THE INFLUENCE OF FACTORS AND MEASURES ON THE MOTIVATION OF STUDENTS IN THE ACADEMIC ENVIRONMENT

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Annotation. The aim of this article was to create specific recommendations based on the analysis of the primary research concerning the factors and measures influencing the motivation of students, which should be included in the design of the motivational program in the academic environment. Only when the university's motivational program builds on the elements that support motivation with a focus on the needs of stakeholders it will lead to improved performance, increased levels of motivation and support for the creativity of those involved.

The research consisted of a detailed analysis of selected issues related *to decision-making on motivation and creativity in the academic environment.* The analysis also examined the impact of motivational factors on students and the choice of measures that would help their future development.

The results show that the change in the academic motivation of the respondents was mostly caused by *the gradual maturation and development of their personality.* To support their future development, respondents consider these measures to be effective: *greater interest in students and their opinions or the creation of good relationships and a positive atmosphere.*

An appropriately set motivation program should maximize the potential of all stakeholders that in the academic environment include not only teachers and managers, but also students. Only if the program includes motivational tools that respond to their needs, it has a high probability of success.

Keywords: academic motivation, decision-making, motivation program, motivational tools, students, academic environment.

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INTRODUCTION

Over time, views on motivation have evolved. Various authors have taken a certain position on this concept and have tried to explain it from different perspectives: Davis, Connell[1]; Donelly et al.[2]; Veber et al.[3]; Reeve[4]; Steiger, Lippann[5]; Lutz von Rosenstiel[6].

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[1] Davis, H. B., & Connell, J. P. (1985). The effect of aptitude and achievement status on the self-system. In: Gifted Child Quarterly, 29, p. 131–135

[2] Donelly, J.H., Gibson, J.L., Ivancevich, J.M. (1989). Organizations: Behavior, Structure, Processes. In: Business Publications

[3] Veber, J. a kol. (2009). Management. Praha: Management Press

[4] Reeve, J. (2009). Understanding motivation and emotion (5th ed.). Hoboken, NJ: John Wiley & Sons

[5] Steiger, T., Lippann, E. (2012). Psychologie pro manažery. Jak ovládnout umění vést. Brno: Biz Books

[6] Lutz Von Rosenstiel (2014). Motivations im Betrieb. In: Springer Gabler

Nevertheless, the individual definitions are similar to each other – they contain similar elements that are key to motivation.

The importance of motivation has intensified, not only in the corporate but also in the academic environment. People began to realize that if they wanted to increase their performance, they must be motivated enough to perform the necessary activities. This connection is not only valid in *the relationship of the individual with himself/herself,* but it can also be applied in the relationship of *the superior with the subordinate.* This is about the need when the manager should try to support the motivation of the employee (subordinate) to meet the desired goals and make his/her performance sufficient. This influence on the behaviour can be achieved via *a process of motivation.* With a specific view of *the academic environment,* it is possible to consider not only the influence of a superior on the motivation of his subordinates – teachers, but also *the influence of the teacher on the motivation of students*[7,8].

The research part of the article focuses on a detailed analysis of selected questions from a questionnaire survey in the field of motivation in the academic environment. **The aim of the analysis** was to reveal the motivational elements that had the greatest impact on the respondents and those measures that will have the greatest impact on the future change in their motivation and willingness to develop. It is therefore assumed that if specific measures are applied in the process of motivation by the teacher/management, it will have a positive effect on the motivation of students and the factors associated with it. **The purpose of the research** is therefore to create specific recommendations related to the factors and measures that affect students. These recommendations will help to potentially create a motivation program in the academic environment, which should consist not only of recommendations for students but also of recommendations for other stakeholders. In that case, it will lead to an improvement in the university's climate and support the motivation and creativity of stakeholders.

THEORETICAL BACKGROUND

From the perspective of this article, it is important not only to define general motivation but especially **the motivation in the academic environment.** It affects several stakeholders, such as: *students, teachers, administrative staff and managers.* Therefore, in the following

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[7] Schunk, D.H., Pintrich, P.R., Meece, J.L. (2008). Motivation in education: Theory, research and applications (3rd ed.), Upper Saddle River: Pearson Education Inc

[8] Urdan, T.C., Karabenick, S.A. (2010). Advances in motivation and achievement: Vol. 16A-B. The decade ahead: Theoretical perspectives on motivation and achievement. Bingley: Emerald Publishing Group

subchapters, several characteristics of motivation with regard to specific stakeholders will be highlighted. An example is the research examining motivation in relation to personality traits. One finding was that intellectually gifted students generally have higher academic intrinsic motivation than students who have not been identified as gifted[1].

