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The Study on the Connection between Motivation for High-Performance Learning and the Level of Academic Performance among Students of Various Levels and Areas of Study

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Abstract

Developing the potential of young adults is impossible without education, including higher education. Opinions vary on how grades affect further success or failure of an individual, however, educational results are first and foremost evaluated by academic performance, which depends on many factors. Some of them can be influenced by professors and other university staff, as well as parents, schools and other professionals, such as career counselors. One of the deepest and most important issues to study is student motivation.

The objective of this work was to study the connection between motivation for high-performing studies and the level of academic performance among students of various levels and areas of study at the Financial University. The research was conducted through a sociological online survey of a wide sample of students at the University. The survey enrolled 1324 students of all years, faculties, full-time and part-time forms of education.

This article presents the results of a three-stage study: the first stage was related to researching the characteristics of academic performance among students, the second stage was focused on the connection between motivation for high-performance learning and the level of academic performance among students at various levels of education (undergraduate/graduate). Finally, at the third stage, we studied the connection between motivation for high-performing learning and the level of academic performance among students of various faculties.

The results showed that the higher the progress of students is, the more their intrinsic motivation prevails, and vice versa, students with low progress incline to extrinsic motivation and amotivation. The practical significance of the results obtained is that they can be used for creating various programs of additional extracurricular activity in universities, for career guidance for school students and higher school applicants, and for consultations, including admission consultations with young adults and their parents.

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1. Introduction

Developing the potential of young adults in higher educational institutions is inextricably connected with the educational process, since the main goal of studying in higher educational organizations is to acquire a profession and related competencies obtained in the course of studying the disciplines that are settled in the curriculum for a particular special field. Academic performance, meaning the grades that students receive for their tests and exams, may indicate the level of their intellectual potential, as well as their professional and social skills. In this regard, it seems relevant to study the factors that affect academic performance, especially such internal factors as motivation.

Academic performance is one of the most important aspects associated with the learning process at universities. Various scientists have studied a fairly large number of factors that may be linked with academic performance or may affect academic performance: relationships with teachers (Ruiz-Alfonso, Leon, 2017; Vallerand et al., 1992), student relationships with each other (Ingraham et al., 2018), mental well-being (Shen et al., 2010). Psychologists have recently joined such studies (Alessandri et al., 2020; Bean, Eaton, 2012).

The researchers from this field were interested in the factors that can be related to academic performance. In particular, the researchers from Romania assessed how student performance can be related to their involvement in the learning process and the burnout they may experience (Palos et al., 2019).

By burnout, in this case, the researchers meant a personal state characterized by a shift in attitude to the educational process as a whole, to fellow students, to teachers, etc. Students who experience this state quite often feel disappointed in their profession, in the learning process, in the university that gives them the opportunity to get a profession, etc. Therefore, as some researchers note, it is important not only to help students who experience such a condition but to prevent it, help reduce the conditions that may lead to burnouts. Researchers focused on burnouts have repeatedly noted that among the professions most prone to it, the “risk group” consists primarily of those whose work throughout their whole professional career is associated with communicating and interacting with other people (Pronin et al., 2020).

What other emotional states can be associated with burnout? Researchers quite often state that stress can directly affect the level of academic performance among students. For example, scientists from Ghana studied the influence of stress on academic performance at medical colleges. For that purpose, they asked students to complete a stress study scale. Besides, they assessed student grades and the methods they most frequently use to protect themselves from stress. The researchers proposed to divide stress into several main types, in accordance with the events that can cause it (so called stressors):

1. Academic stressors (i.e. events related to studies and the duration of vacations).
2. Interpersonal stressors (i.e. events linked to intragroup relations, obligations towards relatives).
3. Intrapersonal stressors (bills to be paid and situations when students spend more money than they can afford).
4. Environment-related stressors.

Statistical processing showed the following results: there is a difference between students who use various methods related to stress management. It was also found that the way students react to a stressful situation has a significant impact on their academic performance. After additional statistical data processing, it was also stated that the amount of vacation time (if not enough) also affects student academic performance. All these factors play a rather important role in the process of successful learning and efficient understanding of lessons (Hayford et al., 2019).

Researchers also pay a rather high attention to situations when a student cannot cope with the academic load at the university. In particular, the models based on the data obtained from the learning management system (LMS) at the University (Australia), made it possible to predict with fairly high level of probability which students might have difficulties in studying in an educational institution. Two main factors were used to build these models:

- 1) admission to the university (for example, entrance exams or practical work experience);
- 2) class attendance (for example, full day or private attendance).

