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Self-Control and Emotional Skills of Student Athletes in Relation to Academic Learning

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Abstract: *The article focuses on the assessment of physical and mental self-control style as an attitudinal pattern in relation to the academic performance of first-year students at the National University of Physical Education and Sport included in the target group of the Rose project in 2022. This is an initial empirical study aimed at identifying attitudinal trends in terms of vision on sports performance and performance in didactic learning. The investigated students responded to a psychological questionnaire made up of items assessing: the dominant tendency to place the locus of control in relation to various aspects of life; the dominant tendency to accumulate information (learning style); the way of relating emotionally to different life contexts. The 2020-2022 period left a special mark on all those involved in a didactic learning process, given the context generated by the COVID-19 pandemic, in the sense of increasing the dropout rate of academic education, and a strong mark on athletes' mobilization for performance and their vision of the future. Theoretically, we consider the concept of locus of control in one's own life (Rotter, 1966), in the sense of decision-making, action or non-action in predictable and unpredictable situations, but also the level of dependence on social influences. On the other hand, we refer to the visual or auditory perceptual dominance associated with motor learning.*

Keywords: *locus of control, learning pattern, emotional pattern, performance pattern..*

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Introduction

The 2020-2022 period left a special mark on all those involved in a didactic learning process at both pre-university and university levels, considering the context generated by the COVID-19 pandemic, in the sense of increasing the dropout rate of academic education. People's need to relate, to feel valued by others and be socially connected is essential for their emotional validation on a social level, the development of values at work, but also for goal orientation and giving a meaning to life through the activity carried out (Osemeke & Adegboyega, 2017). The need to feel effective when facing everyday challenges and opportunities actually builds up competences over time. To develop human competences, it is important to have access to the necessary resources for learning, but also to effectively organize the targeted actions (Osemeke & Adegboyega, 2017); however, these are deficient aspects in the context of a national policy focused on isolation and the reduction of activities in open spaces as much as possible, which also affects the didactic activity.

The Theory of Needs developed by McClelland (1988) is based on three types of needs, namely: the need for power over others, in the sense of influence, holding control and maintaining the role of leader; the need for achievement, which is the drive to excel, to perform according to a set of standards, to persevere in order to succeed. Strong desires are assumed at a personal level, people feel responsible for accomplishing tasks and finding solutions, they set goals, take risks and need feedback to mobilize their ability to perform; the need for affiliation, which is the desire to have friendly interpersonal and social relationships.

As regards academic learning, Singh et al. (2020) conducted a study on Indian students during the COVID-19 pandemic and found, on the one hand, a negative association between student engagement, academic burnout and loneliness, and on the other hand, a positive association between academic burnout and loneliness, and a moderating impact of internal locus of control on academic burnout and student engagement relationship. Loneliness acted as a partial mediator for the moderated relationship between academic burnout and student engagement relationship.

This phenomenon with a strong negative motivational impact is also identified in Romanian student athletes, who naturally focus less on academic learning, but rather on sports performance and a specific learning style or the assimilation of environmental data through movement. In general, learning as a process is mediated by perception.

Especially this dimension of learning through movement represents the essential vocational element specific to athletes, starting from the assumption that the human psychological system is an immaterial mechanism that uploads information at the sensory level and downloads information in the environment on the same pathways: visual, auditory, kinesthetic, olfactory and gustatory. It operates as software with a subjective capacity, which accumulates data from the environment by means of sense organs; the information is processed in the system and later used at the behavioral and cognitive levels. In general, there are data that present the majority of the population as having visual or auditory perceptual dominance, but also a category of people rather oriented toward learning practically through movement or kinetically.

