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The Mechanism of Identification and Management of Risks Affecting the Process of Supporting Creativity Based on the Sample from the Slovak Academic Environment

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Abstract: This article focuses on risks while supporting creativity. This represents a knowledge gap that is addressed. The employees' creativity is desired, but there is often no approach process to its support. The implementation is affected by risks needed to be managed. The aim was to create a mechanism for managing risks within the support of creativity in organizations, including commercial companies and others, e.g., sports clubs. Content analysis, case studies, questionnaire surveys, or models were applied. The results combined secondary (cases) and primary data (survey with two groups of respondents). The findings showed that when creativity is supported, people are willing to increase their performance (50% of academicians, 88.78% of students). The process is negatively affected by the lack of managerial skills and the interconnectedness of processes. Organizations should increase their managers' skills. A proactive approach to risk prevention leads to continuous improvement. A procedure was selected when the potential of applying findings from the academic environment to other organizations was identified. A generalization of the findings was performed so that the research results can be applied in different environments after considering their specificities. The recommendations include the process for supporting creativity, the identification of risks, and the risk management mechanism.

Keywords: corrective measures; change; economy; organization; risk prevention

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1. Introduction

The number of changes resulting from the external environment that the organization must respond to creates constant pressure to improve internal processes (Koman et al. 2022; Ribeiro et al. 2022; Holubcik and Soviar 2021; Hitka et al. 2021; Babelova and Starecek 2021; Tokarcikova et al. 2020). It is assumed that every organization should strive to be a mature organization. Therefore, it is crucial to approach this concept and identify the possible ways to define it. Tietz and Kugler stated that a mature organization is one that has successfully achieved a certain level of maturity *in personnel and management processes.* Managers know and understand the key importance and value of their employees for the future success and progress of the whole organization. A mature organization strives to create appropriate support for the employees' creativity, focusing on the effective implementation of personnel and management processes (Tietz and Kugler 2018).

Many other aspects can be analysed in connection with the maturity of the whole organization or its members. For example, Afsouran et al. (2022) focused on the link between transformational leadership and employee maturity, leading to the further development of the whole organization. Other authors pointed out that numerous maturity models are connected to the area of people and personnel management, including employee creativity (Shukla and Sushil 2022). Therefore, the attribute of flexibility is added to the overall maturity. For an organization to be flexible and able to react to ever-changing conditions, it is necessary to support its members' creativity. Only then can they find creative solutions to

emerging issues and adapt to changes. To add another more closely focused perspective, Dellana et al. (2022) selected the connection between maturity and organizational risk management. According to the results of their study, an organization can achieve this kind of maturity if it manages to harmonise the effort within three dimensions (orientation, integration, and collaboration).

Fostering creativity leads to higher performance and consequently to higher productivity (Tiwari et al. 2023; Hitka et al. 2020). A sufficient customer base, access to resources and funding, and the use of effective methods for processing a large amount of data are also essential parts for setting the above-mentioned processes as well as for their successful implementation (Koman et al. 2018).

Any economic unit, whether it operates in a profit or non-profit sector, can achieve the maturity level. Thus, mature organizations can be found among manufacturing companies, universities, or sports organizations. Many sports organizations are also referred to as "learning organizations" because they respond to changes in the environment and try to effectively solve emerging problems (Mihaila et al. 2021; Mardosaite and Jasinskas 2022). The decision-making of professional sports organizations should be supported via scientific models (Oktavia et al. 2020) so that the organization operates in a sustainable regime (Varmus et al. 2022).

While organization focuses on employees and their development, it is important that it also focuses on strategic aspects. Only by considering the long-term operation of the organization will the managers be able to set appropriate procedures for achieving goals, for example, in creativity support or change and risk management. The fulfilment of goals themselves represents the desired result. Approaching these aspects in a complex way can be characterized as strategic management. It is the latter that represents orientation towards the long-term direction of the organization in the market environment. This term includes several activities related to all functional areas of the given organization (Fotr et al. 2012; Obydenov 2021; Maříková et al. 2022). One of the activities that inherently belongs to strategic understanding is the identification and management of risks (Giraldo and Nunez 2020; Baloyi and Ozumba 2020; Jia and Li 2022).

In the text above, the aspects related to the risks affecting the organizations were presented. All the main aspects with their mutual connections are shown graphically (Figure 1). The graphic form captures the impact of risk on organizational processes with a focus on the creativity supporting process. Furthermore, the mechanism of risk identification and management was included, which can also be used within the process of managing changes that are constantly present in the internal environment of organizations. Subsequently, the negative impacts of potential or currently active risks can be minimized, and the effective risk management of organizations in the market environment leads to their progress and a positive impact on the country's economy.

This article focused on researching various aspects of creativity support. It is appropriate to support this in a procedural way, which is also connected to the aim of the article. This was the creation of a mechanism for identifying and managing risks associated with the process of creativity support.

Among the most important findings resulting from the analyses performed is the fact that, when creativity is supported by the organization, there is an increased willingness of employees towards better future performance. Employees are willing to increase their creative performance. It is also crucial to focus not only on identifying but also on managing risks. One of the risks, with the highest negative impact on the implementation of the creativity support process, is related to the insufficient skills of managers in this particular area. Managers usually do not have the opportunity to experience training specifically oriented to supporting the creativity of employees.

Following the information presented in the introduction, it is possible to describe the knowledge gap on which this article is focused. This gap is represented by the link between risk management and the implementation of a process approach to support creativity among employees. Based on the above, it was also possible to define research questions: (RQ_1) How

should the process of creativity support in the organization be arranged? (RQ_2) What risks affect the process of creativity support in the organization? (RQ_3) How can risks associated with the implementation of the creativity support process in the organization be managed?

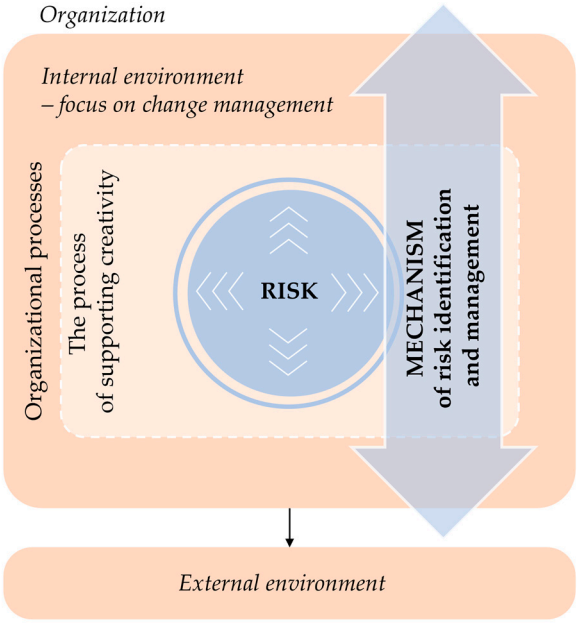

Figure 1. The impact of risk on organizational processes and its effect on the state of the economy in the country (own elaboration).