The undoubted advantage of these studies may be in the fact that the use of these models can be one of the preventive, but quite effective measures for timely assistance to students (Helal et al., 2018).

The results of various studies confirm an interesting pattern: the level of academic performance is influenced by various factors that are connected, among other things, with the student education area (or, in other words, with the faculty they study at). In particular, the study (Ingraham et al., 2018) shows that there is a relationship between the student learning area and the success in learning that they demonstrate. So, the researchers come to the conclusion that this process is influenced by a limited number of factors. In particular, they include: support from teachers, care and concern for students, diversity (for example, in teaching methods) and ignorance that can be shown from both teachers' and students' sides.

Some researchers paid attention to other psychological aspects that may be important indicators of student academic performance. Quite often in the university environment, complaints can be heard (in particular, from mathematics professors) about low motivation in students. One of the researches specified that internal motivation and interest from both students and teachers has a positive effect on the academic certification of mathematical course participants (Ruiz-Alfonso, Leon, 2017).

Thus, academic performance of university students is determined by various factors (Kavousipour et al., 2015), many of which have been previously studied by researchers from various countries. However, a large-scale study of the connection between academic motivation and performance of students from a financial and economic university, broken down by year groups, faculties and levels of education, has not been previously conducted. This study is intended to eliminate this gap in scientific knowledge, and its results can be used for organizing extracurricular and educational student activity in order to influence their motivation type and, thereby, improve learning results.

2. Materials and methods

The objective of this empirical study was to explore the specifics of student academic performance, its dependence on various factors, both organizational, related to the students' place of residence and work, and motivational. To do so, their academic performance and a number of other factors that may also affect their academic performance were assessed. In particular, these include:

1. The student's place of study (for example, whether he studies in the same city he graduated from school or moved to another region).
2. Job (if a student works, does it somehow affect his/her academic motivation).
3. Job area, that is, whether their job is related to their major.

To explore the specifics of academic performance, students were offered to answer a range of questions (Table 1).

Table 1. Questions Offered to Respondents

Question	Answer Options
How would you evaluate your performance at the university in general?	<ol style="list-style-type: none"> 1. high (I am at the top 25 % at my year) 2. above average 3. average 4. below average 5. low (I am at the 25 % of the least successful students)
How would you evaluate your chances to successfully graduate and get a diploma?	(0-100 %)
In your opinion, what are your chances to successfully (with no fails) pass your term exams?	(0-100 %)
You study:	<ol style="list-style-type: none"> 1. in the same city you went to school 2. another city but the same region you went to school 3. moved to study to another region 4. moved to study to another country

Do you have a job?	<input type="radio"/> yes, regular job (full-time) <input type="radio"/> yes, regular job (part-time) <input type="radio"/> yes, regular job (flexitime, freelance) <input type="radio"/> occasionally (project work etc.), not regularly <input type="radio"/> no, I don't have a job
If you have a job, can you say that it is in the same area you study at the university?	1) yes, the same 2) mostly yes (has a certain connection with my future profession) 3) mostly no (remote connection to my future profession) 4) no, not connected

The next stage of the research implied a study of the connection between motivation for high-performance studies and the level of academic performance among students at various levels. For these purposes, their academic performance and motivation for high-performance studies were assessed. The research methodology was based on the Academic Motivation Scale questionnaire (Osin *et al.*, 2014). This methodology, designed to measure the level and type of motivation for learning activities, was created by T.O. Gordeeva, O.A. Sychev and E.N. Osin in 2014 based on the Academic Motivation Scale by R. Vallerand (Vallerand *et al.*, 1992) and is represented in the form of a questionnaire with statements grouped by 7 main factors that determine student motivation for learning, 3 of them related to internal motivation, 3 to external and 1 to absence of motivation:

1. Learning motivation – includes statements related to collecting new information. Example of statement: “It is interesting for me to learn”.

2. Achievement motivation – contains statements related to solving problems and getting satisfaction from the process. Example of statement: “Learning gives me pleasure, I like to solve difficult problems”.

3. Self-development motivation – statements in this block were related to considering learning as an internal process of self-development. Example of statement: “I enjoy overcoming myself in learning achievements”.

4. Self-respect motivation – the factor that includes statements related to getting satisfaction from the learning process. Example of statement: “I want to prove to myself that I am capable to study well at the university”.

5. Introjected motivation – contains statements related to stimulating the study process by the sense of duty. Example of statement: “I am ashamed of being a bad student”.