Academic motivation

Many authors focus on examining people's behaviour when defining motivation. Based on the previous knowledge, it can be stated that *behaviour is closely linked to motivation.* Human motivation can be understood as the interaction between the set goals and the responses to impulses. A person (student/teacher/manager) is affected by several internal and external influences such as: the internal side of motivation, requirements and opportunities or other external factors[5].

As early as in 1991, Schunk discussed motivation *in terms of efficiency* in his publication. He emphasized the judgments of the individual and his/her ability to perform the activities[9] (p. 207). These activities can be considered as resources needed to achieve the desired goal.

In relation to *the setting of academic goals,* it can be stated that they often focus on the long-term horizon. These goals can include, for example: obtaining a university degree, completing a scientific project or a seminar task, increasing the average performance, etc. Morgan also followed up on these ideas, but he found out that goals focused on the short-term horizon – *proximal goals,* increase the internal interest of university students during the academic year[10]. The interest is subsequently reflected in increased academic performance. Other sources also suggest that distance or proximity to a goal affects *individuals' self-regulatory processes.* Therefore, examining students' goal setting over a period of time can reveal how they self-regulate their motivation. From the analysis, it is also possible to determine the development of efficiency on the basis of the time set for achieving the goals[9] (p. 214).

Some authors have also focused on revealing the factors that influence the change in academic motivation. For example, Brophy found out that *choosing activities* is not a good indicator of academic motivation. The reason is that the students are frequently not involved in the decision-making on their participation in specific activities[11] and even if they are, this is

9   Schunk, D.H. (1991) Self-Efficacy and Academic Motivation. In: Educational Psychologist, 26:3-4
10 Morgan, M. (1985). Self-monitoring of attained subgoals in private study. In: Journal of Educational Psychology, 77, p. 623–630
11 Brophy, J. (1983). Conceptualizing student motivation. In: Educational Psychologist, 18, p. 200–215

quite limited, and they can only decide on their leisure-time activities. The decision-making therefore relates to a narrow motivational focus[9] (p. 221). The school environment is created by academic structures that are linked to aspects of the academic motivation of stakeholders (students/teachers/managers). The academic environment is also linked to the good living conditions, outcomes and behaviour of people in this environment[12] (p. 413).

The climate of the study group (class) is formed mainly by the mutual relations between the group of students and the teacher, but also by *the management of the groups and the motivational climate*[12] (p. 407).

Mutual relations

The quality of the *"teacher-student"* relationship is a key component of the group atmosphere. This relationship has been addressed by a number of authors highlighting certain specifics of the teacher's behaviour that affect the overall atmosphere of the group and the behaviour of students. The elements of the teacher's behaviour, which have a positive effect not only on the behaviour of individuals (students) but also on their results, include *trust, care, respect or special interest in education.* Teachers should provide socio-emotional and intellectual support to students in fulfilling their academic educational tasks. In the students, these aspects encourage engagement and perseverance, understanding of values, development of a positive perception, a sense of belonging and well-being not only in the group but also towards the educational institution[13,14,15,16].

Eccles and Roeser also emphasize people and their feelings of belonging and support. These authors claim that *the feeling of emotional support* is one of the most important factors applied in the developmental context, which also includes educational institutions – universities. The academic environment should support the positive development of students[12] (p. 407).

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[12] Eccles, J.S., Roeser, R.W. (2009). Schools, Academic Motivation, and Stage-Environment Fit. In: Handbook of Adolescent Psychology

[13] Deci, E.L., Ryan, R.M. (2002). Self-determination research: Reflections and future directions. In: Handbook of self-determination theory research, p. 431–441

[14] Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. In: Journal of Early Adolescence, 13 (1), p. 21–43

[15] National Research Council (2004). Engaging schools: Fostering high school students' motivation to learn. Washington, DC: National Academies Press

[16] Wigfield, A., Eccles, J.S., Schiefele, U., Roeser, R., Davis-Kean, P. (2006). Development of Achievement Motivation. In: Handbook of child psychology: Social, emotional, and personality development, p. 933–1002

Management of the groups

Many researches also focused on the management of the study group (class), which *supports the autonomy of students.* It is autonomy that is important to support the intrinsic motivation[12] (p. 408) to learn something new and to support socio-emotional development during adolescence[13,17].

Motivational climate/environment

Several authors also focused on making recommendations for a teacher's behaviour that would support the creation of a motivational climate in the group. Several recommendations concern the use of *a wide range of behaviours.* In practice, for example, the following teaching methods are used: *individualized versus group teaching, the use of clustering skills and the promotion of mutual feedback*[18]. Because these procedures use the diversity of students and their characteristics and qualities to their advantage – motivation in the group is influenced in a positive way[12] (p. 408).

