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Psychology of Personality: Real and Virtual Context

SELF-REGULATION OF PSYCHOLOGICAL STATES IN EDUCATIONAL ACTIVITY OF STUDENTS

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Abstract

The article considers the most essential characteristics of personal psychological states, such as integrity, reactivity, etc. It is emphasized the possibility of independent control of a subject's own psychological states. The study is based on the structural-functional model of the psychological states regulation of subject. The study involved 88 people (average age - 18 years old), all of them are 1st year students of the Institute of Psychology and Education of Kazan Federal University, studying in the areas of Classical Psychology and Clinical Psychology. The study was carried out in the course of 3 main forms of educational activity: lecture, seminar and exam. As a result of the study in various situations of students educational activity, established their most pronounced psychological states, leading methods of self-regulation, as well as psychological properties that effectively manage their psychological states. Found that the most intense psychological states in various forms of educational activity are cognitive states. By the increase of stress intensity of the training situations the number of personality traits that are most often manifested in educational activity decreases. Students mostly resort to such methods of regulation as introspection (self-reliance), self-control, the use of logic, a positive attitude and high searching activity.

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Keywords: Psychological state, self-regulation, educational activity, psychological property, student.



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1. Introduction

In modern psychology, self-regulation is considered to be an ability or skill that develops as regular exercises or naturally in the process of achieving various life goals (Schmeichel & Baumeister, 2004). Diverse approaches are used in research: neurocognitive, psychoanalysis, cybernetics, theory of dynamic systems, etc. (Carver & Scheier, 1998). The main concepts in regulation are the “feedback” (feedback) and the “hierarchy of goals” of the individual. Recent studies on self-regulation tend to take into account individual differences and the social context (Berger, 2011). From 1976 to 1986 four volumes of “Consciousness and self-regulation” were published, where various theories of self-control are presented, physiological and cognitive processes in the regulation of individual states are considered.

In the last years of the 20th century, the concepts of self-regulation that were popular in world psychology were developed: the concept of control over action (Kuhl, 1987), the model of regulation of behavior and emotional states (Pulkinen, 1992); the cognitive-motivational concept of coping Lazarus (1999), based on the concept of cognitive assessment of difficult situations.

2. Problem Statement

The “cutting edge” of self-regulation research is presented in the large manual (Vohs & Baumeister, 2016). It presents articles of the most authoritative researchers on neurological, physiological, cognitive, affective, social, cultural and other dimensions of self-regulation, issues of automatic and conscious regulation, individual psychological aspects of self-regulation, development of self-regulation in ontogenesis. For practical purposes, various methods of self-regulation are explored: positive thinking, sleeping, volitional control, religious practices, progressive relaxation and the possibilities of its use in pedagogy, the role of hypnosis and meditation states in regulating behavior, biofeedback (Alpha Feedback Training).

In the context of our study, we rely on the structural-functional model of the mental states regulation (Prokhorov, 2009). The model is a structure of the relationships between mental states, characteristics of consciousness (representations, reflection, experiences, semantic structures, mental experience) and external factors (situations, cultural space, lifestyle, temporary factors and social environment), as well as regulatory actions and feedback.

The regulatory complex is an integral part of the subjective (mental) regulatory experience of a person. The inclusion of experience in situations of vital activity is manifested in the actualization of a certain quality mental state and in the usage of typical methods and techniques of regulation. It also manifests itself in the organization of “ordered” structures of consciousness tuned to regulate the state. This organization consists of states complexes, means of regulation, and mental structures that are formed in the repetitive life situations.

3. Research Questions

In functional terms, the basis of self-regulation is the mechanisms of regulation of an individual state (Prokhorov et al., 2016). Achieving the goal (the “desired” state) is connected with the inclusion of mental structures (semantic, reflection, experiences, etc.) in the regulatory process and is carried out through a

chain of transitional states. The transition from state to state is realized by using various regulatory techniques. Information on the achievement of the aim state is implemented by using feedback. Regulation is based on the active participation of mental processes and psychological properties (temperament, character, ability, etc.).

The regulatory process takes place in certain cultural, ethnic, professional and other conditions. It depends on the social situation of life, as well as on the social role, status, lifestyle of a person (Prokhorov & Chernov, 2016).

4. Purpose of the Study

The main purposes of the study are: to establish the most pronounced psychological states of students, to show leading methods of self-regulation, as well as psychological properties that effectively manage their psychological states.

5. Research Methods

The study involved 88 people (average age - 18 years old), all of them are 1st year students of the Institute of Psychology and Education of Kazan Federal University, studying in the areas of Classical Psychology and Clinical Psychology. The study was carried out in the course of 3 main forms of educational activity: lecture, seminar and exam. During the study, the lesson was interrupted and the students were asked to answer questions from three author questionnaires:

1. Questionnaire of students' psychological states. It includes a list of 104 psychological states and evaluating the presence and severity of students' proposed psychological states on a 5-point scale.
2. A questionnaire of students' regulatory properties, consisting of 63 indicators. It is aimed at the diagnosis of qualities that allow students to manage their psychological states in the course of educational activities.
3. Questionnaire of students' self-regulation methods, including 25 parameters. Students asked to choose and evaluate the frequency of using various methods of psychological states' self-regulation.

