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## COGNITIVE BASIS OF STUDENTS MOTIVATION AND PSYCHOLOGICAL STABILITY

### Abstract

This article presents the study an achievement motivation and psychological stability their impact on development of the personal cognitive abilities in students of pedagogical high school. The analysis of the results shows that steady cognitive interest forms a stable motivation. The students with expressed achievement motivation preferred to work under the conditions of maximum stimulation of the achievement motive and strived to search for more effective methods of problem solutions. The importance of this research consists in that the relation, revealed between achievement motivations and cognitive interest of the students in general mechanism of mental regulation of training and education allows a teacher to identify the reference points of psychological training and education regulation, to have a psychologically reasoned impact on formation and perspectives.

**Keywords:** motivation, cognitive interest, cognitive abilities, students

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## СТУДЕНТТЕРДІҢ МОТИВАЦИЯ ЖӘНЕ ПСИХОЛОГИЯЛЫҚ ТҰРАҚТЫЛЫҚТЫҢ БЕЛГІЛІ НЕГІЗДЕРІ

### Аннотация

Осы мақалада педагогикалық орта мектеп оқушыларының жеке танымдық қабілеттерін дамытуға әсер етудің психологиялық тұрақтылығы мен жетістігінің зерттеуі келтірілген. Нәтижелерді талдау тұрақты когнитивті қызығушылық тұрақты мотивация қалыптастыратынын көрсетеді. Жетістікке деген ынтасы бар студенттер жетістік мотивін максималды ынталандыру жағдайында жұмыс істегенді жөн көрді және проблемаларды шешудің тиімді әдістерін іздеуге ұмтылды. Бұл зерттеудің маңыздылығы - оқыту мен тәрбиелеудің психикалық реттеудің жалпы механизміне деген оқушылардың мотивтері мен танымдық қызығушылықтары арасындағы байланыс мұғалімге психологиялық дайындық пен білім беруді реттеудің анықтама нүктелерін анықтауға, психологиялық тұрғыдан ие болуға мүмкіндік береді. қалыптасуына және перспективаларына негізделген әсер.

**Түйінді сөздер:** ынталандыру, танымдық қызығушылық, танымдық қабілеттер, студенттер.

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## КОГНИТИВНАЯ ОСНОВА МОТИВАЦИИ И ПСИХОЛОГИЧЕСКОЙ УСТОЙЧИВОСТИ СТУДЕНТОВ

### Аннотация

В данной статье представлено исследование влияния мотивации достижения и психологической устойчивости на развитие познавательных способностей личности у студентов педагогического вуза. Анализ результатов показывает, что устойчивый познавательный интерес формирует устойчивую мотивацию. Студенты с выраженной мотивацией достижения предпочитали работать в условиях максимальной стимуляции мотива достижения и стремились к поиску более эффективных методов решения задач. Важность данного исследования состоит в том, что выявленная взаимосвязь между мотивациями достижения и познавательным интересом студентов к общему механизму психической регуляции обучения и воспитания позволяет учителю определять ориентиры психологической регуляции обучения и воспитания, иметь психологическое обоснование. аргументированное влияние на формирование и перспективы.

**Ключевые слова:** мотивация, познавательный интерес, познавательные способности, студенты.

**Introduction.** The motivation is a set of mental processes, which add a power impulse and general orientation to the behavior. The motivation is driving forces of the behaviour, i.e. a problem of the motivation is a problem of the reasons for behaviour of an individual [1-5].

Gordon U. Olport [4] considers that a normal adult person is functionally autonomous, independent of its physical needs and generally conscious, highly individual. According to the experimental tradition, cognitive approaches to solving the motivation issues become more and more popular in motivation studies among researchers: psychologists endeavor to understand more profoundly how representations are interconnected, knowledge of human on the world with its behaviour.

**Purpose** to study an achievement motivation and its influence on development of the cognitive abilities of the person.

Currently, many research works are devoted to the problem of studying the achievement motivation; researches of the issue on cognitive achievement motivation determinants are of special interest.

The urgency of the studying the influence of achievement motivation on development of the cognitive abilities is caused by the following reasons: Development of new information technologies, complication of many professional activities demand high intellectual work and sense of locality and ability to operate in the tangled situations filled with emotions [3].