Motivational tools and programs

Following the previous statements, the focus and analysis of the academic environment, group climate and culture leads managers to understand *systems to support motivation and engagement.* Understanding the systems is a clear prerequisite for their correct setting, which will bring not only increased motivation of stakeholders and their improved performance but also the success of the entire organization – the university[19] (p. 1). The justification of the focus on motivational tools and systems is also supported by *the theory of organizational culture*[20]. Its authors claim that it is the strong organizational culture that influences the high performance of employees and the achievement of overall satisfaction with the work performed. Other factors that are essential for stakeholders – and should be included in the university's

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[17] Grolnick, W.S., Gurland, S.T., Jacob, K.F., Decourcey, W. (2002). The development of self-determination in middle childhood and adolescence. In: Development of achievement motivation, p. 147–171

[18] Rosenholtz, S.J., Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? In: Review of Educational Research, 54, p. 31–63

[19] Morgan, T.L., Cieminski, A.B. (2020). Exploring the mechanisms that influence adolescent academic motivation. In: Educational Studies

[20] Robbins, S.P., Judge, T.A. (2007). Organizational behavior. Upper Saddle River, NJ: Pearson Prentice Hall

motivational program – are also *a sense of belonging and the creation of a pleasant, even "family" atmosphere* (spirit)[21], (p. 133).

In order for the teachers to be able to properly strengthen students' motivation, it is necessary for them to be motivated to carry out activities to support motivation. In relation to the teacher's support, Fryer presents that, on the one hand, the strategy implemented via *financial incentive programs* can be applied[22], but on the other hand, the author himself found out that the support program for teachers built this way does not significantly contribute to the performance of the university. Thomas has a different view of the factors that should be applied in relation to teachers in the academic environment. He divided the factors according to their influence on internal or external motivation. Factors that influence teachers' internal motivation include students' pleasure and the joy from the teaching profession. Those that have an impact on external motivation lie in the salary and further education[23]. On the contrary, a bad relationship with co-workers can also significantly negatively affect not only the feelings but also the performance of employees, which then affects the motivation of students, too. To improve relationships within the university environment, managers should focus on *the social networking of stakeholders* as well when creating a motivation program[24].

All the analysed definitions and the opinions of various authors can be linked through the following statement: *"satisfied employees have a higher level of overall motivation".* That is why every organization – the university, should strive to create a motivation program while taking into account the needs of stakeholders (students/teachers/managers). Only then their motivation and satisfaction will be increased[25].

RESEARCH

As part of the scientific study of motivation, research was also conducted focusing on *decision-making on the motivation and creativity of students in the academic environment.*

[21] Manalo, R.A., Castro, B., Uy, Ch. (2020). The Mediating Role of Job Satisfaction on the Effect of Motivation to Organizational Commitment and Work Engagement of Private Secondary High School Teachers in Metro-Manila. In: Review of Integrative Business and Economics Research, Vol. 9(1)

[22] Fryer, R.G. (2013). Teacher incentives and student achievement: Evidence from New York City public schools. In: Journal of Labor Economics, 31(2), p. 373–407

[23] Thomas, M.A. (2016). Teacher motivation and incentives. In: 25 Ways to Improve Learning

[24] Fernet, C., Gagné, M., Austin, S. (2010). When does quality of relationships with coworkers predict burnout over time? The moderating role of work motivation. In: Journal of Organizational Behavior, 31(8)

[25] Dartey-Baah, K., Amoako, G.K. (2011). Application of Frederick Herzberg's TwoFactor theory in assessing and understanding employee motivation at work: a Ghanaian Perspective. In: EJBM, 3(9)

It was performed in 2019 within the University of Žilina in Žilina on a sample of 142 respondents.

For the purpose of this article, two questions were selected for analysis, which were examined in terms of mutual context and relationships. In the first question, respondents had to choose *the elements that had contributed the most to the change in their academic motivation in the past.* The above-mentioned question was also explained to the respondents in the following way: what elements have evoked different needs, plans and desires in you in relation to the field of study at present than you felt before?

The second question was stated as follows: Please, indicate the measures taken by teachers or the management of the faculty or university that would help increase your motivation and willingness to develop further. It was about revealing the students' views on what the faculty/university should do or change to support their motivation.

Statistical software was used to calculate specific values, in which mutual relationships were also examined using the Z-Score. Significant dependence was confirmed if: $z > c$ (not confirmed if: $z < c$). The permissible deviation taken into account in the evaluation was: *c = Critical value @ 5%; where: c = 1.96.*

Analysis and evaluation

The basic characteristics of the respondents are listed in the following table. Respondents were characterized on the basis of *gender, degree of study and field of study* they attend.