The connection between the academic environment analysed in this study and the application of the results to the environment of various other organizations (commercial businesses, sports organizations, the public sector, and others) is manifold. It is based on the findings and opinions of several other authors. Dau et al. (2022) described the point of replication studies in different environments, considering the specifics of that environment. Thus, in the context of this article, the study can be replicated in the environment of the selected organization for the continuous improvement of theoretical knowledge. Such an environment can be a commercial or non-profit sector or public sector because, in each of them, there is room for the utilization and further development of the creativity of the environment members. Rozentale and van Baalen (2021) emphasised the need to modify created academic approaches directly by the managers of organizations. Managers use the created models as the fundamentals and subsequently consider the actual conditions of the current situation during their implementation. The result is the connection and application of the created model in its modified version, reflecting the conditions and principles of the selected environment. Valente et al. (2021) pointed to the importance of addressing the opinions of current students, as they are the leaders of the future and influence the operation of businesses and other organizations. Influencing today's students in the desired direction is how academia should contribute to the creation and achievement of positive results in the future when these students will be managers and employees of businesses and organizations. Espinosa-Pike et al. (2021) examined the connection between the students' opinions and the practical execution of a specific profession (in this case, the profession of auditors). It is important to incorporate students' opinions on the chosen profession and adjust the education itself based on this perspective. This way, the profession is affected in practice in the future. The last selected angle relates to the concept of open innovation. What is created by academicians at universities finds its practical application in industries. Thus, the entire process of creating innovations is constantly moving forward. Knowledge transfer between these areas occurs within this process (Baban et al. 2021). The study presented in this article has the same ambition.

2. Literature Review

When examining risk in general and in connection with specific organizational processes, it was necessary to define the main terms based on the current theoretical knowledge. Therefore, the creativity, creativity-supporting process, and risk are described separately in the following subchapters.

2.1. Creativity

Creativity can be defined from different perspectives. One of them is the object to which this property is attributed. In this case, the studied object can be both an individual and a team, a social unit, or the entire organization (Franková 2011; Yuan et al. 2022). Creativity can be considered a quality but also a certain behaviour of an individual leading to the creation of new, innovative, and useful ideas (Anderson et al. 2014; Montag et al. 2012; Somech and Drach-Zahavy 2013; Yu-Qian Zhu et al. 2016; Gao et al. 2021).

Several authors drew attention to the identification of aspects supporting creative thinking. One such aspect is the personal interest of the person/employee and the perceived enjoyment (Forgeard and Mecklenburg 2013; Wang et al. 2022). In connection with the points listed above, it is appropriate to state that the creative process can be activated via appropriate motivation. This can be understood as an internal force driving a person to create a new idea and to achieve a set goal (Agnoli et al. 2019). A direct link between intrinsic motivation and creativity is also supported by the opinions and results of Leung et al. (2014) and Nili and Tasavori (2022).

When investigating creativity in organizations, it is also necessary to know the ways in which its level can be measured. One approach to measuring employees' creativity is The Runco Ideational Behaviour Scale (RIBS). This method helps capture the creative thinking of employees more accurately. Individuals evaluate the frequency with which the so-called idea moments appear in their daily work activities (Runco et al. 2001; Tep et al. 2021; Alabbasi et al. 2022). The scale can be described as a tool for measuring creative potential using its practical manifestation (Puryear et al. 2017).

The assumption of the proposals presented in this article is that creativity consists of different elements. These can be promoted (improved) separately so that the creativity of the individual, team, or the organization is supported eventually (Le et al. 2022). The results of various research projects confirm that approaches to the perception of creativity vary slightly depending on the education of the individual, culture, or available information (Childs et al. 2022). However, one of the conclusions of the study claims that, despite a variety of creative perceptions, diverse approaches can be connected via the common efforts of the organization's members to create new and valuable ideas, facilitate open discussion, or build and share knowledge (Ha and Ha and Ha 2022). This is why it is necessary to support creativity as a feature of members of a particular organization, regarding the specifics related to the environment (Carroll et al. 2009; Imamoglu et al. 2022). The process of supporting creativity should be proposed and implemented considering the organization's needs.

Other findings follow the similarity of the elements the creativity is composed of. It should be noted that there were no significant differences in the components of creativity between pupils of various grades, gender, and groups (Le et al. 2022). In the context of these findings, it can be stated that, in the support of creativity as a whole (not only its individual elements), its overall development in the organization will occur (Nili and Tasavori 2022).

2.2. The Process of Supporting Creativity

Experts from the field of behavioural sciences look at the process of creativity from the perspective of possible ways to influence it. In their research, they try to reveal specific factors that stimulate the creative process in employees. One finding states that expertise and enculturation contribute to individual differences in creativity. Another factor is the work environment in which the employees perform their tasks. This factor significantly affects the results of the creative process, which can be revealed in the evaluation phase. An important factor is also represented by negative attitudes coming from co-workers, which

cause the creative ideas of some employees to not be positively received or appreciated (Kleinmintz et al. 2019).

The authors try to describe the creative behaviour of employees as explicitly as possible, so that it is clearly understandable and that it can be shaped in the desired way. This is a complex task. On the one hand, it can be stated that creative behaviour takes place in a flow mode. It manifests itself in a smooth movement that completely bypasses consciousness while it can be influenced by the perceived organizational support (Dietrich 2018; Aldabbas et al. 2021). On the other hand, it is appropriate to give an example of how such a creative process can happen. If the managers understand the process of creating new and unique solutions, then they can influence it and support it in their employees.

Based on the work related to the prediction of creative behaviour in real life, Jauk et al. (2014) focused on creating a model describing the creative process. This model summarized and linked findings from different areas of creativity research. The key part of the model is the three separate but interconnected levels of creativity. The basis consists of neurobiological systems, which are followed by individual differences, depending on the personality and abilities of a person related to creativity. The last level is the real creative behaviour itself. These three levels also represent three different types of processes, which include biological, psychological, and behavioural ones. Therefore, the model of the creative process can be described as bio-psycho-behavioural (Jauk 2019; El-Kassar et al. 2021).