6. External motivation – learning based on desire to avoid social problems. Example of statement: “I don't have another choice as the attendance is taken”.

7. Amotivation – statements are related to the lack of desire to study and of understanding why it is required. Examples of statement: “Frankly speaking, I don't know, I feel like wasting my time here”.

This methodology is based on the self-determination theory created by E. Deci and R. Ryan (Deci *et al.*, 2001; Deci, Ryan, 2008). The scale developed by Gordeeva, Osin and Sychev consists of 28 statements. These motivation factors include 4 statements per factor. The respondent had to evaluate each statement on a 5-point scale (from 1 – “does not correspond at all”, to 5 – “quite corresponds”).

This study was conducted by a Google Forms online survey. The results were processed with the STATISTICA and SPSS software. The survey engaged a total of 1,324 respondents – students of the Financial University under the Government of the Russian Federation, enrolled in all 4 undergraduate and 2 graduate years on a full-time and part-time basis, on a budgetary and commercial basis (Table 2).

Table 2. Description of respondents according to their study year

Year	Undergraduate				Graduate	
	1 st year	2 nd year	3 rd year	4 th year	1 st year	2 nd year
Percents	28,5	25,5	15,5	12,0	10,4	8,1

3. Results

The results of the study showed the following specifics connected to the student academic performance.

Most of the students surveyed state that their academic performance ranges from "average" to "high". Only a few of those surveyed say that their academic performance is "below average" or "low". These results may be caused by two main reasons:

1. Participating students may be subject to the "social desirability effect" when, even when anonymous, many still answer a little better than they really are,
2. Participating students indeed have a fairly high academic performance. This may be explained by the desire of well-performing students to participate in the study.

The next question the students were asked was about their own estimation of their chances to successfully graduate from university and get a diploma. Most of the respondents are confident that they will successfully graduate from the university and get a diploma. This metric is also an indirect indicator of the student academic performance since the part of the students who are sure that they will get a diploma, probably has such a personal quality as self-efficacy.

The next question asked to the students was related to their assessment of their own capability to pass the next term exams without fails. Even more students believe that they will pass the next term exams without fails. Such distribution of answers may indicate that students have successfully adapted to the educational process at the university. On the one hand, such attitude towards term exams may indicate that students do not take this period seriously enough. On the other hand, such confidence may be due to the fact that students study during the term and by the end of it are firmly convinced that their knowledge will be enough to pass their term exams without fails. Additional studies are required to confirm these hypotheses.

The next block of questions was related to original location of students, as well as whether they work while studying at the university. Most of participating students either study in the same city where they went to school (that is, are from Moscow) or moved to study in another region. The performance of these groups also differs from each other. So, for example, students who came to study to another region more often rate their own academic performance as "above average" and "high", while students who graduated from school in the same city rate their performance more often as "average" and "above average".

The next question was related to whether the students work during the learning process. We couldn't establish a clear pattern of connection between work and academic performance. The number of students who have a regular job and who work occasionally is approximately the same. A much larger number of students answered that they did not have a job. This distribution may be due to the fact that most of the students who participated in the study are just starting their full-time undergraduate program (when they rarely work). In general, the group of those who answered that they don't have a job includes the majority of students who rate their academic performance as high. Those who answered that they have a regular job rate their performance lower than those who do not work.

The last question was related to the nature of the student's job (if they answered that had a job in the previous question). Most of the students who took part in the survey do not have a job in the same area they study (if they work at all while studying at the university). Most of those who answered that they did not have a job in the same area they study, nevertheless, assessed their performance fairly highly. Many students, as the previous stages of the research showed, experience difficulties in finding a job. Probably, without an opportunity to work in the same area they study, if they feel the need to work at all, they engage in a profession other than the one they are studying. On the one hand, this does not prevent them from performing well at the university, on the other hand, it probably causes difficulties in finding employment after graduation.

This study leads us to a conclusion that the majority of students assess their performance as average and above average. They are rather serious about getting a higher education, mostly they do not have a job, and among those who do not have a job, the majority of students rate their own academic performance reasonably highly. A complete summary of the responses to the questions in Table 1 is provided in the appendix to this article.

Next, we will analyze the results of a study of students enrolled in undergraduate programs (Table 3) (the values in the cells are the average values for various academic motivation scales, the maximum possible value is 20 points).