Table 1. Basic characteristics of respondents

Sex	Frequency	Field of study	Frequency	Field of study	Frequency
Male	65	Management	19	1. (Bc.)	53
		Informatics	19	2. (Ing.)	12
		Information management	12	3. (PhD.)	0
		Computer engineering	15		
Female	77	Management	51	1. (Bc.)	54
		Informatics	4	2. (Ing.)	21
		Information management	21	3. (PhD.)	2
		Computer engineering	1		
Total	142				

The elements that have contributed the most to the change in respondents' academic motivation in the past were primarily examined in terms of frequency.

Table 2. Elements that influenced the change of respondents' motivation

No.	Options	Frequency	[%]
1.	Gradual maturation and development of your personality	80	56.34%
2.	Long-term fatigue, stress and burnout	63	44.37%
3.	Significant success in the field of study	50	35.21%
4.	Achievement of a long-term goal	49	34.51%
5.	Awareness of your qualities and merit	45	31.69%
6.	Negative, demotivating influence of a teacher	45	31.69%
7.	Feeling of satisfaction in partner life	35	24.65%
8.	Getting to know an esteemed, respected person	30	21.13%
9.	Health and health condition	24	16.90%
10.	Achieved success and happiness of your partner	20	14.08%
11.	Great failure in the study	18	12.68%
12.	Experiencing an extraordinary joyful moment	18	12.68%
13.	Manifestation of a latent (before hidden) need	16	11.27%
14.	Disappointment in the love life	13	9.15%
15.	Death of a close person or friend	12	8.45%
16.	Change of the field of study or university	11	7.75%
17.	Starting a family	10	7.04%
18.	Failure, unhappiness of your partner	3	2.11%

The change in the academic motivation of the respondents was mostly due to the factor *Gradual maturation and development of your personality,* with a frequency of 56.34%. The second place was taken by *Long-term fatigue, stress and burnout,* with a frequency of 44.37%. This factor represents a negative effect on motivation, which is a significant concern as it is one of the factors with the greatest impact on students. *Significant success in the field of study* is at the third place in terms of frequency (35.21%). The element that has the lowest effect on the change in motivation is *Failure, unhappiness of your partner* (2.11%).

As these factors occupy the first three places in terms of frequency, they were subsequently examined in *relation to the second issue analysed.* Thus, the possible dependence between the factors that contributed most to the change in motivation and those measures that should be applied to students in the future in order to increase their academic motivation and efforts to develop was examined. In addition to the mutual relations between the examined questions, the relationship between *all the presented factors from the first selected question and the respondents' gender* were analysed too.

Subsequently, **measures taken by teachers or faculty/university management to help increase respondents' motivation and willingness to develop further** were also assessed in terms of frequency.

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Table 3. Measures that will help increase the motivation and development of respondents in the future

No.	Options	Frequency	[%]
1.	Greater interest in students and their opinions	99	69.72%
2.	Creation of good relationships and a positive atmosphere	93	65.49%
3.	Correctness, fairness and humanity of teachers	92	64.79%
4.	Lectures given by experts from the practice and improved opportunity for employment	77	54.23%
5.	Providing the necessary information	71	50.00%
6.	Improving mutual communication	68	47.89%
7.	Showing recognition for a job well done	66	46.48%
8.	Mutual and open cooperation	62	43.66%
9.	Better study conditions	61	42.96%
10.	Greater number of credits for subjects	57	40.14%
11.	Room for independence and self-realization	42	29.58%
12.	Complementary educational activities and skills development	37	26.06%
13.	Participation in management and decision-making	36	25.35%
14.	Joint cultural and sports activities of teachers and students	34	23.94%

In terms of measures that would help increase the motivation of respondents, it can be stated that the frequency was over 50% for 5 of 14 measures. This finding can be interpreted as a high interest of respondents in the application of these factors in the academic environment.

According to the results, it can be assumed that the willingness of students to further develop themselves would be highest if the following factors were applied by teachers or faculty/university management: Greater interest in students and their opinions (69.72%), Creation of good relationships and a positive atmosphere (65.49%) and Correctness, fairness and humanity of teachers (64.79%).

These factors should be taken into account by the teachers in their efforts to encourage students' motivation. If students themselves have shown interest in these factors – which are linked to their needs in the academic environment – it is important to pay attention to them. For example, if a motivation program is being set within the university that respondents attend, it should certainly involve all stakeholders – including the students for whom the above-listed factors are important.

Dependences between the variables

When examining the relationship between the elements influencing the change in motivation and gender, a statistically significant dependence was confirmed for the following factors: Experiencing an extraordinary joyful moment ($z = 2.146$), Feeling of satisfaction in

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partner life (z = 2.353), Long-term fatigue, stress and burnout (z = 2.657), which is displayed in the following table.