With the political declaration of the COVID-19 pandemic at the national level, a strategy was attempted to diminish educational losses with the help of electronic instruments. This strategy was called online learning. Thus, those involved in an educational process, namely schoolchildren, students and teaching staff, transmitted and received information specific to the field of activity using IT. This context entailed the isolation of those participating in the educational act and the limitation (up to cancellation) of the possibilities of movement outside the dwelling space. Many activities were performed superficially as a form of compromise in order to reduce losses as much as possible, but surely the effects were very low compared to the potential reached before the pandemic. This context had a strong demotivating role at the social level and was all the more significant as schoolchildren and students who were close to accessing a certain level of education or graduating an educational cycle perceived the situation as a major loss in terms of competences that they would have had the opportunity to acquire. Singh et al. (2021) conducted a study in the USA in a context similar to the one described by us, with the aim of identifying the attitudes of those involved in an online learning process. The impact was strongly negative, especially due to the lack of standardization of specific actions, the unpredictability of the effects, but also the inability of some people to use technology in an appropriate manner or responsibly, for constructive purposes. Counterproductive behaviors were obviously recorded, for example, playing on other sites during teaching activities, lack of attention mobilization and lack of consistency at all levels, starting from food, sleep, organization of educational actions and up to the completion of work tasks in general.

It should be mentioned that this is a pilot study, which aims to analyze psychological aspects intended to provide some clues about the

potential for improving the academic performance of UNEFS students so that they can complete their studies.

The basic psychological assessment from which we start considers the way of relating to more or less predictable events and situations in the light of the "locus of control" concept (Rotter, 1966). Locus of control (LOC) is a concept that appears frequently in the literature (Dagal & Bayındır, 2017; Akca et al., 2018; Kirmizi et al., 2018). We try to identify how and to what extent students are tempted to face the effects of a situation that they perceive to be either under or beyond their personal control.

We start our investigations from the theory according to which current events in our lives are somewhat subjectively perceived to be under our control and thus we can act to modify certain effects that they can generate, but there are also many events that are beyond our personal control, which sometimes depend on our sociocultural environment or are even totally uncontrollable. We take into account aspects related to the ability to mobilize in conditions of major stress, as well as aspects related to blaming the competent authorities in the field of sport for non-involvement and potentially catastrophic events such as the case of a pandemic.

Naditch and DeMaio (1975) associate the "locus of control" concept with the theories of motivation, in the sense of persistence and vigor of behavior. Expectancy and value theory postulated by behaviorist theories are related to the tendency toward performance.

The second target in psychological assessment is to identify the specific style of cognitive learning and whether there is a predominant visual, auditory or practical tendency. This could be used in a future process of psychological counseling of those concerned.

Third, we aim to explore some emotional aspects with an impact on both academic and sports performance. We consider that physical, psychological, emotional and social perceptions, as well as distancing from others, can cause a series of negative emotional experiences as an effect of social deterioration. Belonging to a social group is a human need that plays an important role in building a person's social identity (Philippe et al., 2020).

Performance in relation to psychological regulation and energization mechanisms

- Do emotional tensions have an impact on academic performance?
- What kind of influences can these experiences have in relation to didactic learning?

Motivation, which was theorized especially by Maslow (1946, 1954, 1996), is conceptually related to notions such as: level of aspiration or targeted

standard; optimal motivation or balance between over-motivation and under-motivation in relation to locus of control. The questions aimed at this aspect relating to performance/failure are the following: What is my target? What depends on me to be successful? What depends on society? What can happen without the possibility of personal control so as to generate failure?

Generally speaking, in psychological terms, motivation (Zlate, 2000) is the set of factors that trigger an individual's activity, orient it toward a specific goal and support it energetically. One of the most well-known forms of differentiating motivation focuses on internal and external orientation, in the sense of motivation from outside the human being, such as a material reward of any nature, and internal motivation generated on the basis of individual resources to mobilize for achieving a goal. Among the most important notions associated with the concept of motivation, one can identify the level of aspiration, which is frequently related to the idea of performance as a superior level of goal achievement (Zlate, 2000), or self-actualization (Maslow, 1954; Osemeke & Adegboyega, 2017), in the sense of fulfilling the available potential. This represents the target or standard that an individual intends to reach and can have different content from one aspect of life to another. Therefore, we can meet in the same person a medium level of aspiration in terms of academic learning, a leader's level of aspiration as regards sports performance, a modest level of aspiration regarding the interest in efficiently investing one's own financial resources, etc. This phenomenon naturally manifests itself in this way, and it is not possible for a person to be equally motivated for performance in relation to all aspects of life. Personal resources are always limited and focused on some objectives rather than others.

