

Medical Education

# Improvement of Students' Training Level in Higher Educational Institutions

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## Abstract

Objective: to determine the effective factors of impact on the internal motivation stimulation for students' study.

## Keywords

motivation; study; influence factors

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## 1. Materials and Methods

In this study 56 students took part; they had come to the Department of Internal Medicine #2 and Nursing in 2016 being the 5<sup>th</sup> year-students for learning of the subject "Internal Medicine", and had continued their study in this Department in 2017 as students of the 6<sup>th</sup> year of study in the same amount. 12 students of them were in a control group.

## 2. Literature Review

Having analyzed scientific literature, we can easily say that success of the student depends on his/her individual motivation, desire to receive education and to improve himself/herself [1, 7, 11, 15]. The student has to be considered an integral personality in the process of learning-cognitive activity, because formation of motivation is on the boundary of education and personal development [1, 2, 9, 10]. This means that tutors have to look after both educational process (professional training) as well as personal development of the student [5, 15].

Studying capability is laid in the human being in early childhood [12, 13, 16]. This means how a student can orientate, collect and organize him-

self/herself [3, 13]. Having performed the analysis of study of students of the first and second years of study, we can easily say that their educational process depends foremost on capability to work with information. Many junior students have low self-esteem that makes them spend time for searching of "right-necessary" information, form inadequate motives.

Motivation forming in students depends directly on the teacher's credibility and successfulness [2, 4, 6, 14, 15, 17]. That is if the teacher uses some innovative technologies in his/her pedagogic practice, or can find an approach individually and catch student's interest with his/her delivery of theoretical and practical material [7, 9, 10, 17].

The student of a medical institution must have not only professional qualities (knowledge, skills and practical abilities), but must also know relationships between people (reach and poor, homeless or orphan), have creative skills (various approaches in medical deontology) [5, 6, 9, 10].

Motivation – is an important component of any human activity and is a driving force of everything "impossible". As our grandmothers say: "It is easy to find a stick to beat a dog", or "Without

an inner engine, the car would not go up". Motivation increases human's desire to get success, stimulates educational activity, is a so-called "inner engine" [7, 8].

External motivation pays off rarely or shortly. It relies on promotions, punishments and other types of stimulation that direct or hinder human behavior [5]. And only then, when a human starts acting, in order to get positive mental (inner) state, internal motivation appears [4, 6]. This occurs then, when the student organizes himself/herself on own initiative independently of someone's will [5, 12].

### 3. Results

higher educational institutions work for stimulation of external motivation exactly (rating assessment, recording absence, state employment, scholarships, tests, and others) and one of their main tasks is that in some time the external motivation should become strong internal motivation.

Since "to teach up" is easier than to learn a new completely, we've tried to review regularly with a group of students in each class basic disciplines according to the theme (anatomy, physiology, propeutics, etc.) that allowed us to see some differences in students' behavior compared to the control group of students, where such reviews were not regular (Table 1).

Having understood that the result of direct pressure of students (persuasions, punishments, etc.) causes aggressive behavior and conflict situations occur, we've used also a "hidden compulsion method". This allows giving the student individual tasks according to his/her mental capabilities and thus to create a situation where the student just is not able not to learn. For this method there were developed such topics for home task which the students had to prepare as mini-reports for next classes according to the topics. These were the topics for review of learnt material during the previous years of study for weaker students. For example, while learning arterial hypertension, they were offered such topics to choose from:

- anatomical peculiarities of vascular wall;
- etiologic factors of hypertension development;

- pathogenetic links of hypertension;
- normal physiology and pathophysiology of increased and decreased blood pressure.

The 5-year students had to prepare slides in these topics and to report them during 4-5 min at the beginning of the lesson. And students with better knowledge were offered more complicated topics with a new theory. For example:

- comparison of antihypertensive drugs;
- pharmacodynamics and pharmacokinetics of  $\beta$ -adrenoblockers;
- indications and contraindications for the use of each class of antihypertensive drugs;
- hypertension and pregnancy;
- modern medicines in hypertension treatment.