Table 4. Relationships between factors that influence the change of students' motivation and gender

No.	Options	Z-Score		Sex	No.	Options	Z-Score		Sex
1.	Significant success in the field of study	z:	1.371		10.	Death of a close person or friend	z:	0.904	
		significant:	no				significant:	no	
2.	Great failure in the study	z:	0.121		11.	Manifestation of a latent (before hidden) need	z:	0.173	
		significant:	no				significant:	no	
3.	Experiencing an extraordinary joyful moment	z:	2.146		12.	Long-term fatigue, stress and burnout	z:	2.657	
		significant:	yes				significant:	yes	
4.	Achieved success and happiness of your partner	z:	0.893		13.	Awareness of your qualities and merit	z:	0.217	
		significant:	no				significant:	no	
5.	Gradual maturation and development of your personality	z:	0.808		14.	Negative, demotivating influence of a teacher	z:	0.579	
		significant:	no				significant:	no	
6.	Feeling of satisfaction in partner life	z:	2.353		15.	Failure, unhappiness of your partner	z:	0.734	
		significant:	yes				significant:	no	
7.	Getting to know an esteemed, respected person	z:	0.302		16.	Disappointment in the love life	z:	0.613	
		significant:	no				significant:	no	
8.	Achievement of a long-term goal	z:	0.152		17.	Change of the field of study or university	z:	0.608	
		significant:	no				significant:	no	
9.	Starting a family	z:	0.278		18.	Health and health condition	z:	1.342	
		significant:	no				significant:	no	

The confirmed dependence was further analysed. The results show that for women the factor *Long-term fatigue, stress and burnout* is at the 1st place (frequency: 54.55%) and for men at the 3rd place (frequency: 32.31%). Despite this difference, this factor is very important in terms of the effect on motivation for both genders. The factor *Feeling of satisfaction in partner life* is at the 6th place for women with a frequency of 32.47% and for men at the 8th place with a frequency of only 15.38%, which is a relatively significant difference. The last factor examined was *Experiencing an extraordinary joyful moment,* which is at the 9th place for women (frequency: 18.18%) and at the 13th for men (frequency: 6.15%).

Based on the presented findings, it can be stated that overall, all three examined factors *(Long-term fatigue, stress and burnout, Feeling of satisfaction in partner life, Experiencing an extraordinary joyful moment)* are more important for women than for men. The first question examined the elements that have contributed the most to the change in respondents' academic motivation in the past. At the first place, based on frequency, there is the factor **Gradual maturation and development of your personality** (frequency: 56.34%). This factor was analysed in terms of possible relationships with elements that would help increase students' motivation and willingness to develop further. Dependence was statistically significant for the measures: *Creation of good relationships and a positive atmosphere* ($z = 2.351$), *Correctness, fairness and humanity of teachers* ($z = 2.54$), *Improving mutual communication* ($z = 2.266$).

Table 5. Relationships between the factor Gradual maturation and development of your personality and measures that would help to change the motivation of students in the future

Elements that contributed to the change in motivation – Gradual maturation and development of your personality (frequency: 56.34%)						
No.	Measures that would help to change the motivation of students in the future	Z-Score		No.	Measures that would help to change the motivation of students in the future	Z-Score	
1.	Greater interest in students and their opinions	z: 1.924	significant: no	8.	Providing the necessary information	z: 1.354	significant: no
2.	Complementary educational activities and skills development	z: 0.831	significant: no	9.	Mutual and open cooperation	z: 1.047	significant: no
3.	Creation of good relationships and a positive atmosphere	z: 2.351	significant: yes	10.	Room for independence and self-realization	z: 1.608	significant: no
4.	Greater number of credits for subjects	z: 1.42	significant: no	11.	Better study conditions	z: 0.558	significant: no
5.	Lectures given by experts from the practice and improved opportunity for employment	z: 0.89	significant: no	12.	Showing recognition for a job well done	z: 0.956	significant: no
6.	Participation in management and decision-making	z: 1.057	significant: no	13.	Joint cultural and sports activities of teachers and students	z: 0.335	significant: no
7.	Correctness, fairness and humanity of teachers	z: 2.54	significant: yes	14.	Improving mutual communication	z: 2.266	significant: yes

Respondents who **were motivated by** the factor *Gradual maturation and development of your personality* selected the measure *Creation of good relationships and a positive atmosphere* with a frequency of 73.75%. In the case of those respondents who indicated that their motivation **was not influenced by** *Gradual maturation and development of your personality,* the frequency of this measure was only 54.84%.