We often encounter some terminological confusion between motivation and volition, these two psychological processes being able to energize and regulate the mental activity of an individual. If motivation works as an engine that triggers the activity, orients it toward the target and provides the necessary energy to bring the action to the end, volition focuses on the goal, overcoming internal obstacles, even motivational ones, but also external obstacles such as social or economic ones, or various unpredictable situations that can be dangerous natural phenomena.

Affectivity is also in the area of psychological regulation and is commonly associated with the "emotional plane" notion (Zlate, 2000). It is worth mentioning that affectivity is a cluster of categories of subjective experiences that involve emotions, feelings, passions and moods, each of them having a very important role in the dynamics of psychological mobilization for action. The difference between the four types of affective

experiences is mainly based on the intensity of the experience, its duration of manifestation and mobility, all of which have areas of positive and negative manifestations, a feature called "polarity of affective processes". A relevant example would be that of a student who feels an intense positive or negative emotion at a given moment, but, although passionate about their field of activity, the student cannot mobilize voluntarily at that moment.

Therefore, the hypothesis arising from the presented data is that of a negative association between the locus of control and didactic learning relationship and the affective relationship with study completion.

Locus of control

Locus of control is defined as a fundamental individual difference variable that reflects individuals' beliefs about the degree of control they have over events in their lives, and has been formally studied for more than 50 years. Initial studies demonstrated that locus of control was a key predictor of various work-related outcomes, ranging from job attitudes and affectivity to motivation and behavior (Galvin et al., 2018). It represents the tendency to consider the causes or effects of events that occur at a given moment as the result of an individual action, and this attitude is called internal locus of control or the result of factors external to the individual, such as: society in general, natural phenomena or generated by other people, more or less objective unpredictable situations (Rotter, 1966). People with an external locus of control often believe that events happen as a result of luck, fate or a source beyond their possibilities of influencing them personally. Instead, people with internal locus of control believe that they are responsible for their own successes and failures. (Kesavayuth et al., 2020; Tran et al., 2023)

Referring to the locus of control theory described by Rotter (1966) and to the effects generated by the pandemic context in the last two years, which caused a lot of sociocultural limitations, we take into account the hypothesis of a negative association between the tendency to learn predominantly in relation to movement and focusing on the external locus of control.

Ekezie and Hong (2023) highlight the idea that task complexity and external locus of control increase people's perception that task completion would be beyond their locus of control. The increased tendency to be defensively pessimistic about commitments at work has a negative impact on performance. This study has found that task complexity and external locus of control encourage pessimistic defense, having a negative impact on professional performance.

Current research status

Nowadays, there are numerous interdisciplinary studies between psychology and sport. Many of them focus on the education, health and performance of athletes from different areas of sports activity (Makarowski et al., 2022; Sygit-Kowalkowska et al., 2022). There are well-founded accredited theories related to behavior, performance, coping mechanisms such as sublimation, but also multiple research tools. Kim and Lee (2018) analyze the mediating role of self-efficacy in career decision-making, occupational commitment and locus of control as a motivational variable; Conner (2020) describes the theory of planned behavior using concepts such as the theory of reasoned action (TRA), the prior theory of planned behavior (TPB), and the posterior reasoned action approach (RAA), providing experimental correlational evidence to support them. Behavioral intention represents a person's motivation, in the sense of their conscious plan, decision-making or self-instruction to make efforts to achieve the target behavior.

Therefore, we can refer to vocational-specific personality testing, motivation, volition or emotional relation to such activities, stress resistance, manipulation of emotional tensions to reach performance, etc.