Table 3. Average values and standard deviations of academic motivation for student groups with various academic performance in undergraduate programs (M±SD)

Motivation Types	Academic Performance				
	Low	Below average	Average	Above average	High
Learning motivation	11,5714 ±3,704	12,0976±3,691	13,6013±3,715	14,9033±3,724	15,0864±3,594
Achievement motivation	8,8571 ±2,864	8,4390±2,797	9,6412±2,924	10,9779±2,864	11,6543±3,004
Self-development motivation	11,0714 ±3,869	11,7805±3,872	13,4352±3,859	15,1077±3,819	15,5648±3,799
Self-respect motivation	9,0714 ±4,463	10,2439±4,455	12,2226±4,503	14,1602±4,299	14,1173±4,467
Introjected motivation	6,9286 ±3,122	7,9268±3,422	9,0664±3,120	9,9309±3,135	10,0833±3,322
External motivation	11,4286±3,723	13,1463±3,729	12,0100±3,753	11,7707±3,800	11,5926±3,763
Amotivation	14,0000±4,484	12,0000±4,497	10,1462±4,184	9,0856±4,422	9,1080±4,514

The motivation of students who evaluate their own performance has a certain specifics. First, learning motivation is high when it comes to "above average" and "high" grades. This type of motivation tends to increase with the increase in the students' assessment of their performance. Second, achievement motivation is not too different when students rate themselves as "poor" and "below average" and tends to increase when students rate their own performance as "average" and above. Thirdly, the trend towards an increase in average values is specific to most academic motivation scales, with the exception of external motivation. That is, students who are motivated only by an external behavior system, usually study at a fairly low academic level. Fourthly, the level of amotivation decreases when moving from "low" performance to "high". That means that students who are motivated to learn have a fairly low level of amotivation.

The results of the graduate programs students are presented in [Table 4](#) (the values in the cells are the average values for various academic motivation scales, the maximum possible value is 20).

Table 4. Average values and standard deviations of academic motivation for student groups with various academic performance in graduate programs (M±SD)

Motivation types	Academic Performance				
	Low	Below average	Average	Above average	High
Learning motivation	8,0000±3,675	10,8333±3,665	14,2830±3,675	14,8636±3,722	14,8036±3,805
Achievement motivation	8,0000±2,579	8,0000±2,581	10,2830±2,619	11,1023±2,499	11,2857±2,539
Self-development motivation	10,3333±3,955	9,5000±3,945	13,1321±4,025	13,9318±3,967	14,3839±3,921
Self-respect motivation	10,6667±4,518	6,6667±4,511	11,4528±4,498	12,1818±4,527	12,1250±4,601
Introjected motivation	7,3333±3,223	6,5000±3,233	8,4528±3,199	8,5114±3,247	8,9643±3,219
External motivation	9,6667±3,602	10,1667±3,611	10,9057±3,607	10,1591±3,627	10,9464±3,598
Amotivation	14,3333±4,699	9,3333±4,671	10,5660±4,595	9,4773±4,703	10,5446±4,690

At this level of education, other trends can be noted. So, for example, compared to undergraduate programs, there is no clear dynamics of amotivation decrease and of the connection of this motivation type with the student's self-assessment of their performance. Some motivation types have an ambiguous connection with the level of assessment (for example, self-respect motivation). High values of external motivation, as a rule, according to students, are connected to high academic performance. In general, the results obtained may indicate that not many students who study at graduate programs perceive it as a way to learn something new (despite the fact that the trend of cognitive motivation increase and related increase in academic performance has repeated). Perhaps, if previously external motivation consisted in the fact that successful graduation from the university allows to get a good job, then, admitted to the graduate program, its successful completion gives a chance to move up the career ladder.

Let's follow with the results by departments.

First, we will analyze the results obtained from the survey conducted among the students of the Institute of Online Education. There were not so many students who would rate their academic performance as "low" and "below average". In this regard, it was decided to unite these students in one group.

Table 5 shows the motivation factors for the students of this Institute in descending order.

Table 5. Motivation factors for the students of the Institute of Online Education, depending on their academic performance

Performance	Low, Below average	Average	Above average	High
Academic motivation types in descending order	Learning motivation	Learning motivation	Learning motivation	Self-development motivation
	Self-development motivation	Self-development motivation	Self-development motivation	Learning motivation
	Amotivation	Self-respect motivation	Self-respect motivation	Self-respect motivation
	External motivation	Achievement motivation	Achievement motivation	Achievement motivation
	Achievement motivation	External motivation	External motivation	External motivation
	Self-respect motivation	Introjected motivation	Introjected motivation	Amotivation
	Introjected motivation	Amotivation	Amotivation	Introjected motivation

According to the results of the study, the following interesting patterns can be seen: only a small number of students assess their academic performance as "low" and "below average" (which is why these levels were united in one category). In addition, the highest values in all assessments are associated with a high level of learning motivation. Although students who rate their academic performance as excellent, put self-development motivation in the first place. Amotivation also affects students' self-assessment in different ways. At the "average" and "above average" levels, amotivation is the last factor. At the "low" level, this motivation type is in the third place, and for students who rate their own performance as "high", this motivation type is in the penultimate place. That is, students who study at this Institute have a high level of learning motivation, their motivation level is directly related to their assessment of their studies – motivated students rate their own progress higher, students with external motivation, respectively, lower. In general, these trends are typical for all levels of assessment.