The achievement motivation is the most important component of full development and achievement of the personhood. Notably, success and failure don't have the other direct consequences for certain individual, except for those, which are related to self-estimation. The cognitive interest forms an achievement motivation. The intelligence generates a cognitive interest only for the sake of its saturation and, self-saturation in a mediated manner. Notably, more advanced intelligent persons possess a sustainable cognitive interest. Hence, high intelligence level generates a sustainable cognitive interest. The sustainable cognitive interest forms a stable achievement motivation [3, 4, 6].

Cognitive Motivation Theory for the following reasons:

1. Achievement motive is diagnosed following the results of cognitive activity (imagination, game, fantasies).

2. Purpose category appears here – achievement motive is defined as a tendency to set your own purposes according to a number of circumstances [5].

D.V. Ushakov [7] considers that the achievement motivation is a suitable candidate for role as a strict, but fair instructor of abilities. Hereafter, the author assumes two ways of such influence: the first one consists in that the people, who are more motivated to achievement, must work better on perfection of their abilities, and carry out the intellectual training more often; the second one consists in that advantages of more motivated examinees can be shown in the course of the intellectual activity itself, in particular, during the test, where they will show higher results. Therefrom, it is necessary to expect an increase of intelligence in people with higher achievement motivation.

M.Sh. Magomed-Eminov [5] considers the achievement motivation as a functional system of integrated affective and cognitive processes, regulating the activity in achievement situation by full course of its implementation. Alongside with that, the achievement motive of the same person can be realized not in all kinds of activity and not to the equal extent in which ones it is materialized, i.e. there is a characteristic circle of activities for everybody, in which the achievement motive is materialized.

The analysis of the main classical representations and results of the state-of-the-art researches with respect to interrelation of the achievement motivation and cognitive abilities has shown that currently the parity between efficiency of mental abilities and personal-motivational component of intellectual activity was studied insufficiently [8].

The main objective of our research is to study the achievement motivation, peculiarities of its development in various subjects, and also influence of the achievement motivation on development of the personal cognitive properties (abilities) in students of pedagogical high school.

Object of the Research - achievement motivation and its influence on personal cognitive properties in students.

Goals of the Research

1. To identify a level and peculiarities of achievement motivation in students from the first to the fourth courses

2. To determine an influence of achievement motivation on personal cognitive properties in students

Experimental studying of the level and features of the achievement motivation has been conducted with use of the following methods: A. Mekhrabian's Test-Questionnaire for measurement of the achievement motivation (TAM) edited by M.S. Magomed-Eminov; H. Hekhuizen's Motivational Test

modified by L.N. Sobchik; T. Elers's method of diagnostics of motivation to obtain success, T. Elers's method of diagnostics of motivation to avoid failures [2].

The students of natural science specialities of pedagogical high school of Kazakh National Pedagogical University named after Abaya have taken a part in the research for levels and peculiarities of the motivation. Age of the respondents was from 16 to 23 years, share of the girls has been 60 %.

Our experiment consisted of two parts: the first stage was measurement of achievement motivation in students, and the second stage was testing of mental abilities of the students in the end of each academic year.

The achievement motivation of the first and second year students was researched under the T. Elers's method of diagnostics of motivation to obtain success and T. Elers's method of diagnostics of motivation to avoid failures. The researches of the third and fourth year students were conducted by means of A. Mekhrabian's Achievement Motivation Test we have diagnosed two generalised sustainable motives of the person: motive to obtain success and motive to avoid failure. It was estimated which one of these two motives has dominated. Both forms male (form A) and female (form B) were used. Before start of the experiment, the test procedure instruction has been explained to the experimental subjects. The stimulus material has been issued to the students, certain time was provided. The received results have been processed. The student receives a certain quantity of the points for each answer. Calculation of the points was conducted by means of the keys through simple summation.

**Results and discussion:** This technique measures a resultant motivation tendency that degree of prevalence of one of the specified motives - drive to achieve or to avoid failure. The high test results mean that the drive to obtain success is expressed to the more extent, than drive to avoid failure, low test results speak for contrary. If the sum of the gained points is within the range from 165 to 210, then it is concluded that the aspiration to success (high level) dominates in success achievement motivation of such experimental subject. If the total point was within the range from 76 to 164, then it is concluded that aspiration to avoid failures (average level) dominates. If the total point was within the range from 30 to 75, then no any certain conclusion on domination of motivation to obtain success over the other motivation to avoid failures cannot be drawn (low level). In the course of the research we have obtained the following data.