Generally, in psychological terms, personality is a dynamic, open, hypercomplex and probabilistic system (Golu, 2007). This means that it is an immaterial structure, which is permanently in a relationship of substance, energy and information exchange. The human being is informavore, meaning that the psychological system accumulates data from the external environment and in relation to the biological body through the sense organs, usually translated as life experience lived subjectively in a positive, negative or neutral sense. Under the structural aspect, personality has four major components: temperament (the dynamic-energetic side of personality or the energy available to the individual to carry out the targeted activities); skills (the instrumental side of personality, which is generally unlimited because a person can have a lot of abilities that are possible to be achieved at a performance level in relation to any aspect from the surrounding environment: sports, literary, artistic, technical skills, and more), and the most important skill for human adaptation is intelligence itself; creativity (the transformative-constructive side of personality); character (the relational-value side of personality). Personality is considered the core of the human psychological system, which coordinates all psychological activities in relation to all processes specific to human psyche. (Zlate, 2000)

Methodology

Instruments

Three psychological questionnaires were administered in electronic format: one to assess the locus of control (Rotter, 1966), which was adapted by Yemen and Clawson (2003), another to assess the learning style, namely the VAK Questionnaire (Clark, 2019), and the ERQ Questionnaire to assess emotional regulation (Gross & John, 2003). The "Locus of Control" Questionnaire contains 20 items with dichotomous responses (true/false) and assesses the tendency to attribute the effects of various events on the internality/externality dimension using a scale of 0 to 5. The VAK Questionnaire consists of 36 items on a 5-step Likert scale and assesses perceptual predominance in learning on three dimensions: visual, auditory and practical (kinesthetic). The ERQ Questionnaire contains 10 items on a 7-step Likert scale and assesses a series of emotional experiences.

Statistical data processing was performed with the help of IBM SPSS Statistics.

Participants

The participants in this study were 269 first-year students from the UNEFS faculties, of which 183 males, representing 68%, and 86 females, representing 32%, who had previously been selected to be included in the target group of the ROSE project conducted at UNEFS (National University of Physical Education and Sport). This was the inclusion criterion. We mention that the project aimed to improve the learning ability of first-year students at UNEFS, essentially contributing to an increased adaptability and integration/adaptation ability of students to both specific academic and professional environments and requirements. All participants are students aged 19-35, with an average age of 22 years.

Results

Locus of control in relation to didactic learning

Table 1. Total score for locus of control

	Frequency	Percentage
Internal – personality	116	43.1
External – social	153	56.9
External – unpredictable	0	0
Total	269	100

The obtained data show that 43.1% of participants have the dominant tendency to causally focus only on their own personality, directly assuming the effects of the actions undertaken, while 56.9% of them have the tendency to attribute the causes of events that occur rather to the sociocultural environment.

It is noticed that no participant has taken into account the hypothesis that an event could be totally uncontrollable, unpredictable, and therefore cannot be imputed to anyone.

What can be done if a natural or human-induced disaster occurs?

Does the person mobilize and fight depending on the context or abandon the situation, considering that they were unlucky and nobody intervened to offer them help?

Table 2. Tendency toward superstitions

	Frequency	Percentage
I rather believe in luck/chance	76	28.3
I do not really believe in luck/chance	193	71.7
Total	269	100

Table 3. Tendency to abandon a difficult task

	Frequency	Percentage
If I am not successful in an activity, I prefer to give up	74	25.5
If I am not successful in an activity, I continue to act hoping that I will win	195	72.5
Total	269	100

The extracted data show that the research participants tend to turn to superstitions, but the same unpredictable source makes them mobilize for gain until all is lost. On the other hand, it is observed that 72.5% of participants tend to persist in a difficult task, as opposed to 25.5% of them who tend to abandon the difficult task. This aspect gives us an important clue about the first hypothesis stated, namely that 25.5% of participants could be tempted to abandon their didactic activity if they perceive the experience to be out of their personal control. Consequently, we can think that they will abandon what it does not seem predictable for their perspective.