Those who **were motivated by** the factor *Gradual maturation and development of your personality* selected the measure *Correctness, fairness and humanity of teachers* with a frequency of 73.75% and those who **were not motivated by** this factor selected the measure *Correctness, fairness and humanity of teachers* with a frequency of 53.23%.

Those who **were motivated by** the factor *Gradual maturation and development of your personality* selected the measure *Improving mutual communication* with a frequency of 56.25%. Respondents who **were not motivated by** this factor selected the measure *Improving mutual communication* with a frequency of only 37.10%. Based on the above-mentioned findings, it can be stated that if the motivation of the respondents was influenced by the factor *Gradual maturation and development of your personality* in the past, the measure *Improving mutual communication* is relatively important for their future academic motivation and development. On the other hand, for the respondents who were not motivated by this factor in the past, the measure *Improving mutual communication* is not essential for their future development.

At the second place in terms of frequency of elements that have contributed the most to the change in the academic motivation of respondents in the past, there is the factor **Long-term fatigue, stress and burnout** (frequency: 44.37%). This factor was also examined in terms of possible relationships with elements that would help increase students' motivation and willingness to develop further. Dependence was statistically significant only for the following two measures: *Mutual and open cooperation* ($z = 2.211$) and *Better study conditions* ($z = 2.367$).

Respondents who **were motivated by** the factor *Long-term fatigue, stress and burnout* selected the measure *Mutual and open cooperation* as well as the measure *Better study conditions* with a frequency of 53.97%. Those who **were not motivated by** the factor *Long-term fatigue, stress and burnout* selected the measure *Mutual and open cooperation* with a frequency of 35.44% and the measure *Better study conditions* with a frequency of 34.18%

The above-mentioned findings imply that if students were affected by long-term fatigue or stress in the past, they are more interested in the academic environment characterized by

mutual and open cooperation and better study conditions. On the other hand, students who were demotivated by long-term fatigue and stress do not consider the two measures described above to be important.

Table 6. Relationships between the factor Long-term fatigue, stress and burnout and measures that would help to change the motivation of students in the future

No.	Measures that would help to change the motivation of students in the future	Z-Score		No.	Measures that would help to change the motivation of students in the future	Z-Score	
Elements that contributed to the change in motivation – Long-term fatigue, stress and burnout (frequency: 44.37%)						
1.	Greater interest in students and their opinions	z:	1.867	8.	Providing the necessary information	z:	0.845
		significant:	no			significant:	no
2.	Complementary educational activities and skills development	z:	0.93	9.	Mutual and open cooperation	z:	2.211
		significant:	no			significant:	yes
3.	Creation of good relationships and a positive atmosphere	z:	0.263	10.	Room for independence and self-realization	z:	1.345
		significant:	no			significant:	no
4.	Greater number of credits for subjects	z:	0.789	11.	Better study conditions	z:	2.367
		significant:	no			significant:	yes
5.	Lectures given by experts from the practice and improved opportunity for employment	z:	0.623	12.	Showing recognition for a job well done	z:	1.259
		significant:	no			significant:	no
6.	Participation in management and decision-making	z:	0.011	13.	Joint cultural and sports activities of teachers and students	z:	0.429
		significant:	no			significant:	no
7.	Correctness, fairness and humanity of teachers	z:	0.065	14.	Improving mutual communication	z:	1.295
		significant:	no			significant:	no

At the third place in terms of frequency of the elements that contributed the most to the change in the academic motivation of respondents in the past there is the factor **Significant success in the field of study** (frequency: 35.21%). For this factor, no statistically significant dependence was confirmed in relation to any of the measures that would help increase students' motivation and willingness to develop themselves further.

DISCUSSION

Based on the examination of the issue of academic motivation and the analysis of the primary data obtained via a questionnaire survey, specific conclusions were drawn. Subsequently, it was possible to make recommendations regarding factors and measures that should be included in the process of motivating students within the university environment.

The first recommendation is to focus on *the identification of the stakeholders' needs in academic environment.* When creating a complex motivation program, it is necessary to pay attention to which stakeholders are in this environment. Opinions, feelings and needs of each stakeholder should be included in the program. Therefore, three actors should be involved in setting the motivation program, as the program concerns everyone who works in this environment and the fulfilment of the program is ensured by *the university (management), the teachers and the students themselves.* These three entities can also be referred to as the objects affected by the program.