2.3. Risk

In general, risk is perceived as a phenomenon that has adverse effects on activities and processes in the organization (Xie and Wu 2008; Girlando et al. 2021). The field of project management, which analyses risk during the planning of any project (Sato 2014; Obondi 2022), devotes a lot of attention to this topic. In the context of the presented research, the very implementation of the creativity supporting process can be understood as a project of its own.

Overall, an organization's approach to risk management can be denoted as "risk management culture". Private, public, or non-profit organizations differ in what goals they set, but the common element is the effort to reduce the negative impacts of risks. Via risk management, the organization contributes to making the probability of achieving defined goals as high as possible (Domanska-Szaruga 2020). Risk management is also related to the continuous and sustainable assurance of the organization's operation (Mormul 2021).

When managing risks, it is appropriate to focus on basic processes such as the identification of risk factors, the assessment of impacts (quantitative, qualitative), and the management of key risk factors (Damnjanovic and Reinschmidt 2020; Trzeciak 2021). When implementing individual processes to help manage risks, it is advisable to proceed according to valid principles. It is also necessary to include the managers' own judgement in the decision-making (Krewski et al. 2022). When implementing business processes or ensuring individual phases or activities, it is essential to manage the risks so that the entire project is successful eventually (Nikolaenko and Sidorov 2023; Riazanova 2022).

3. Materials and Methods

The area of risk management in organizational processes was researched with a focus on creating a procedure that will help managers and employees in managing these risks. Therefore, the article's aim was the creation of a mechanism to identify and manage risks in the process of supporting creativity. The mechanism represents a sequence of steps, following which the potential negative effects of risks on the creativity of employees can be minimized or fully eliminated.

Several different methods, techniques, and thought processes were applied in the research of this issue. These methods are listed together with the description of their application in Table 1.

Table 1. Methods and their application.

Methods	Application
Content analysis of documents	Literature review, discussion
Analysis of case studies	Secondary data—results
The method of sociological inquiry using the questionnaire survey technique	Primary data—results
	Design of the recommended model
Modelling	Setting the creativity supporting process, identification of risks, proposal of corrective and preventive measures, proposal of the mechanism for risk identification and management
Mathematical and statistical methods	Evaluating questionnaire survey questions

(Own elaboration).

The questionnaire survey was applied in the academic environment in Slovakia. However, the generalized findings and results can be used for the environment of mature organizations (defined in the literature review). Even universities and sports organizations can be considered mature if the described conditions are met.

The questionnaire survey was conducted in two phases, focusing on two groups of respondents. The entire questionnaire survey contained questions focused on several elements (motivation, managerial decision-making, and creativity). In connection with this, partial results focused mainly on motivation and decision-making were already published in other articles (Blašková et al. 2021; Tumová and Demjanovičová 2021; Tumová and Blašková 2021; Blašková et al. 2022).

The respondents were university students (n = 419) in Slovakia and academic staff (n = 90) at a particular selected faculty. Both of these surveys were conducted in 2019.

The statistical population in the first survey was determined based on information from the Statistical Office of the Slovak Republic as the number of full-time university students in 2019. This represents 105,393 students (SOSR—Statistical office of the Slovak Republic 2023). With a confidence interval of 95% and a margin of error of 5%, a minimum sample size of 383 respondents was calculated. However, the real sample size included 419 respondents with a margin of error of 4.78%. In the second survey, the statistical population consisted of 124 employees of the selected faculty. The actual sample size (answers obtained) is 90 respondents with a margin of error of 5.43% (Raosoft 2023).

The reliability analysis included the Cronbach's Alpha calculation using SPSS Statistics software. The value of 0.882 indicates a high level of the questionnaire's reliability.

The full text of the questions used in this article is listed in Appendix A. To achieve a correct understanding of the examined elements by the respondents, these elements were separately explained in the questionnaire.

One of these elements was a change in approach on the part of the organization (teachers). An approach that supports creativity has been described as one that uses creative/progressive methods and procedures (e.g., supporting the development of potential and intellectual abilities, role-playing, counselling, experiential methods, brainstorming, benchmarking, etc.).

After primary (questionnaire surveys) and secondary data (case studies) related to the academic environment were thoroughly analysed, a generalization of the findings was applied. This procedure resulted in a model of the creativity support process, which is sufficiently general to be applied in different environments (outside the academia).

The result of the performed analyses was a proposal of recommendations for the risk management in the process of supporting creativity in the organization. One of the presumptions is the positive impact of the effective risk management approach of the organizations in the given country on its knowledge economy.

4. Results

The results presented in this article were divided into four separate parts. The first part is an analysis of case studies, which is followed by results from selected questions of a questionnaire survey conducted in 2021. This is followed by a presentation of the proposed model of the creativity supporting process with a link to the identified risks. The last, but no less important, part is the very identification of the potential risks within the proposed process and their management.

4.1. Analysis of Case Studies

Several case studies and examples from practice were analysed as part of the research. Key findings from selected studies are presented below, together with a table summarizing the main findings (Table 2). It indicates (1) the main goals and results of the studies, (2) factors affecting creativity, and (3) risks threatening the process of supporting creativity.

Table 2. The identification of factors and risks affecting the process of creativity support.

Study	Objectives and Results	Factors Influencing the Process of Creativity Support	Identification of Risks in the Process of Supporting Creativity
A	Identifying ways to promote creativity and a sustainable community; defining steps for incorporating creativity into processes; identifying factors that influence the promotion of creativity; the need to support the development of talented and creative individuals; the necessity of joint creation and joint sharing of knowledge; adopting approaches supporting creativity	Diversity of creativity types	Insufficient skills of managers to support creativity
		Development of individual skills	Omission of essential steps of the creativity support process
		Knowledge sharing	Insufficient support for the creative process
			Reluctance to share information with colleagues
		The principle of reciprocity	Reluctance to implement changes in organizational processes on the part of the organization's management
B	Identification of key characteristics of the social environment; clear and open communication; an authentic environment contributing to the greater engagement of organizational members and higher performance; sufficient mutual interaction between the members of the organization improves the results; interest in learning and gaining experience	Favourable social environment, building a social network	Increased disturbance in the communication process
		A sense of security	Reluctance to accept and adapt to change
		Clear and open communication	Reluctance to create mutual interactions
		Interest in one's opinion	Lack of opportunities for education
		Positive relationships, interactions, and atmosphere	Lack of interest in supporting the creation of an authentic work environment
		Application of the leader's authentic approach	Errors in the evaluation of results and performance (error of similarity, comparison, halo effect, etc.)