As our observation showed the complicity of proposed tasks can not only give new knowledge but also make self-esteem lower (Table 2).

As it is seen, student's internal interest with weak theoretic preparation is stimulated by tasks of lesser complicity, and complicated tasks – on the contrary decrease his/her feeling of competence, self-respect, suppress his/her interest in learning. Strong students in learning have to be stimulated with complicated tasks that will give them an opportunity to show their skills in training, to realize themselves and to strive for self-improvement. The complicated tasks for students with good preparation show that they have a way to go, have more to learn.

After a student learns to study, gets some knowledge level, it is important to teach the student use this knowledge. The teachers need for this to inspire confidence into the students, to create some air in the group where everyone would feel comfortably and can open himself/herself. We offered our students a "Team Game" where each has his/her own role.

Providing medical assistance to the patients – is exactly the team activity where on a treatment stage each from the medical staff has to fulfill best his/her duty, otherwise provided medical aid brings no proper benefit to the patient. For example: acute coronary syndrome is simulated by a "student-patient", upon that supposed relatives have called an ambulance crew. Other students do roles of an ambu-

**Table 1.** Influence of review of learned knowledge on mastering the new material

	2016 45 students	2016 11 students (control group)	2017 45 students	2017 11 students (control group)
Improvement of self-worth	++	–	+++	+
Perception of new information	++	+	+++	++
Replication of new information	++	+, –	+++	+
Skills formation	+++	++	+++	++
Internal motivation	+++	–	+++	+

Notes: (+++) – excellent; (++) – good; (+) – satisfactory; (–) – not satisfactory.

**Table 2.** Influence of complicity level of tasks on students with different level of theoretic training

Complicity level of tasks	2016 15 students with weaker knowledge	2016 15 students with weaker knowledge	2016 30 students with strong knowledge	2016 30 students with strong knowledge
	Easy tasks	Complicated tasks	Easy tasks	Complicated tasks
Increased self-esteem	+++	+, –	–	++
Showed skills in a completed task	++	–	+, –	+++
Ability to realize oneself	++	–	–	+++
Internal motivation	+++	–	–	+++

lance attendant, a nurse, an admitting physician, a cardiologist-resuscitator. On each stage they perform disease diagnostics, making of diagnosis, treatment till hospitalization into regional cardiological center. In the course of the game, the students have to understand themselves what they had done wrongly, which mistakes had occurred. The students prepare for such task themselves in advance; they need not only to learn material well, but also to find their actor skills in the middle of the classroom and without any tips. As our experiment had shown, the students from the control group who were not offered such a game in the course of a year study, had difficulties in providing the medical assistance during the 6<sup>th</sup>-year of study in a team, however they knew theoretic material very well, but the 6<sup>th</sup>-year students who had played such a "Team Games" on the 5<sup>th</sup>-year of study, have easily chosen a correct medical aid scheme, could make decision themselves when simulated complications

occur (Table 3).

Ability to work in team means to be able to depend on others. Because when each student can prepare well and does something wrongly, then the next student has not only to understand the previous student's mistake, but he/she must also try to correct it while not hurting the patient.

## 4. Conclusions

1. The main condition for good teaching of medical students is maximally individual approach to stimulation of his/her internal motivation.
2. Constant practice and game element even during senior years of study stimulate scientific interest in students that, in its turn, helps them to self-organize and to use immediately theoretic and practical knowledge in unusual situations.
3. Cognitive interest is driving force in striving

**Table 3.** Ability to work in a team in the 5<sup>th</sup>-6<sup>th</sup>-year students

	2016 45 students	2017 45 students	11 students (control group)
Skill mastering	++	+++	+
Development of activity capability	++	+++	+
Use of new sources	++	+++	+
Ability to work in a team	++	+++	+, -
Internal motivation	++	+++	+

ing to self-improvement, use in teaching of personal approach in solving of set tasks independently of previous training.

4. Stimulation of emotional satisfaction with own achievements is an "internal engine" in formation of internal motivation in a student to the study.

### Conflict of Interest

The authors stated no conflict of interest.

### Financial Disclosure

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