Let's analyze in more depth the results of students of the Faculty of International Economic Relations. Students of this faculty were divided into only three levels (unlike students from other faculties). The reason to do so was that only one student responded with assessment his academic performance as "low". Also, only one student out of all answered that they assessed their level of academic performance as "below average". The results for the students of this faculty are presented in Table 6.

Table 6. Motivation factors of students of the Faculty of International Economic Relations depending on their academic performance

Performance	Low, Below average and Average	Above average	High
Academic motivation types in descending order	Learning motivation	Learning motivation	Self-development motivation
	Self-development motivation	Self-development motivation	Learning motivation
	External motivation	Self-respect motivation	Self-respect motivation
	Self-respect motivation	Achievement motivation	Achievement motivation
	Achievement motivation	External motivation	External motivation
	Amotivation	Amotivation	Introjected motivation
	Introjected motivation	Introjected motivation	Amotivation

Judging by the data in Table 6, students have a fairly standard profile related to motivational features. So, learning motivation and self-development motivation have the highest values at all three levels of the student self-assessment of their own performance. Introjected motivation and amotivation also close the scale range for students who evaluated their academic performance at various levels. Other features are also typical for students of other faculties.

Let's move to analyzing the results obtained while processing the results for the students at the Faculty of Finance. At this faculty, students evaluate their own performance at all possible levels – that is, from "low" to "high". The rest of the results are presented in Table 7.

Table 7. Motivation factors of students of the Faculty of Finance depending on their academic performance

Performance	Low	Below average	Average	Above average	High
Academic motivation types in descending order	Amotivation	Learning motivation	Learning motivation	Learning motivation	Self-development motivation
	External motivation	Self-development motivation	Self-development motivation	Self-development motivation	Learning motivation
	Self-development motivation	External motivation	Self-respect motivation	Self-respect motivation	Self-respect motivation
	Learning motivation	Amotivation	External motivation	External motivation	External motivation
	Achievement motivation	Self-respect motivation	Amotivation	Achievement motivation	Achievement motivation
	Self-respect motivation	Achievement motivation	Achievement motivation	Introjected motivation	Amotivation
	Introjected motivation	Introjected motivation	Introjected motivation	Amotivation	Introjected motivation

Students at the Faculty of Finance show a high level of amotivation when they rate their academic performance as "low". In all other cases (except for the "high" rate), they demonstrate high values on the learning motivation scale. For a high level of self-estimation, self-development motivation comes first. In addition, introjected motivation demonstrates the lowest values at all levels except for "above average".

Next, let's consider in more detail the results that were obtained in the study of the Higher School of Management students. Students at this faculty rarely rate their own performance as "low" or "below average". Other features are presented in Table 8.

The students of the Higher School of Management with different levels of self-assessment of academic performance (with the exception of "low" and "below average" academic performance)

place self-development motivation first. Only when it comes to underachieving and below-average students, amotivation is at the first place. Then comes the learning motivation. All students who assessed their own performance differently have a low level of introjected motivation. Other motivation types do not have a clear connection with student self-assessment of their own performance.

Table 8. Motivation factors of students of the Higher School of Management depending on their academic performance

Performance	Low, Below average	Average	Above average	High
Academic motivation types in descending order	Amotivation	Self-development motivation	Self-development motivation	Self-development motivation
	Self-development motivation	Learning motivation	Learning motivation	Learning motivation
	Learning motivation	External motivation	Self-respect motivation	Self-respect motivation
	External motivation	Self-respect motivation	External motivation	External motivation
	Achievement motivation	Amotivation	Amotivation	Achievement motivation
	Self-respect motivation	Achievement motivation	Achievement motivation	Amotivation
	Introjected motivation	Introjected motivation	Introjected motivation	Introjected motivation

The next faculty to be evaluated is the Faculty of Taxes, Audit and Business Analysis. For students at this faculty, the following feature should be noted: not a single student answered that their academic performance could be assessed as “low”. Other features are presented in [Table 9](#).