(Own elaboration).

For the presentation of the main findings, a study dealing with the topic of creative universities and their creative city regions (Powell 2007) was selected as the first example. The research described in the study was carried out by the European University Association (EUA 2023). The Consortium of Seven European Universities (C5U) explored different attitudes towards the development of creativity, focusing on the link between universities and creative cities. They focused on the following areas: ethics and values, the role of talented and creative personnel (employees and management staff), management structures, and the creative relationship with the city region. The main part of the methodological procedure of the analysed study was the conduction and documentation of case studies

leading to the identification of the best practices. A comprehensive final report revealed why each partner university's approach was considered creative.

Knowledge creation at universities is closely related to the cities in which the universities are located (Florida 2005; Gertler and Vinodrai 2004; Wu 2005). The result is the understanding and fulfilment of the universities' role in managing programs aimed at achieving success in the global knowledge economy. Based on the findings, creativity can be characterized as a mental process developing new ideas, concepts, theories, and processes. Innovations and their implementation often have a social and economic impact (Branscomb and Auerswald 2002). To build a creative and innovative university, the creative qualities of individuals need to be encouraged.

One of the main results was the definition and detailed description of five basic elements of a creative organization. These five points include: diverse talented and creative leaders; creative teams; creative, open, and flexible relationships; creative communities of business practice; and creative urban regions. A specific aspect that the organization should focus on is the promotion of creativity via education. Members of the organization should be actively involved in this process (Davis and Murrell 1993; Coates 2005). Other important prerequisites that ensure the effectiveness of the processes are (1) the support for the development of creative thinking skills, (2) support for problem-solving skills, and (3) support for such behaviour that leads to innovative thinking (Powell 2007).

The second study selected from the performed research, showing the results from the secondary data analysis, dealt with the topic of students' safety for learning and the role of a lecturer's authentic leadership in the creation of psychologically safe environments. In this study, the impact of the described phenomenon on academic performance was researched as well (Soares and Lopes 2020). The study was mainly focused on characterizing the role of organization members in promoting creativity. The intention was also to investigate authentic leadership and its impact on creating a psychologically safe environment.

Within the methodological procedure, four main aspects were examined and measured: psychological safety by Edmondson (1999), authentic leadership (Avolio et al. 2007), social network density, and performance. Specific findings highlight the positive impact of psychological safety and the authentic leadership of lecturers during the educational process on the performance of the participants. They also point to the key importance of a favourable social environment. The environment should be characterized by open communication where members can ask questions and discuss their doubts. Authentic leadership leads, for example, to a better understanding of a topic or to greater engagement and higher performance.

If there is enough mutual interaction between members of the organization, then the tendency for better results will show. There will also be an effort to provide advice and to present and confront opinions, and the mutual problem-solving will occur. Another finding states that if a member of an organization develops a strong social network, he/she will experience higher psychological safety in the environment than the one with a lower social network density (McPherson et al. 1992).

4.2. Results from the Questionnaire Surveys

When collecting primary data, the questionnaire survey technique was used, via which information was obtained on the working environment and the willingness to adapt to change or development. Two questionnaire surveys were conducted. The first one was distributed among lecturers (n = 90) and the second among students (n = 419). In the academic environment, lecturers can be divided into employees and managers. However, both of these groups participate in teaching and are therefore related to the creation of an atmosphere of trust and the support of creativity among students. The similarity of some questions in both questionnaires made it possible to subsequently compare the information collected. This provided space for drawing conclusions and proposing recommendations based on the connection of two perspectives represented by the opinions of two groups of organizational members.

One of the questions of the questionnaire survey for the lecturers was oriented towards revealing whether the respondents are willing to increase their future creative work performance (left side of Table 3); (frequency represents the specific number of respondents who marked a specific answer from the total number of respondents; (%) represents the relative frequency from the total number of respondents—the same for Tables 4 and 5). The potential willingness to approach the fulfilment of work tasks creatively should be supported by improving the approach on the part of the organization (by directly supporting the creativity of employees). Based on the findings from the presented case studies, it can be stated that a part of the employees' creativity is also their willingness to make, accept, or adapt to changes and thus also change their performance.

Table 3. The willingness of respondents to increase creative performance if the approach on the part of the organization changes (employees' responses).

A. Are You Willing to Increase Your Performance If the Organization's Approach Changes?			B. By How Much (%) Would Your Performance Increase If the Organization's Approach Improved?		
Options	**Frequency**	**[%]**	**Intervals**	**Frequency**	**[%]**
			1–20	27	60.00
			21–40	10	22.22
			41–60	3	6.67
No	45	50.00	61–80	1	2.22
			81–100	4	8.89

(Own elaboration).

Table 4. The willingness of respondents to increase creative performance if the approach on the part of the organization changes (students' responses).

A. Are You Willing to Increase Your Performance If the Organization's Approach Changes?			B. By How Much (%) Would Your Performance Increase If the Organization's Approach Improved?		
Options	**Frequency**	**[%]**	**Intervals**	**Frequency**	**[%]**
			1–20	113	30.38
			21–40	119	31.99
			41–60	92	24.73
No	47	11.22	61–80	34	9.14
			81–100	14	3.76

(Own elaboration).

Table 5. The respondents' effort to build an atmosphere of trust and belonging.

Options	**Employees—Building the Atmosphere**		**Students—Perceiving the Atmosphere**	
	Frequency	**[%]**	**Frequency**	**[%]**
Yes	47	52.22	75	17.90
Mostly yes	21	23.33	215	51.31
Sometimes	14	15.56	112	26.73
Mostly no	7	7.78	13	3.10
No	1	1.11	4	0.95

(Own elaboration).

A total of 50% of respondents (employees and managers) were willing to increase their creative performance. The remaining 50% were inclined to the possibility that they would not increase their performance even in the case of a change in the approach towards them. The reluctance to change discovered among half of the respondents can be interpreted, in connection with other findings from the survey, as the fact that these employees consider the level of their current performance very high already; therefore, their performance would not increase even with further support for their creativity.