We could previously see in Table 1 a significantly greater tendency to externalize the causes of events to the social plane, which might indicate that society is blamed for the failure to complete studies.

Table 4. Ability to use emotions effectively

	Frequency	Percentage
I avoid emotions	209	62.1
I hide positive emotions	204	60.6
I hide negative emotions	193	57.3
I am calm	202	59.9
I change perception to block negative emotions	221	65.5
Total	269	100

Regarding the ability to sublimate or use aggressive drives, in the sense of generating resources within regulatory psychological processes, we observe a poor ability to use them constructively and consciously discharge them in sports or academic performance. The central tendency is to consider them as obstacles, and therefore to avoid them. This aspect is related to self-knowledge and identifying the possibilities of effective emotional discharge so as to energize the activity carried out and to function as "fuel" for motivation.

Calmness seems desirable, even if it can be a mask and extra self-effort.

Table 5. Learning style

	Frequency	Percentage
Visual	108	40.2
Auditory	64	23.8
Kinesthetic (practical)	97	36.5
Total	269	100

Concerning the dominant tendency in learning, no particular style was significantly highlighted. The practical style or kinesthesia seems to associate with both visual and auditory perceptions. Athletes in general tend to combine movement with visual imagination, but also with the musical rhythm that is commonly used during training.

This aspect provides us with a relevant clue about the second hypothesis stated, which is related to the association between the student athlete's tendency to learn through movement and their tendency to externalize the causes of events that occur at a given moment. 36.5% of participants seem to have kinesthetic perceptual dominance, which means that they naturally learn more easily if they perform the action in a practical way. This is a dominant feature of some people, as if we considered left or right laterality. In the case of our research participants, the dominance is visual and there are no large statistical differences between the three groups.

We can think that they had great difficulty during the pandemic in terms of assimilating information, given that they were forced to remain isolated, and that some of them might have been very discouraged, especially because this tendency could overlap with that of externalizing the effects of life events. This aspect requires a more in-depth study regarding the effect size.

Table 6. Correlations between locus of control and the ability to use emotions effectively

Descriptive statistics															
Correlations															
	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Gender	1.24	.43	-	.230**	-.018	.035	-.064	-.020	-.018	.061	.021	-.027	038	049	019
Internal locus of control	1.10	.30	.230**	-	-.035	-.030	-.041	-.039	.074	.110	-.030	-.064	-.055	.045	-.073
External locus of control	1.37	.48	-.018	.035	-	.034	-.026	-.119	.069	-.051	-.064	.162**	-.031	.012	-.073
Avoiding positive emotions	4.33	1.77	-.035	-.030	.034	-	-.063	.369	.243**	.247**	.134**	.307**	.339**	.237**	.171**
Hiding emotions	4.93	1.84	-.064	-.041	-.026	.063	-	-.119	.258**	-.009	.204**	-.118	-.154**	.244**	-.105
Avoiding negative emotions	4.29	1.96	-.020	-.039	-.119	.369**	.302**	-	.175**	.287**	.177**	.342**	.092	.217**	.272**
Hiding positive emotions	3.80	1.89	-.018	.074	.069	.243**	.258**	.175**	-	-.002	.142**	.158**	.157**	.165**	.206**
Calmness	4.56	1.75	-.061	-.110	-.051	.247**	-.009	.287**	-.002	-	.158**	.340**	.135**	.270**	.206**
Emotional self-control	4.76	1.76	-.021	-.030	-.064	.134**	.204**	.177**	.142**	.131**	-	.238**	.255**	.283**	.285**
Seeking positive emotions	4.27	1.66	-.027	-.064	-.162**	.307**	-.118	.342**	-.158**	.340**	.238**	-	.255**	.283**	.257**

Changing the perception of emotion	4.44	1.45	.038	-.055	-.031	.339**	-.154*	.092	-.157**	.135*	.255**	.415**	-	.245**	.660**
Repressing negative emotions	4.69	1.75	.049	.045	.012	.237**	.244**	.217**	.165**	.270**	.283**	.245**		-	.285**
Blocking negative emotions	4.47	1.56	.019	-.073	-.073	.171**	-.105	.272**	-.206**	.285**	.257**	.660**		.285**	-
N	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269