6. Findings

As a result of the study, it was found that the average severity of psychological states is higher in an exam situation (2.2 points) than in a lectures (1.3 points) and a seminar (1.4 points), that is because of the higher intensity of the exam, in comparison to a lecture and a seminar. Lectures and seminars can be considered as everyday forms of educational activity, where the intensity of experienced states is much lower. The severity of psychological states at the lecture and seminar differs slightly (Figure 01).

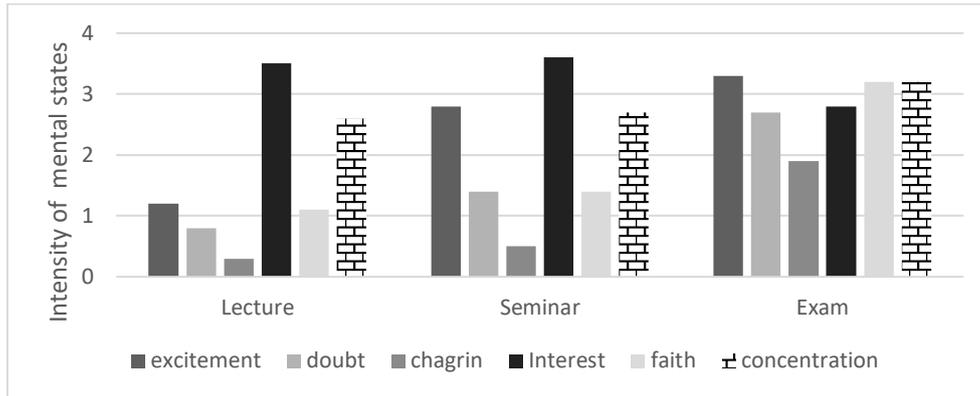


Figure 01. The average values of the severity of psychological states in various forms of educational activity (presented states with the greatest differences in average values)

It is established that as the intensity of the situations of the educational activity grows, the severity of psychological states of excitement, doubt, and grief also increase. These states reach a peak in severity in the exam situation. However, the severity of not only negative states, but also such positive ones as faith and hope for a favorable exam outcome, is increasing. At the same time, there is a significant decrease in the intensity of positive cognitive states, such as interest and curiosity. We also note that the severity of the cognitive state of "concentration" in the exam increases in comparison with everyday forms of educational activity.

Regardless of the form of educational activity, the most intense are the following states: interest, thoughtfulness, curiosity, concentration. All of them can be attributed to the class of cognitive psychological states. In addition, there is a high severity of other psychological states: activity, responsibility, hunger and respect (Table 1).

Table 01. The psychological states that are most intense during the educational activity

Psychological states	Intensity	Psychological states	Intensity
Thoughtfulness	3,3	Respect	3,1
Interest	3,3	Hunger	2,9
Thoughtfulness	3,0	Activity	2,7
Curiosity	2,8	Responsibility	2,7
Thinking	2,8		
Concentration	2,8		

Revealed that cognitive states, in general, have a higher severity and positive color. Particularly it concerns the states of thoughtfulness and interest, which received the highest score of intensity, experience, regardless of the form of training.

Let us turn to the states mostly experienced in various forms of educational activity. Revealed that in a lecture situation, the most frequent states are interest, respect and thoughtfulness. The manifestation of the remaining states does not reach the needed values (3.0 points). Note that the number of expressed states grows as the intensity of tension increases from a lecture to a seminar and then to an exam. In addition to the already indicated states, the manifestation of thoughtfulness and hunger states was discovered in the situation of the seminar. In turn, in the exam situation, the noted states are more intensively expressed, and

the motivational states of faith, hope, and responsibility, as well as the emotional state of excitement, are added to the cognitive states of thoughtfulness, concentration and thoughtfulness (Table 2).

Table 02. The frequency of psychological states during the lectures, seminars, and exams

Lecture	Seminar	Exam
Interest (3,5)	Interest (3.6)	Thoughtfulness (3.5)
Respect (3.1)	Thoughtfulness (3.4)	Excitement (3.3)
Thoughtfulness (3.0)	Respect (3.3)	Faith (3.2)
	Thoughtfulness (3.0)	Thoughtfulness (3.2)
	Hunger (3.0)	Concentration (3.2)
		Responsibility (3.0)
		Hope (3.0)

Next, we turn to personality traits that allow students to most effectively regulate psychological states during the training (Table 3). Were distinguished the most typical personality traits, regardless of the form of training: adequacy (3.9 points), tolerance (3.7), as well as independence, reflectivity, responsibility and awareness (3.6 points each).