As mentioned, one of the stakeholders in the academic environment is also represented by the students who were the main participants in the survey. In it, specific factors influencing their motivation were identified. The factors *Gradual maturation and development of your personality* or *Significant success in the field of study* contributed most to the positive change in the respondents' academic motivation. The factor *Long-term fatigue, stress and burnout* also had a significant effect on the change in respondents' motivation, but this is a negative effect. Based on other findings, it can be stated that some factors are more important for women than for men. This was also the case of the following factors: *Experiencing an extraordinary joyful moment, Feeling of satisfaction in partner life, Long-term fatigue, stress and burnout.*

Such findings, based on the experience of the students themselves, help better set the process of motivating students performed by the teachers within the academic environment. The results also suggest that students' motivation for their further development will be at a high level if factors such as: *Greater interest in students and their opinions, Creation of good relationships and a positive atmosphere, Correctness, fairness and humanity of teachers* are applied.

With regard to the examined context, it can be emphasized that if the motivation of respondents in the past was influenced by the factor *Gradual maturation and development of your personality,* the measure *Improving mutual communication* is also essential for their motivation for their future development. If students were affected by long-term fatigue or stress

in the past, they care more about the academic environment characterized by mutual and open cooperation and better study conditions. For example, Wentzel[26] emphasizes the importance of building relationships, communication and cooperation, and Eccles and Roeser[12] explore awareness of the development of their own abilities.

Recommendations regarding the factors that should be incorporated into the setting of the process of motivating students can be summarized by the following points:

- identifying the needs of academic stakeholders (students/teachers/managers),
- showing willingness and trust in students,
- interest in students and their opinions,
- correctness, fairness and humanity of teachers,
- setting long-term as well as short-term academic goals,
- creation of good relationships and a positive atmosphere,
- awareness of students' own characteristics, qualities and merit.

It is important that other academic stakeholders (in addition to students, for example, teachers, managers and administrative staff) are analysed in a similar way. Only if the needs and factors that affect their motivation are identified, it will be possible to set a motivation process focused on a specific object, as well as a complex motivation system of the university[25].

CONCLUSIONS

The main subject of this article was the academic environment, which examined the motivation of students and the factors that affect it. Looking at this environment, it is necessary to examine not only the influence of the superior on the motivation of teachers, but also *the influence of the teacher on the motivation of students.* Theoretical background shows that individual elements of motivation can be revealed by the analysis of the behaviour of stakeholders, because the behaviour is associated with motivation.

The aim of the analysis was to reveal the motivational elements that had the greatest impact on the respondents and those measures that will have the greatest impact on the future change in their motivation and willingness to develop themselves. Specific **findings** include the identification of those factors that have contributed the most to the change in the students' motivation: *Gradual maturation and development of your personality, Significant success in*

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[26] Wentzel, K. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. In: Child Development, 73, p. 287–301

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the field of study, Long-term fatigue, stress and burnout. Those measures that should increase academic motivation for the students' development include: *Greater interest in students and their opinions, Creation of good relationships and a positive atmosphere and Correctness, fairness and humanity of teachers.*

Based on the findings, it was possible to make **recommendations** regarding the setting of the process of motivating students in the academic environment. Specifically, it is important *to show interest in students and their opinions, emphasize the correctness, fairness and humanity of teachers or create good relationships and a positive atmosphere.* In the relationship with students, it is also very important to support the students themselves *to be aware of their qualities and merit.*

The orientation of future research should focus on deeper understanding of the motivation programs of universities (best practice in the academic environment). The subject of research can include not only students and their teachers, but also managers and administrative staff who are also part of this environment. There should also be a combination of these findings and recommendations and their use in creating a complex motivation program of the university, whose benefits can be monitored.

Only if the proposed elements of the motivation program are based on the needs of all stakeholders, successful application can occur with the maximum positive outputs of the program set this way.

REFERENCES

1. Brophy, J. (1983). Conceptualizing student motivation. In: Educational Psychologist, 18, p. 200–215. ISSN: 0046-1520.
2. Dartey-Baah, K., Amoako, G.K. (2011). Application of Frederick Herzberg's TwoFactor theory in assessing and understanding employee motivation at work: a Ghanaian Perspective. *In: European Journal of Business and Management,* 3(9), p. 1–8. ISSN: 2222-1905.
3. Davis, H. B., & Connell, J. P. (1985). The effect of aptitude and achievement status on the self-system. *In: Gifted Child Quarterly,* 29, p. 131–135. DOI: https://doi.org/10.1177/001698628502900306.
4. Deci, E.L., Ryan, R.M. (2002). Self-determination research: Reflections and future directions. *In: Handbook of self-determination theory research,* p. 431–441, Rochester, NY: University of Rochester Press, ISBN: 1648-3898.
5. Donelly, J.H., Gibson, J.L., Ivancevich, J.M. (1989). Organizations: Behavior, Structure, Processes. *In: Business Publications,* 845p. ISBN: 978-02-5605-821-5.
6. Eccles, J.S., Roeser, R.W. (2009). Schools, Academic Motivation, and Stage-Environment Fit. *In: Handbook of Adolescent Psychology.* DOI: 10.1002/9780470479193.adlpsy001013.

