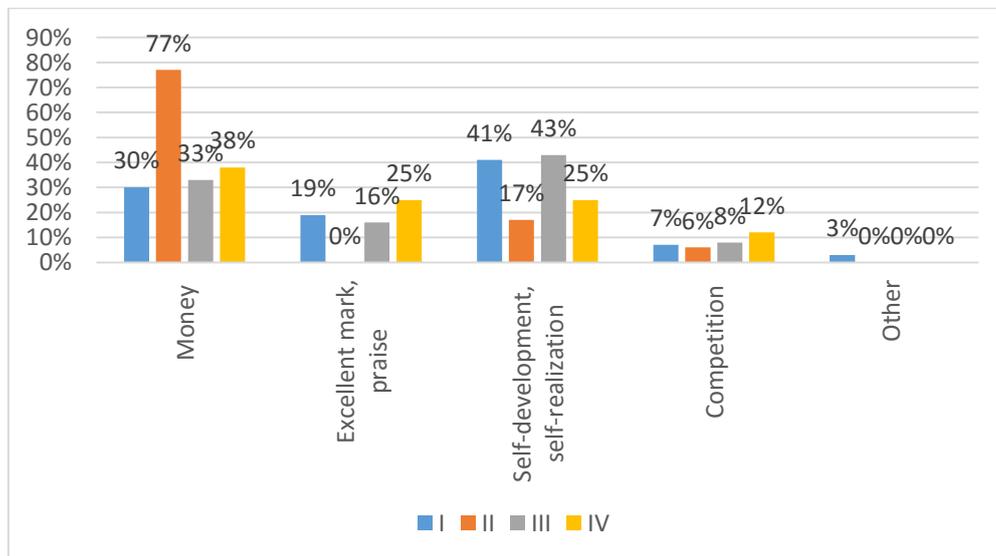


Figure 7. The main motivators to education

There are different opinions in relation to profile subjects; students distributed the value of profile subjects equally. Concerning educational methods, a significant share of students gave preferences to passive educational methods and only third-year students voted for independent analysis and discussions.

Unfortunately students of all years give the priority find a job regardless specialty.

Formative stage

The research hypothesis is the following: those who have higher education, they have high earnings, therefore, they have to study well since the high standard of knowledge means high or marginal level of common cultural, professional competences. The academic achievements of modern youth testify to their high importance in further life, success in a professional sphere.

Theoretical relevance of research is caused by the need of creation of complete structural motivation model of educational activities which would provide a consistent vision of motivation and integrate existing ideas of motivation that were offered within various theoretical paradigms. The key basis of research is a psychological approach to understanding human motivation and well-being that sorts out the problem of intrinsic and extrinsic motivation to explain the opportunities on the example of academic motivation of students of economic programs at technical university. We define academic motivation as an integrated structure that was founded on a set of informative, social and personal motives (Gordeeva, Sychev & Osin, 2013). The interaction of internal and external sources of academic motivation influences educational activities and their results and promotes subject, metasubject, transsubject and personal results of educational activities.

The assessment of education market, efficiency of its institutions and balance of structural elements, display analytical models, official statistical database gives an opportunity to design them. Now we give general characteristic of an educational sphere of Russia and the Samara region (figure 8).

In comparison with 70-80 years of the XX century today the number of students was almost doubled on 10 thousand of population, it is "The Golden Age of Russian Education"! The Samara region takes the 19th place in a rating of 2015.

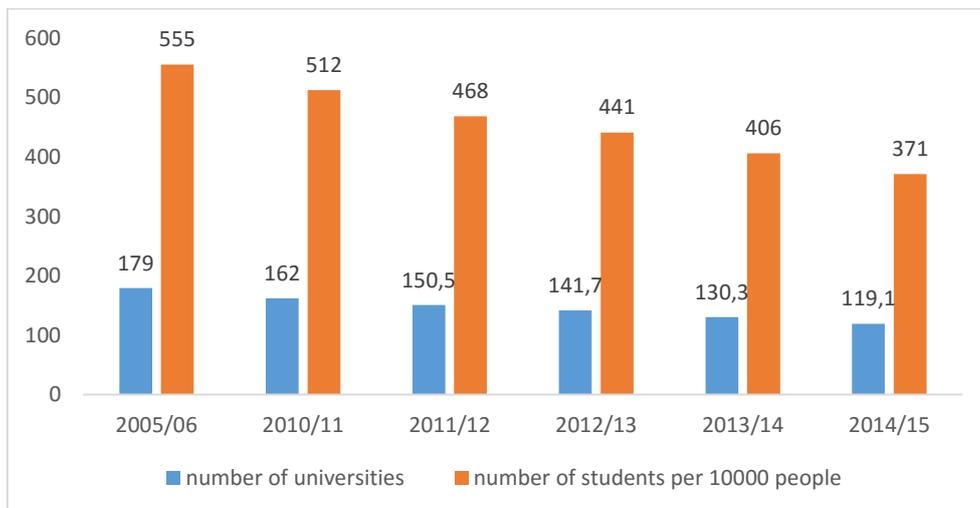


Figure 8. The number of higher education institutions in the Samara region and the number of students of higher educational institutions on 10 thousand people of the population of the Samara region.

Considerable release of specialists with higher education is followed by non-optimal amount of preparation on integrated groups of specialties and directions of preparation (IGSDP). It is obvious that despite a downward tendency of number of graduates of higher educational institutions from 2010-2013, the number of graduates on IGSDP “Economy and Management” continues to remain extremely high. Within this IGSDP higher education institutions for the last three years graduated 369 thousand people that makes more than a third of total quantity of graduates within the similar period.