The effect of initial state of the predicted variable is included in all models, even if not reported.
† $p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

In order to identify the existence and type of relationships between placing the internal/external locus of control and the affective level, we tracked the correlations between these variables. The obtained data highlight the presence of a strongly significantly negative correlation between the externalization of consequences and the search for positive emotions: "When I want to feel more positive emotions, I change the way I think about that situation", r = .-162**.

This shows a tendency to avoid conflicting emotional states by association with certain environmental causes. When the volitional dimension is involved in affective determination, it is obviously an attempt to avoid emotional states. It appears like an escape from intense emotional contents, as if they were harmful to the activities carried out.

A series of strongly significantly positive correlations can be observed between the "avoiding positive emotions" variable and variables 7 (hiding emotions in general), r = .243**, 8 (calmness), r = .247**, items 11, 12 and 13, which aim at expressing negative emotions, where r = .339**, r = .237**, r = .171**.

These correlations can provide clues about how to emotionally relate to situations considered as having a higher level of difficulty.

Conclusion

Hypothesis 1 is confirmed because 56.9% of the research participants show a strong tendency toward externalizing their control. The learning style does not indicate significant differences, but one can understand the difficulty felt by students with dominant kinesthetic perception during the period of social isolation and their emotional difficulty felt due to an external unpredictable situation as a life experience. These aspects, associated with specific strategic learning benchmarks, lead us to the conclusion that they may perceive themselves negatively in terms of educational path offered by the social context and, based on available resources at the personality level, that they have reached a higher or lower degree of adaptation and confidence in their future.

We can interpret this situation as follows: "I cannot learn effectively because society does not allow me to move as much as I need, and my ability to build the necessary skills depends on my motor training. I have lost something in my development and I do not know if and how I can catch up".

We also take into account the hypothesis of a low level of self-knowledge and self-esteem, an issue that we can assess in the next stages.

We notice the tendency to ignore the consequences of a truly unpredictable phenomenon in the relationship with success/failure in career and learning. We are rather tempted to consider the poor ability of psychological and even somatic mobilization after a fully unpredictable period.

How do we mobilize after the pandemic?

But if the war expands, what will happen to our performance?

There are legitimate questions in the current sociopolitical context, and we aim at the ability to adapt from a professional point of view.

Hypothesis 2 assumes a negative association between the tendency to learn predominantly in relation to movement and focusing on the external locus of control, and what we can say is that it is partially confirmed. Approximately 36% of participants have kinesthetic dominance, but this situation does not particularly affect those with visual dominance (40%) or auditory dominance (23.8%).

From the anamnesis and interview data collected during the psychological and pedagogical counseling sessions, we identify the interest in didactic professional activities, but also in becoming private coaches.

On the other hand, the data show a major tendency to mask emotions of any type, be they positive or negative.

Future directions and limitations

We intend to conduct a larger longitudinal study in order to assess the risk and endurance of student athletes in relation to the effects generated by recent social events, namely the pandemic and the war.

The study is in the initial stage.

There were 269 participants, but unevenly distributed in relation to the fields of sports study, and only those in the first year.

The assessment moment is very close to the moment of overcoming the pandemic, but also in a context of major risk from a sociopolitical point of view, taking into account the war on Romania's border.

The group of participants is not homogeneous in terms of the number of girls compared to the number of boys, and we could not have a numerical balance at the faculty level. There were large differences in the number of students from each faculty involved, and differences between the number of full-time students and the number of students with reduced attendance. This aspect was conditioned by the students' willingness to enroll in the Rose project, respecting the inclusion criteria, and by their willingness to answer the questionnaire proposed for this study. Participation in the study was voluntary, not mandatory.

Authors' Contribution

All authors have equally contributed to this study and should be considered as main authors.

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