Subsequently, the answers of 45 respondents who were willing to increase their future creative performance were examined in detail (right side of Table 3). A total of 60% of this group favoured a percentage increase in their performance from 1 to 20%. The second interval (21–40%) was marked by 22.22% of respondents. The rest of the respondents chose even higher potential increase in their performance. Thus, 20% of the employees from the organization would considerably increase their willingness to create and bring new ideas and innovative solutions (intervals with a 21% increase in the performance or higher). This way, the organization will obtain more efficient employees with a prospect of becoming more successful overall. Therefore, it is appropriate to put sufficient effort into the support of employees' creativity.

Information regarding the willingness to change one's creative performance was also analysed from the perspective of students who are actively influenced by the lecturers in question. As many as 88.78% of students from the total number stated that they were willing to increase their creative performance and effort if they saw and felt changes in the organization (left side of Table 4). These changes should consist of a motivational approach to the support of creativity.

Subsequently, the answers of 372 respondents open to change were examined (right side of Table 4). Within this group, 30.38% of students were willing to increase their future creative performance by at least 1–20%, and almost the same number of respondents stated that their performance would improve even by 21–40%. Based on these results, it can be concluded that the support of creativity affects the increase in the performance of organizational members.

Another sign of decision-making in the support of creativity is the targeted support for building an atmosphere of trust and belonging. This kind of atmosphere stimulates the creativity of the organizational members. Therefore, managers and employees were inquired in relation to the creation of an atmosphere of trust, friendliness, and belonging.

Over half of the employees stated that they try to build an atmosphere of trust with their colleagues and students, and 23.33% chose the option "mostly yes" (left side of Table 5). In contrast, more than half of the students said that the teachers build the atmosphere of trust in supporting their creativity (options "yes" and "mostly yes") (right side of Table 5).

Thus, the conclusion is that if employees want to set the process to support creativity, they should focus on using open communication and fostering a relationship of trust. In this way, creativity and enthusiasm are supported not only among students but also among lecturers. These elements become a part of the environment and represent the main values characterizing the creative environment of the organization.

To visualize the ratio between the answers and the differences in the opinions of employees and students, a graphic representation of the data was created (Figure 2) (the number in square brackets represents the absolute frequency with which a particular answer was indicated by the respondents, and % represents the relative frequency of the total number of respondents). A total of 26.73% of students said that teachers only sometimes create an atmosphere of trust. The application of trust is therefore not a targeted decision for some teachers, and it is only a sporadic intuitive use of the aspect in question. However, to support creativity in the work environment, it is necessary that the building of trust and belonging among the members of the organization is thoroughly considered and planned.

4.3. Proposed Model of the Creativity Supporting Process with a Link to Identified Risks

Based on the findings resulting from the analysis of case studies, sociological inquiry, and other parts of the research, a proposal for the process of the direct support of creativity was designed. This consists of three separate phases: (1) analysis, (2) implementation, and (3) evaluation. It is not advisable to skip any of the phases or change their order. Each of them includes several elements and is separated from the next phase by a decision-making point. Decision points are characterized by a specific question that managers of organizations should ask themselves while setting the support for employees' creativity.

The graphic representation of this model of direct support for creativity is captured in Figure 3. In the lower right corner, there is a legend explaining individual elements. The

first of them is the beginning of the process, after which information is collected and the current work atmosphere in the organization is analysed. Based on the information and results of the analysis, the atmosphere is evaluated, and the first decision-making point is established (this can consist of more questions, not just one). This way, the process continues until the last element, which is the end, following the final evaluation of the whole process, including the feedback for its next iteration.

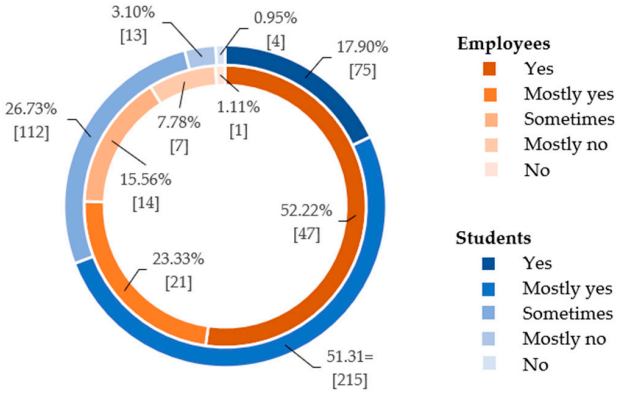

Figure 2. Building the atmosphere of trust and belonging from the perspective of employees and students (own elaboration).