Based on these data, we can see that the different level of performance assessment among students at this faculty, unlike all other faculties, is associated with self-development motivation and self-respect motivation. In addition, students at this faculty who evaluate their performance as "below average" and "average" have rather low values on the achievement motivation scale, while students who rate their own performance as “above average” and “high” have low values on the amotivation scale.

Table 9. Motivation factors of students of the Faculty of Taxes, Audit and Business Analysis, depending on their academic performance

Performance	Below average and Average	Above average	High
Academic motivation types in descending order	External motivation	Self-respect motivation	Self-development motivation
	Learning motivation	Self-development motivation	Learning motivation
	Self-development motivation	Learning motivation	Self-respect motivation
	Amotivation	External motivation	Achievement motivation
	Self-respect motivation	Introjected motivation	External motivation
	Introjected motivation	Achievement motivation	Introjected motivation
	Achievement motivation	Amotivation	Amotivation

The results that were obtained at the Faculty of Information Technology and Big Data Analysis are also interesting. The number of its students who rated their own performance as "low"

and "below average" was also small. General features identified in students of this faculty are presented in [Table 10](#).

Table 10. Motivation factors of students of the Faculty of Information Technology and Big Data Analysis depending on academic performance

Performance	Low, Below average	Average	Above average	High
Academic motivation types in descending order	External motivation	Learning motivation	Learning motivation	Learning motivation
	Learning motivation	Self-development motivation	Self-development motivation	Self-development motivation
	Amotivation	Self-respect motivation	Self-respect motivation	Self-respect motivation
	Self-development motivation	External motivation	Achievement motivation	External motivation
	Self-respect motivation	Achievement motivation	External motivation	Achievement motivation
	Introjected motivation	Amotivation	Introjected motivation	Introjected motivation
	Achievement motivation	Introjected motivation	Amotivation	Amotivation

As the results from [Table 10](#) show, the students at this faculty rely more on learning motivation and self-development motivation. At the same time, for the students who rate their performance as “high”, a low level of amotivation and introjected motivation is typical. External motivation is rated high only by those students who consider their academic performance as "low" and "below average". They also possess a low level of self-achievement motivation.

Let's take a closer look at the results that were obtained with the participation of students studying at the Faculty of Social Sciences and Mass Communications. At this faculty, out of the total number of respondents, only 1 person rated their own academic performance as “low” and another 1 rated it as “below average”. The rest of the data is presented in [Table 11](#).

Table 11. Motivation factors of students of the Faculty of Social Sciences and Mass Communications depending on academic performance

Performance	Low, Below average and Average	Above average	High
Academic motivation types in descending order	External motivation	Self-development motivation	Learning motivation
	Amotivation	Learning motivation	Self-development motivation
	Self-development motivation	Self-respect motivation	Achievement motivation
	Learning motivation	External motivation	Self-respect motivation
	Self-respect motivation	Achievement motivation	External motivation
	Achievement motivation	Introjected motivation	Amotivation
	Introjected motivation	Amotivation	Introjected motivation

For students who assess their own performance as "low", "below average" and "average", high values on the external motivation scale are more typical. For students with “above average” and “high” (performance), two leading motives in the educational process are identified, as a tradition already – learning motivation and self-development motivation. In addition, we can see the feature

typical for the students of this faculty and already revealed in the students of other faculties – low level of introjected motivation and amotivation.

It is also necessary to consider the results of students who study at the Faculty of Economics and Business. The features of the students at this faculty include the following trend: these students did not choose the option of assessing their performance as "low" and "below average". Other features are presented in [Table 12](#).

Table 12. Motivation factors of students of the Faculty of Economics and Business, depending on academic performance

Performance	Average	Above average	High
Academic motivation types in descending order	Self-development motivation	Self-development motivation	Learning motivation
	Learning motivation	Self-respect motivation	Self-development motivation
	Self-respect motivation	Learning motivation	Self-respect motivation
	External motivation	Achievement motivation	Achievement motivation
	Amotivation	External motivation	External motivation
	Achievement motivation	Introjected motivation	Introjected motivation
	Introjected motivation	Amotivation	Amotivation

Students who assess their performance as "average" and "above average" have high scores on the self-development motivation scale. Students who rate their academic performance as "above average" and "high" have low scores on the amotivation scale. Unlike students from other faculties, those students who study at this faculty demonstrate high scores on the learning motivation scale.