One of the reasons that applicants are interested in specialty group 38 of IGSDP is that it's not necessary to explain students that they have to study 4 years and plus 2 years, it is enough to have a look at the salary level of economists, financiers, managers and other related specialties.

Control stage

Regular electronic questioning is an effective monitoring mechanism of their motivation, quality assessment of educational process, educational requirements, systematic and large-scale participation of teachers and operating structural units of a higher educational institution in the preparation of high-quality and popular economists and managers. The electronic and educational environment of the university allows supporting questionnaires of different groups of graduates.

The structured materials of students' questionnaires of differentiated classes which are trained in the integrated groups of specialties and directions of preparation “Economy and management” of a Bachelor degree and Specialist degree, enable to create the analytical base to implement correctional or motivational events in educational activities. Students motivations to getting education develops under the influence of various factors, studying these factors allows working on the creation of conditions to develop commitment and informative skills. There is the necessity for synthesizing questionnaires and

interviews for students together with electronic and educational environment of the university that will increase the speed of data processing, opportunities for expansion of an interviewed student body, will provide operational forming and implementation of the programs that are directed on high-quality growth of educational process and increase of academic motivation.

For example, for the 4th year students the amount of profile subjects, the hours of work practice could be increased instead of traditional lectures. To increase the motivation for the students of 1-3 years, it is necessary to organize business games, master classes, the classes that involve students in the world of their profession. It is necessary introduce an opportunity to be trained in individual educational trajectories, to introduce such mode of training on which the student could choose his own educational program providing the reduction of classroom loading and distribution of free time for more profound subjects, research and designing which are well-loved by the student. In our opinion, it will enable not only to increase academic motivation, but also to create an active position of the students to work at classes.

Modern realities in the system of higher education indicate that there are universities of new quality that display other semantic meaning of the universities. The higher educational institution is a cross-functional platform which creates more conservative idea of a university. Without any doubt, today a higher educational institution is multifunctional, it can be characterized in several forms:

1. as a storage of academic and fundamental knowledge;
2. as a concentrate of social activity and labor application;
3. as an element of all-economic system and a conductor of innovations;
4. as a generator of economic values.
5. as a concentrator of formations, innovations and research.
6. as a megacomputer of knowledge and intelligence.

In the conditions of significant increase of society interest to implement person's potential, the basis of progressive development of modern high-technology economy become the achievements of intellectual and creative potential of a person. It is indisputable that a modern university has to create the environment that allows "modernizing yourself to modernize others" (Institute of Strategic Initiatives). Actually the university is a provider on the creation of correct, favorable environment and people have to develop in it. The similar collaboration of business, spheres of science and education allows all participants of the innovative system to reach consolidation and to increase feedback from an individual contribution (Kosyakova & Larionov, 2013). For the present moment the higher educational institution as a distributor of educational content loses to the market in new conditions, and as an organizer of the integration process of students and teachers into new social and economic conditions has no competitors at all.

The universities, which can unite and attract interest in productive dialogue of the most gifted and motivated people, have to become a point of growth of innovative changes.

First of all, to introduce the issue that a modern university is a conductor of changes which creates the feature of students' motivation, reveals the talents



and necessity to get education, we assume that vigorous activity of students in many respects determines the success of the university in scientific, academic, business and innovative activity. One of key indicators to assess the significance of a higher educational institution is the success of his graduates that can be measured by knowledge, level of competences and their personal career development.

Therefore the consideration of approaches to activities assessment of a higher educational institutions will be limited without understanding, firstly, the evolution of terminological fullness of academic motivation and, secondly, the formats of links of students with a higher educational institution and motives of modern educational inversions.

The research of a motivational component of students' activities is conducted at sociological, psychological, organizational, cultural and economic levels.

Interactionist approach of Vincent Tinto is included in a number of the most authoritative theories within sociological reference points (Tinto, 2003) which key aspect is the change of student's behavior when changing the educational levels that is caused by the change of habitual circle of contacts and study, and also habitual associations, for example "school friends". Other institutes and behavioral models, corresponding to the university environment, become new for the student where he should be integrated and observed safely. In this case its academic basis will pass tests and will positively be reflected in training results.

The dominating line item of organizational level is institutional environment and structures that influence educational activity. Within this theoretical design the model of left-out of students of J. Bean is well-known (1980), who established the similarity of left-out of students with a labor turnover in the company, as in the first and in the second case assignment and dismissal are influenced by the satisfaction level with studying or labor activity. As a scientist, J. Bean (1980) researched primary characteristics of a student to explain psychological factors of motivation, i.e. those which he developed at school, and, interacting with the institutional environment of a higher educational institution, they influence academic motivation.

Cultural factors can interfere with student's progress, for example, to be a barrier in language communications, and to promote educational internationalization expansion.

From economic prospects, students have to popularize an opinion that the process of getting qualifications is not just pastime in the company of soul mates, but complete many-sided process of personality development and forming a portfolio of professional competences demanded in specific types of professional activity (Braxton, 2003).

Conclusion

Thus, motivational activities can be measured quantitatively, for example, through the indicator that measures a share of students who successfully mastered a university program. Low values of this indicator can be regarded as a lack of favorable conditions for students to reveal individual many-sided potential to education.

The analysis of references and educational practice displayed that more attention should be paid to a problem of research of motivational activities and students involvement into educational process. The theoretical base and practical experience of the universities show multiple practice of students interest development to university knowledge and university environment, scientific research, team building, non-learning activities.

Materials of this article can be interesting for specialized structural divisions of the university which are engaged into the events connected with professional orientation work, for the teachers who have close contact with students and also with students who set a vector of individual educational trajectories.

In the course of research there was a new circle of problems requiring further studying and solving. It is reasonable to continue research on problematic issues of motivational activities at the university.

Disclosure statement

No potential conflict of interest was reported by the authors.

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