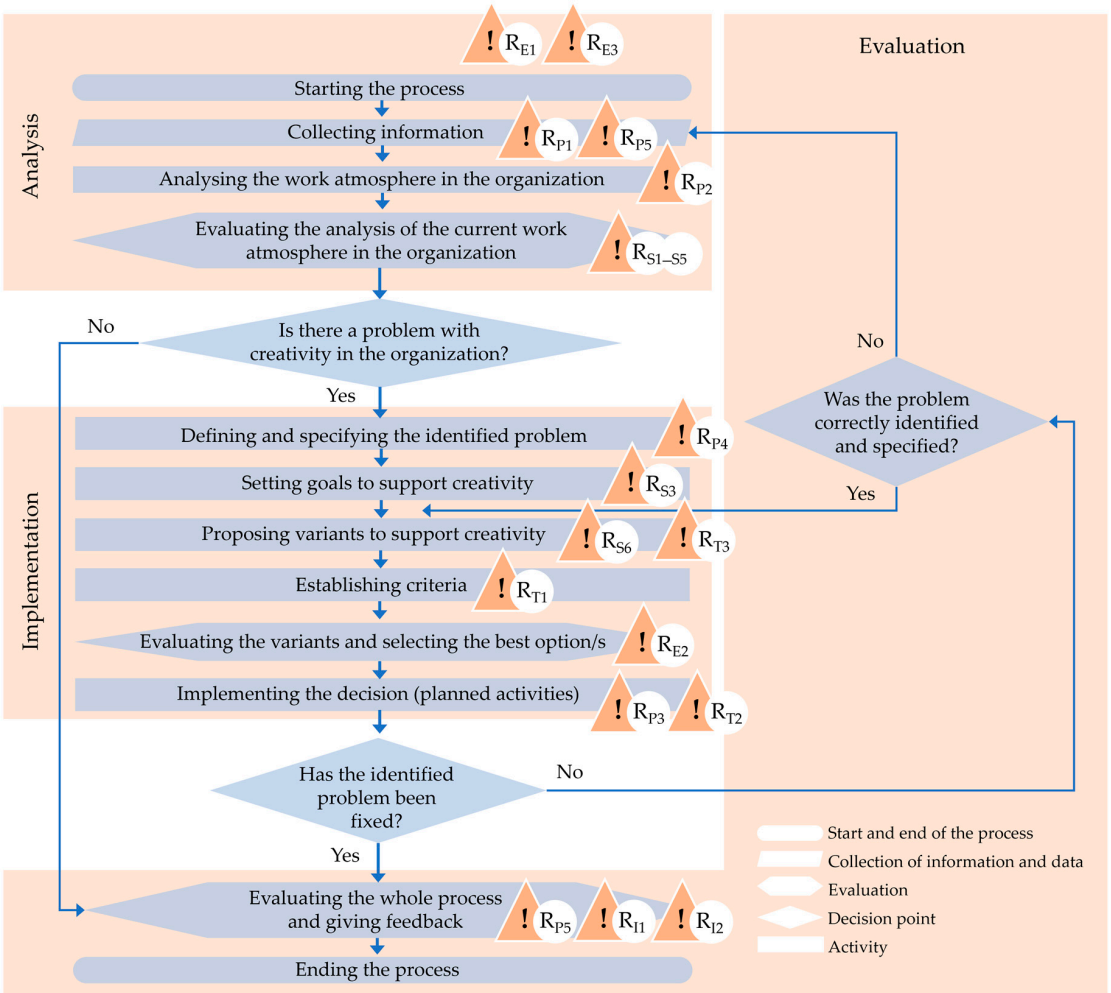

Figure 3. The process of direct creativity support (own elaboration).

Following the description of the creativity supporting process by Jauk (2019), this needs to be perceived as a bio-psycho-behavioural phenomenon. It is the behavioural component that is directly linked to the behaviour of all actors involved in the process of creativity support. Therefore, in this process, it is necessary to emphasize especially its social aspect and the resulting consequences for the setting and implementation of this process within the management of the organization (Antopolskaya and Silakov 2021; Moreno and Jurado 2022). Further research also confirmed the fact that social support leads to higher creativity (Tan et al. 2022).

The generalized form of the model was deliberately chosen. It is the generalization of the process in the form of a model that supports the variability of its implementation in multiple (diverse) environments. Following this perspective, it is necessary to add that, when implementing the creativity support process based on the created mechanism, this must be adapted according to the specific requirements of the organization, the environment it operates in, and the factors of creativity that are relevant for its processes and outputs.

The space to consider the relevant factors of creativity within the examined organization and environment is during the analysis included in the proposed model (activity: analysing the work atmosphere in the organization) as well as during the implementation itself (activity: defining and specifying the identified problem). This is emphasised also within the steps of the whole mechanism for the implementation of the proposed model (in Section 5.2).

An essential part of the presented model is the identification of potential risks that may occur during its implementation. These are marked with an exclamation point and a specific designation in the form of an abbreviation, where *R* = risk, *E* = expectations, *S* = staff, *P* = processes, *T* = time, and *I* = ICT. A description of the categories mentioned together with specific risks can be found in Section 4.4 below. It is essential for managers of organizations to also focus on the identification and management of risks when implementing the process of supporting creativity. Only in this way can they minimize the negative effects of potential risks and ensure the higher efficiency of this process and the higher creativity of employees and other internal processes.

4.4. Identification of Anticipated Risks within the Proposed Solution and Their Management

During the implementation of the creativity support process, several adverse situations may occur, which subsequently lead to undesirable changes. For prevention, it is advisable to identify potential risks in advance since these could negatively affect the implementation of activities. After identifying the risks, specific preventive measures can be designed that prevent these negative effects.

Table 6 shows a list of potential risks differentiated into five categories. These include expectations, staff, processes, time, and ICT. The identification was supported by other partial results within the research project that was open for several years (Tumová and Blašková 2020). The categories were screened so that they complexly covered the whole design process, capturing the main elements and actors. Specific risks were denoted based on the first letter of the presented category and the corresponding number. The identified risks were further examined in terms of the probability of their occurrence and the seriousness of the consequences they would cause (Table 6: columns probability (P) and impact (I)).

Both aspects (probability = P, impact = I) were assigned three different degrees, to which a specific level belongs (Table 7). Based on the calculation (P × I), (last column of Table 6) a risk matrix could be created (Table 8).

The risk matrix clearly shows the risks together with their level. If the risk reaches 1 or 2 points when recalculated, it is a low-level risk (green colour). If the value is equal to 3 or 4, it is a medium level (orange colour), and if it is in the range between 6 and 9 points, the risk has a high level of seriousness (red colour). The most serious are the risks with a high level in the risk matrix. Therefore, it is necessary to pay the greatest attention to them. It is essential to focus on their elimination or at least their mitigation.

Table 6. Identification of potential risks.

Category	Id.	Potential Risks	Probability	Impact	Risk Value
Expectations	R_{E1}	Overvalued expectations related to higher creativity	1	3	3
	R_{E2}	Failure to achieve the expected effects in the form of increased creative performance	1	2	2
	R_{E3}	Insufficient identification of factors affecting creativity in the specific environment and potential (expected) errors	2	3	6
Staff	R_{S1}	Improper distribution of power to affect the individual, team, and organizational creativity	2	2	4
	R_{S2}	Insufficient skills of managers in decision-making on motivation and creativity	3	3	9
	R_{S3}	Lack of competencies and skills (identification of own sources of creativity, ability to apply creativity in specific situations, . . .) of employees (students or different members of organizational environment supposed to deliver creative performance)	3	2	6
	R_{S4}	Insufficient knowledge of responsibilities for the activities included in the process of supporting creativity	1	2	2
	R_{S5}	Failure to complete assigned tasks while applying creativity	1	2	2
	R_{S6}	Reluctance to accept and adapt to change	2	3	6
Processes	R_{P1}	Incorrect identification of information needs (information necessary for the setting of the creativity support process; information on the boundaries determining the space for applying creative solutions to problems)	1	2	2
	R_{P2}	Increased disturbance in the communication process (when communicating the importance of creativity and its support)	1	2	2
	R_{P3}	Insufficient support for the creative process	2	2	4
	R_{P4}	Mutual influence of processes; transfer of risks (high interconnectedness of processes)	3	3	9
	R_{P5}	Leakage of confidential information representing the peoples' level of creativity	1	3	3
Time	R_{T1}	Errors in planning the time frame for the whole process of supporting creativity	1	1	1
	R_{T2}	Failure to meet the time schedule (deadlines set for individual phases and activities included in the support of creativity)	1	2	2
	R_{T3}	Incorrect setting of time reserves	2	2	4
ICT	R_{I1}	Software failure (applications for online collaboration, knowledge management software)	1	2	2
	R_{I2}	Hardware failure (servers gathering information about the peoples' creativity, skills, characteristics, and outputs created via the applications mentioned in the previous point)	1	2	2

(Own elaboration).