ISSN 2029-1701
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Mokslinis žurnalas
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
PUBLIC SECURITY AND PUBLIC ORDER
2020 (24)   Research Journal

7.   Fernet, C., Gagné, M., Austin, S. (2010). When does quality of relationships with coworkers predict burnout over time? The moderating role of work motivation. *In: Journal of Organizational Behavior*, 31(8), p. 1163–1180. DOI: https://doi.org/10.1002/job.673.

8.   Fryer, R.G. (2013). Teacher incentives and student achievement: Evidence from New York City public schools. *In: Journal of Labor Economics,* 31(2), p. 373–407. DOI: http://www.jstor.org/stable/10.1086/667757.

9.   Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *In: Journal of Early Adolescence,* 13 (1), p. 21–43, DOI: https://doi.org/10.1177/0272431693013001002.

10. Grolnick, W.S., Gurland, S.T., Jacob, K.F., Decourcey, W. (2002). The development of self-determination in middle childhood and adolescence. *In: Development of achievement motivation,* p. 147–171, San Diego: Academic Press. DOI: https://doi.org/10.1016/B978-012750053-9/50008-5.

11. Lutz Von Rosenstiel (2014). Motivations im Betrieb. *In: Springer Gabler,* 361p. ISBN: 978-3-658-07809-6.

12. Manalo, R.A., Castro, B., Uy, Ch. (2020). The Mediating Role of Job Satisfaction on the Effect of Motivation to Organizational Commitment and Work Engagement of Private Secondary High School Teachers in Metro-Manila. *In: Review of Integrative Business and Economics Research,* Vol. 9, Issue 1, p. 133–159, ISSN: 2414-6722.

13. Morgan, M. (1985). Self-monitoring of attained subgoals in private study. *In: Journal of Educational Psychology,* 77, p. 623–630, DOI: https://doi.org/10.1037/0022-0663.77.6.623.

14. Morgan, T.L., Cieminski, A.B. (2020). Exploring the mechanisms that influence adolescent academic motivation. *In: Educational Studies,* DOI: 10.1080/03055698.2020.1729102.

15. National Research Council (2004). Engaging schools: Fostering high school students' motivation to learn. Washington, DC: National Academies Press. 302p. ISBN: 978-0-309-08435-2.

16. Reeve, J. (2009). Understanding motivation and emotion (5th ed.). Hoboken, NJ: John Wiley & Sons. 581p. ISBN: 978-0-470-39223-2.

17. Robbins, S.P., Judge, T.A. (2007). Organizational behavior. Upper Saddle River, NJ: Pearson Prentice Hall, 759p. ISBN: 978-0-132-43156-9.

18. Rosenholtz, S.J., Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? In: Review of Educational Research, 54, p. 31–63. DOI: 10.2307/1170397.

19. Schunk, D.H. (1991) Self-Efficacy and Academic Motivation. In: Educational Psychologist, 26:3-4, p. 207–231, DOI: 10.1080/00461520.1991.9653133.

20. Schunk, D.H., Pintrich, P.R., Meece, J.L. (2008). Motivation in education: Theory, research and applications (3rd ed.), Upper Saddle River: Pearson Education Inc. ISBN: 978-0-132-28155-3.

21. Steiger, T., Lippann, E. (2012). Psychologie pro manažery. Jak ovládnout umění vést. Brno: Biz Books. 368p. ISBN: 978-80-265-0006-3.

22. Thomas, M.A. (2016). Teacher motivation and incentives. In: 25 Ways to Improve Learning: A collection of research briefs on quality education from the IIEP Learning Portal.

23. Urdan, T.C., Karabenick, S.A. (2010). Advances in motivation and achievement: Vol. 16A-B. The decade ahead: Theoretical perspectives on motivation and achievement. Bingley: Emerald Publishing Group. 276p. ISSN: 978-0-857-24253-2.

24. Veber, J. a kol. (2009). Management. Praha: Management Press, 736p. ISBN: 978-80-7261-200.

25. Wentzel, K. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. In: Child Development, 73, p. 287–301. DOI: 10.1111/1467-8624.00406.

26. Wigfield, A., Eccles, J.S., Schiefele, U., Roeser, R., Davis-Kean, P. (2006). Development of Achievement Motivation. In: Handbook of child psychology: Social, emotional, and personality development, p. 933–1002, Hoboken, NJ: John Wiley & Sons. ISBN: 978-0-471-27290-8.