And the last faculty to be considered in this study is the Faculty of Law. One of the features of this faculty to highlight is that there were no students who would rate their own academic performance as "low". Other features are indicated in [Table 13](#).

Table 13. Motivation factors of students of the Faculty of Law, depending on academic performance

Performance	Below average	Average	Above average	High
Academic motivation type sin descending order	External motivation	Learning motivation	Self-development motivation	Learning motivation
	Learning motivation	Self-development motivation	Learning motivation	Self-development motivation
	Self-development motivation	Self-respect motivation	Self-respect motivation	Self-respect motivation
	Amotivation	External motivation	Achievement motivation	Achievement motivation
	Achievement motivation	Amotivation	External motivation	External motivation
	Self-respect motivation	Introjected motivation	Introjected motivation	Introjected motivation
	Introjected motivation	Achievement motivation	Amotivation	Amotivation

There are a few interesting features to highlight. Among them is the fact that students who evaluate their own performance at the average level have rather low scores on the achievement motivation scale. Besides, there is a high level of external motivation (in the assessment of "below average"). The other patterns are mostly similar to those found among students at other faculties. In addition, it was found that students who rate their own performance as "average" have low

scores on the achievement motivation scale. At the same time, students who rate their own performance as “above average” and “high” have low values on the amotivation scale.

4. Discussion

The results of the study conducted by the authors of this research can be compared with similar domestic and foreign socio-psychological studies. For example, the long-term study of students who entered the Higher School of Economics in 2014 revealed that motivation has an indirect effect on academic performance, and learning activity acts as a mediator (Semenova, 2016), which does not contradict the results obtained by the authors of this article, but complements and refines them.

In a study in Romania, the researchers were answering the question: is there a connection between the academic performance demonstrated by students and their feeling of well-being. By well-being, the researchers meant two main options for the evolution of the student state: either their engagement, or their burnout. For this purpose, they interviewed the students who filled out questionnaires to diagnose their burnout (they filled them out twice). After that, the data on these students' performance were obtained. The researchers used the method of path analysis that highlighted the following results: the grades received by students can be predictors of student engagement and their burnout. But their engagement or burnout cannot be considered as a predictor of their grades while at the university (Paloş et al., 2019).

Psychologists from Spain also got interested in academic performance and the factors that determine it. Since the Financial University offers a multitude of various mathematics-related disciplines, this study is of particular relevance. The researchers (Ruiz-Alfonso, Leon, 2017) interviewed 1170 students enrolled in a course in mathematics. They were asked, in particular, to what extent they found this course useful, to what extent the professor was able to explain to them the significance of this course in the learning process, etc. The results revealed several interesting features. In particular, it was found that students who feel “passion” from teachers (that is, they see that they are not the only ones interested, but their teachers are too) perceive mathematics and their intrinsic motivation to study it differently (that is, they treat this course differently). However, it has also been found that students who are interested in a certain subject show better performance in it than students who are not. In addition, it was found that the relationship between student academic performance and their perception of a course as “interesting and useful” is mediated by their intrinsic motivation. Finally, it was found that the professor's emphasis on the fact that this course will be useful to the students in the future is the factor associated with their high academic performance in this discipline.

So far, there are studies that confirm the relationship between self-efficiency of an individual and their academic performance in various educational institutions (Pravakar, 2023).

In 2017–2018, a survey of 4-6 year students was conducted at the School of Biomedicine at the Far Eastern Federal University of the Ministry of Health of Russia and the Pacific State Medical University of the Ministry of Health of Russia in order to identify the connection between academic performance, motivation, burnout and self-assessment of the quality of life in medical students. As a result of this study, it was found that academic performance and motivation have a strong direct correlation, while the correlation between motivation and burnout is negative (Kuznetsov i dr., 2019). These results are also consistent with the results that were obtained by the authors of the present article.

A survey of students at the Moscow Psychological and Pedagogical University showed that for students with high academic performance, the leading motivation type is internal learning motivation, while students with average academic achievement tend to have external motivation as leading (Litvinova, 2022), which fully confirms the conclusions made by the authors.

The study conducted by the authors of the current article is limited by its coverage – only students of one university, namely, the Financial University under the Government of the Russian Federation. At the same time, the group of respondents consists of representatives of various faculties, including Humanitarian studies – sociology, political science, philosophy, psychology, as well as Technical studies – information security, applied informatics, etc., compensating this limitation to a certain degree. Another limitation of the study is that the mean values and standard deviations in this work are presented in crosstables. However, further research should use the methods of parametric statistical analysis such as Student's t-test or ANOVA.