Table 7. Characteristics of the risks' probability and impact.

Probability Level (P)		Degree of Probability
Level	**Description**	
Low	Low probability of occurrence	1
Medium	The probability of an event occurring is higher	2
High	The probability of an event occurring is almost certain	3
Impact Level (I)		**Degree of Impact**
Level	**Description**	
Negligible	Low impact of the event, minimal or no consequence	1
Serious	Medium impact of the event, severe consequence	2
Critical	High impact of the event, critical consequence	3

(Own elaboration).

Table 8. Risk matrix.

P/I	Negligible	Serious	Critical
Low	R_{T1}	R_{E2}, R_{S4}, R_{S5}, R_{P1}, R_{P2}, R_{T2}, R_{I1}, R_{I2}	R_{E1}, R_{P5}
Medium	x	R_{S1}, R_{P3}, R_{T3}	R_{E3}, R_{S6}
High	x	R_{S3}	R_{S2}, R_{P4}

(Own elaboration).

5. Conclusions and Recommendations

The specific recommendations resulting from the presented findings include the very model of the creativity supporting process with a link to the identified risks (Figure 3). Subsequently, examples of corrective and preventive measures that are used to minimize or eliminate risks (especially those that were identified as very serious) were defined. The last part of the recommendations includes the steps of the risk identification and management mechanism in the process of supporting creativity.

Findings and results from the analysis of secondary data (case studies) were transformed into identified risks within the implementation of the creativity support process (Table 2, last column). Corrective and preventive measures are directly related to the identified risks, which are further described in Section 5.1.

The creativity support process itself was designed considering the results of the primary data analysis in the form of two conducted questionnaire surveys. An example is one of the results, which points to a high willingness of respondents to change and improve future performance (employees 50%; students 88.78%). This result was reflected in the creation of the model, where the model includes setting the goals of creativity support and their implementation, assuming the willingness of employees to participate in these activities.

Subsequently, it can be stated that, based on the result that 26.73% of students said that teachers only sometimes create an atmosphere of trust, an evaluation of the current atmosphere of the organization was included in the model.

Subsequently, a risk identification and management mechanism was created as part of the recommendations (Section 5.2). This was designed precisely using the results of the analyses carried out; in particular, point 2 in the mechanism is related to the risks identified via case studies; the above result of the survey among students on the creation of an atmosphere of trust is transferred to point 5 of the proposed mechanism.

Based on the results, it was also possible to answer the defined research questions. The answer to question RQ_1 is the proposed model of the creativity support process shown in Figure 3. The answer to RQ_2 is represented by Table 6, which contains the identified risks associated with the implementation of the creativity support process in the organization. The last question, RQ_3, relates to how the identified risks can be managed. The answer is included in the points in Section 5.1, representing corrective and preventive measures, but also in Section 5.2, representing the steps of the proposed mechanism.

5.1. Corrective and Preventive Measures

Based on the identification of risks at the highest level, it was also necessary to propose examples of specific preventive and corrective measures that would eliminate their negative impact on the implementation of the designed process. The measures, the application of which should be re-evaluated even before the implementation of the proposed solution (preventive measures), include:

- Focusing on supporting the improvement of the managers' skills in decision-making to support creativity (e.g., when defining long-term strategic goals);
- Completion of a series of training aimed at improving the skills of employees in creativity support;
- The targeted and timely explanation of the meaning of the planned change. The inclusion of this activity belongs to the main requirements for the implementation of the proposed model of the creativity supporting process;

- Performing an initial analysis aimed at revealing potential errors of the newly introduced process;
- The ongoing improvement of key processes, which, due to their high interconnection with other processes, also influences their improvement (utilizing the risk as advantage via prevention).

Among the measures that are used only after some of the risks emerge in ensuring the creativity supporting process (corrective measures), the following points are advised:

- Revision of assigned responsibilities and their adjustment based on currently assigned tasks;
- Elimination of communication disturbance by clearly defined possibilities, methods, and forms of communication;
- Open communication of errors and proposal of compensation for affected parties;
- Allocation of funds for a sufficiently timely repair or replacement of software and hardware components;
- Revision of information sources and completion of missing information.

5.2. Steps of the Risk Identification and Management Mechanism in the Creativity Supporting Process

The outcome of the researched issue of creativity support is the creation of a mechanism due to which the managers of the organization are able to identify and manage the risks associated with this process more effectively. The basic consecutive steps include:

1. Designing a process of supporting creativity in the environment of a specific organization regarding current knowledge on the topic, considering all the relevant characteristics of the environment, and capturing gathered information as foundations for other steps (preparing documents, making them available to the actors of the process);
2. Identifying risks specific to the examined environment and the factors of the creativity relevant within it, and creating a categorization of the risks based on the documents available;
3. Designing corrective and preventive measures based on the documents available (created during the previous steps, documenting the situation within the creativity of individuals, teams, and the whole organization);
4. Designing a plan for implementing the proposed measures affecting creativity within its relevant aspects for the environment examined (in terms of budget, time, personnel, etc.);
5. Evaluating the mechanism, providing feedback for the whole process of supporting creativity, and planning the subsequent control after the implementation to obtain and document lessons learned.

All the mentioned steps were aimed at the support of creativity and the process by which this support is assured in the organization. It is important to add that, within the research, the individual findings were summarized and subsequently generalized so that it is possible to apply the defined steps of the mechanism to the environment of different organizations (after considering the specifics of these organizations and examining the relevant factors of creativity of the organizational environment members).

6. Discussion

The key importance of creativity support was confirmed by a case study from the USA. Creativity and the development of creative thinking skills are presented as the main components of the success of young people. The results of the conducted research show that the respondents value the stimulation of imagination and curiosity, and they manage to establish contacts and focus on new or different perspectives of perception (Fisher 2018).

Marquis and Vajoczki were inclined to believe that creativity as a unique personality characteristic should be purposefully developed, strengthened, and trained (Marquis and

Vajoczki 2012). When supporting creativity, a combination of different tools or techniques should be used that help an individual or group improve their creativity (Soviar et al. 2015).