The obtained data show that low achievement motivation level is diagnosed in 27% of the tested students. 50 % of experimental subjects have shown an average motivation level, 23 % of students have shown a high motivation level. The low achievement level is diagnosed in 19% of the tested second year students. 60 % of tested students have shown an average motivation level, 21 % of the students have shown high motivation level. The low achievement level is diagnosed in 16% of the tested third year students. 57 % of tested students have shown an average motivation level, 27 % of the students have shown high motivation level.

The low achievement level is diagnosed in 10% of the tested fourth year students. 53% of the tested students have shown an average motivation level, 37 % of the students have shown high motivation level.

The results of the research show that the students with average motivation level have a sustainable level of knowledge and high cognitive interest. The students with low motivation prefer a low or, on the contrary, too high risk level. The more motivation of the person to success – achievement of the objective is, the less readiness for risk is. Thus, the motivation to obtain success has an impact on both hope and success: at strong motivation to success of hope of success is usually more modest, than at weak motivation to success. Those ones, who are strongly motivated to obtain success and have a high readiness for risk, face disastrous occasions more rarely, in comparison with those ones, what have a high readiness for risk less, but high motivation to avoid failures (protection). And, on the contrary, when the person has a high motivation to avoiding of failures (protection) it interferes with motive to success - to purpose achievement.

The research on studying of the strength and orientation of motivation to obtain success and motivation to avoid failure with use of the Hekhausen's motivational test from practice guidance of Sobchik L.N. has been also conducted in third and fourth year students. Hekhausen uses 6 pictures, which illustrate the fragments of official and industrial situations, as a stimulus material, which encourages the experimental subject to identify the strength and orientation of its motivational sphere unconsciously. The basic signs, which simple calculation allows to calculate and to compare two leading motives, directed to achieve an objective and to avoid failure, are differentiated with "key" under the plots, developed by experimental subject. Since 1972 updating of this method offered by Y.A. Kalinin and V.G. Norakidze has been used for both individual, and group tests.

During experiment with 1 to 4 year students, each picture was exhibited on the screen. The sheets with printed questions have been issued to the students: What is happening here and who are those people? How did this situation occur and what was before it? About what does each person illustrated on the picture think, what does each of them want? What will occur after that, what the end of situation will be? Students have been informed on that it is a test to research their imagination and ability to imagination. 5-10 minutes is defined for each picture. Upon completion of the experiment, each story of the experimental subject was processed separately by means of the text decoding "key"; after that, the categories of motivation to obtain success (SE - success expectation) and categories of motivation to avoid failure (FE - Failure Expectation) were differentiated. Then, quantity of mentions of these categories by each kind of motivations was counted up. The total category mentions by each motivation speaks for degree of its intensity. Each mention is quantitatively equated with one point.

We have received the following results: average achievement motivation intensity level was 12 points, and motivation to avoid failure was 6. According to the substantial interpretation of the stories, it was found out that generally, the statements have been referred to the activity (training, work), statements on need for being a good professional, much knowledge, independence, being a leader in the group, showing an insistence and persistence are of frequent occurrence. These statements concern motivation to expect the success. The stories, where pessimistic uncertain notes with lines of dependence have been shown, were characteristic of the people with motivation to avoid failure.

**Conclusion.** In the course of the analysis of the research results, the following conclusions have been drawn: average achievement motivation level dominated in students with various training course. The well-known Yerkes-Dodson's Law, associating a motivation level with intellectual activity, determines a dependence of the best results upon average intensity of motivation. There is a certain border beyond which the further increase in motivation leads to deterioration of the results.

The importance of this research consists in that the revealed relation between achievement motivation and cognitive interest of the students in general mechanism of mental training and education regulation allows a teacher to identify the reference points of psychological training and education management, to have a psychologically reasoned impact on formation and prospects of the life journey of the student.

We have observed the characteristic lines in students with expressed achievement motivation of achievement, in particular: desire to work under the conditions of maximum stimulation of the achievement motive. And also aspiration to search for more efficient methods of the problem solutions.

At student age the achievement motivation generates a cognitive interest. As a whole, it promotes harmonious development of the human person. Increase in average and high levels of the achievement motivation leads to development of the students' cognitive interest, aspiration to increase their intellectual level.

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