5. Conclusion

As earlier studies revealed, academic motivation is influenced by many factors: students' living conditions, illnesses, sports, interaction with professors and fellow students, educational and extracurricular activities (Lazcano et al., 2022; Mendo-Lázaro et al., 2022). The university can, to a certain degree, have a direct or indirect influence on all these factors. Deeper factors, including academic motivation, are more hard to correct, but they have a strong influence on student academic success.

As part of this study, a survey was conducted of 1324 students of the Financial University from all faculties, years, undergraduate and graduate studies, full-time and part-time, on a budgetary, paid or discount basis. The first stage of the study was focused on connection between student academic performance and their working and residential conditions (whether they study in the same city they graduated from school or not). As a result, it was found that those who graduated from schools other than in Moscow demonstrate a higher level of academic performance than those who graduated in Moscow. Participating students mostly do not work, and the authors did not establish a significant connection between student employment and academic performance.

The following stage assessed the connection between performance and academic motivation type. For students with "high" and "above average" academic performance, motivations for learning, self-development and self-respect are at the first place, while for students with "low" academic performance, external motivation or amotivation mainly prevails. Thus, it was found that if a student enrolled due to external pressure, most likely they will not study at A and B levels.

The results obtained can be practically used in organizing career guidance and advisory work with applicants and their parents, educational and extracurricular activities in universities, as well as for highlighting and expanding individual educational trajectories, so that students whose enrollment was based on external motivation could self-actualize in their educational organization and find those professional areas that will be of interest to them in order to improve the quality of graduate training and contribute to the development of the potential of young people.

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Appendix

Survey Results

How would you evaluate your performance at the university in general?					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	Low	17	1,3	1,3	1,3
	Below average	47	3,5	3,5	4,8
	Average	362	27,3	27,3	32,2
	Above average	453	34,2	34,2	66,4
	High	445	33,6	33,6	100,0
Total		1324	100,0	100,0	

How would you evaluate your chances to successfully graduate and get a diploma?					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	0 %	2	,2	,2	,2
	10 %	1	,1	,1	,2
	20 %	4	,3	,3	,5
	30 %	9	,7	,7	1,2
	40 %	2	,2	,2	1,4
	50 %	52	3,9	3,9	5,3
	60 %	56	4,2	4,2	9,5
	70 %	133	10,0	10,0	19,6
	80 %	232	17,5	17,5	37,1
	90 %	326	24,6	24,6	61,7
	100 %	507	38,3	38,3	100,0
Total		1324	100,0	100,0	

In your opinion, what are your chances to successfully (with no fails) pass your term exams?					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	0 %	12	,9	,9	,9
	10 %	6	,5	,5	1,4
	20 %	13	1,0	1,0	2,3
	30 %	26	2,0	2,0	4,3
	40 %	20	1,5	1,5	5,8
	50 %	63	4,8	4,8	10,6
	60 %	83	6,3	6,3	16,8
	70 %	153	11,6	11,6	28,4
	80 %	207	15,6	15,6	44,0
	90 %	270	20,4	20,4	64,4
	100 %	471	35,6	35,6	100,0
Total		1324	100,0	100,0	

You study:					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	in the same city you went to school	543	41,0	44,4	
	In another city but the same region you went to school	160	12,1	13,1	44,4
	moved to study to another region	480	36,3	39,2	57,5
	moved to study to another country	40	3,0	3,3	96,7

	Total	1223	92,4	100,0	100,0
Missed	System	101	7,6		
	Total	1324	100,0		

Do you have a job?					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	yes, regular job (full-time)	287	21,7	23,5	23,5
	yes, regular job (part-time)	93	7,0	7,6	31,1
	yes, regular job (flexitime, freelance)	111	8,4	9,1	40,1
	occasionally (project work etc.), not regularly	210	15,9	17,2	57,3
	no, I don't have a job	522	39,4	42,7	100,0
	Total	1223	92,4	100,0	
Missed	System	101	7,6		
Total		1324	100,0		

If you have a job, can you say that it is in the same area you study at the university?					
		Frequency	Percents	Valid percent	Accumulated percent
Valid	yes, the same	149	10,1	18,6	18,6
	mostly yes (has a certain connection with my future profession)	171	11,6	21,4	40,1
	mostly no (remote connection to my future profession)	149	10,1	18,6	58,7
	no, not connected	330	22,4	41,3	100,0
	Total	799	54,3	100,0	
Missed	System	672	45,7		
Total		1471	100,0		