When examining the opinions presented by the World Economic Forum, information was revealed about future trends in the demand for skills in the labour market. The forum presented the required skills along with their ranking based on estimated preferences, and one of them was "creativity, originality and initiative" (World Economic Forum 2018). These ideas confirm the meaning and importance of creativity.

Risks and their impact appear more and more when looking at global trends affecting the direction of the organization in various areas of business according to its focus. The effect of foreign trends is also manifested in the support of the creativity of the organizations' members. An example is the recent pandemic situation, which supports the trend of online teaching at universities. For universities and other organizations, working in an online environment has become a necessity. This trend was utilized at the University of Potomac, which offered the possibility of obtaining a degree via online learning, even before the outbreak of the COVID-19 pandemic (University of Potomac 2020). The online teaching process stimulates creativity not only among students, but also among teachers, lecturers, and trainers, as they must discover new ways of preparing materials for the learning within the courses provided.

The emerging trends also include virtual reality (VR) technology. This represents one of the latest educational tools that will continue to develop in the future (Paterson 2018). For example, the University of Warwick followed this trend (Allcoat and von Mühlenen 2018). The emotional response of individuals is supported, their motivation is stimulated, and employees are moved forward in their own development. The application of VR technology is considered beneficial by several authors, not only in terms of making the teaching process more effective but also from the perspective of supporting the organization members' motivation and creativity (Yu et al. 2020). The use of new technologies represents opportunities for employees to develop their creative potential.

Following the technological progress, organizations should focus on using new technologies in the future. These technologies should serve not only to provide an abundance of information but also to support the building of high-quality education. According to the findings gathered thus far, the utilization of the trend of artificial intelligence (AI) will contribute to the elimination of the problem of space and time limitations. Other advantages are the support of the creativity, curiosity, and cooperation of the organization members (Bouchrika 2020; Korn 2016).

Within the possibilities of applying academically oriented research and its results to other environments, the focus can first be put on the desirable interdisciplinarity of the research itself. The more areas connected in research, the wider the possibilities of implementing the obtained results and proposed solutions. In the context of this study, interdisciplinarity was achieved by connecting the fields of sports management, risk management, and HR management. Positive impacts and the importance of interdisciplinarity are emphasized, for example, by Zait et al. (2021).

The value of inviting members of other environments to the conduction of research is described, for example, by Hungund et al. (2022). According to these authors, when performing research, it is appropriate to connect knowledge from several areas. To achieve better research results, the academic environment should support mutual cooperation, knowledge acquisition, and individual development. This step can subsequently be taken in the presented study as well, via the verification of the presented model in other organizations. This confirms the possibility of implementing findings in diverse environments. Based on the publication of generalized findings, future cooperation can be established and further built with the non-academic sphere.

The variety of environments in which academically created research results can be applied includes a wide range of economic activity of contemporary society, ranging from the pharmaceutical industry (Robb et al. 2022) to the automotive industry (Ripa 2022) or sports management and social services (Akhmadieva et al. 2021)

"Academic engagement" can be considered an even higher level of cooperation between academic and other environments. This focuses on research based on cooperation with industry, contract research, consulting, and the creation of informal ties. The term points to the positive effects of such cooperation of entities from different backgrounds. Academic engagement is then positively associated with the scientific productivity of individual academics too (Perkmann et al. 2021).

Limitations of this article include the deliberate selection of case studies that were the subject of analysis. In the future, it would be advisable to use a random selection or expand the criteria for a deliberate selection to increase its objectivity. Another limitation is the conduction of the questionnaire survey only in the environment of the selected Slovak university. In the future, it would be appropriate to conduct the survey in the conditions of other organizations or in the environment of other countries. Thus, it will now be possible to verify the generalized findings directly (not only indirectly) in the environment of other organizations as well. The fact that the results were based on the study of the academic environment and their application to different environments requiring the initial consideration of the specifics that occur represents a limitation of the presented study.

The future direction of the research will focus on other processes, not only on the process of supporting creativity. Potential risks will also be identified in these processes. The proposed risk management mechanism will then be adapted to the specific needs of the selected processes.

The resulting model of the creativity support process, based on knowledge from the analysis of primary and secondary data, brings many practical applications stemming from the conducted research.

The first level involves the application of the proposed process in an academic environment. Specifically, it is the deliberate support of creativity by teachers towards students. Furthermore, it is also the support of the creativity of teachers by academic managers.

In the second level, after considering the specifics of a particular environment, the results can be applied and generalized for various other types of organizations (commercial businesses, sports organizations, and others). In these organizations, managers are responsible for supporting the creativity of all employees.

In connection with the fact that creativity and its support are closely connected with people's behaviour, it is possible and appropriate to connect the examined area with the field of psychology (third level). The results of the presented research can be used by experts—psychologists—because they describe the actual behaviour of members of the organizational environment. On the other hand, the expertise of psychologists in connection with human behaviour brings even better knowledge to the setting of the creativity support process. Therefore, these experts should be involved in the entire process of the creation and implementation of the process approach to supporting creativity.

Since many universities and sports organizations belong to the public sector, the research results have a practical impact on the creation of future policies at the national level (fourth level).

The last fifth level is the very impact of the analysed area on the whole society. This perspective represents the cumulative impacts from the previous four levels.

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Appendix A. Selected Questions from Questionnaires Surveys

A questionnaire survey focused on academic motivation and creativity from the perspective of teachers:

1. Please indicate whether and by what percentage on average the overall level of your effort would increase if the creativity-supporting approach of your superior towards you were improved:

☐ *yes by .....%* ☐ *no*

2. Does your superior create an atmosphere of trust, friendliness, and belonging towards you? (choose one option)

☐ *yes* ☐ *mostly yes* ☐ *sometimes* ☐ *mostly no* ☐ *no*

A questionnaire survey focused on academic motivation and creativity from the perspective of students:

1.a If the creativity-supporting approach from the teachers towards you improved, would the average level of your efforts in studies increase?

☐ *yes* ☐ *no*

1.b Please indicate the percentage by which the average level of your efforts in studies would increase (indicate a specific number):

approximately .....%

2. Do the teachers create an atmosphere of trust, friendliness, and belonging towards you? (choose one option)

☐ *yes* ☐ *mostly yes* ☐ *sometimes* ☐ *mostly no* ☐ *no*

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