Table 03. The frequency of personality traits manifestation during self-regulation of psychological states

Lecture	Seminar	Exam
Adequacy (4.1)	Adequacy (4.0)	Responsibility (3.5)
Tolerance (3.9)	Tolerance (3.8)	Adequacy (3.5)
Awareness (3.9)	Reflectivity (3.7)	Independence (3.4)
Meaningfulness (3.9)	Reasonableness (3.7)	Tolerance (3.4)
Reflectivity (3.9)	Discipline (3.6)	Discipline (3.3)
Independence (3.7)	Observation (3.6)	Awareness (3.3)
Responsibility (3.7)	Meaningfulness (3.6)	Reflectivity (3.3)
Assertiveness (3.7)	Independence (3.6)	Self-criticism (3.3)
Observation (3.7)	Tact (3.6)	Severity (3.3)
Discipline (3.6)	Assertiveness (3.5)	Tact (3.3)
Reasonableness (3.6)	Awareness (3.5)	
Severity (3.6)	Responsibility (3.5)	
Tact (3.6)	Restraint (3.5)	
Thoughtfulness (3.5)		
Curiosity (3.5)		

However, there is a certain specificity of the frequency of personality traits manifestation depending on the form of training. It was found that the number of personality traits that are most often manifested in educational activities decreases with increasing tension in the form of training. So, in a lecture, most often manifested such properties as adequacy, tolerance, awareness, meaningfulness and reflectivity. At the seminar, in addition to those noted, the most significant for the process of psychological states regulation are such personality traits as observation, rationality, tact and assertiveness. It should be noted that the distinguished properties are largely similar for the lecture and exam situations. The situation of the exam requires the student to manifest other personality traits, such as responsibility (also found in a seminar situation), seriousness and tact (noted in a lecture situation), and self-criticism. The frequency of manifestation of the selected traits in the exam is lower than in the lecture and seminar.

At the same time, there is a certain specificity of the personality traits manifestation in various situations of educational activity. So, sociability and creativity are more often manifested during seminars, while meaningfulness and reflectivity are more relevant for the lecture form of training. In the exam, students are more likely to show perseverance and leadership qualities, which determines the regulation of their psychological state (Figure 2).

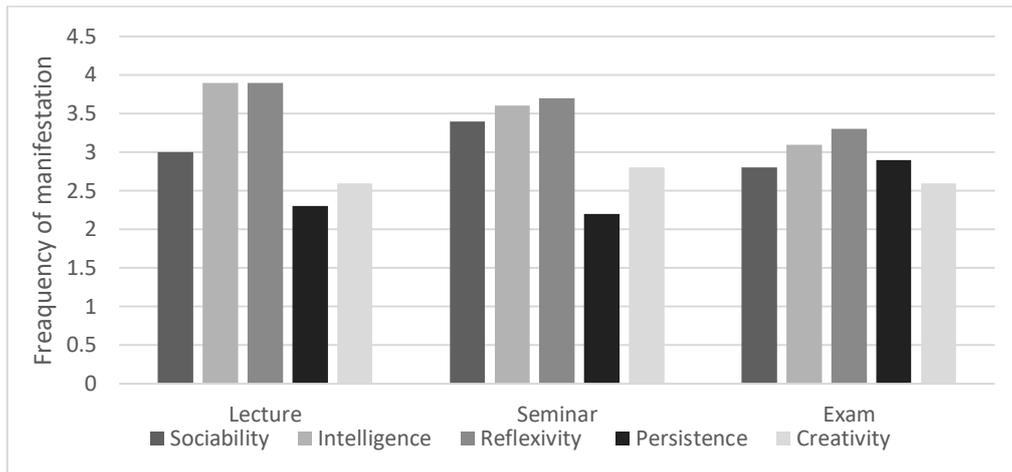


Figure 02. Frequency of manifestation of personality traits in various forms of educational activity

Let's turn to the methods of psychological states self-regulation during educational activities of students. Regardless of the forms of educational activity, students most often resort to such methods of regulation as introspection (self-reliance), self-control, the use of logic, a positive attitude and high search activity. However, there are some specifics of the applied methods and techniques of regulation in different forms of training. There is a similarity in the methods of regulation used in seminar and lecture forms of training as in the case of experienced mental states and actualizing personality traits. Both forms are characterized by the use of introspection and logic. Humor and communication are specific ways of regulation of negative and preserving positive psychological states in a lecture, in a seminar there is a high search activity (finding a solution to a problem). In the exam situation increases the role of such regulatory methods as self-complacency and increasing own motivation, while search activity in solving problems remains high. We also note that the frequency of updating the methods of regulation increases as higher the intensity of educational activity (Table 4).

Table 04. Methods of regulation most commonly used during the training

Lecture	Seminar	Exam
Introspection (withdrawal) (3.5)	Introspection (withdrawal) (3.6)	Searching activity (search for solutions to a problem, etc.) (3,5)
Thinking-reasoning (using logic) (3.4)	Self-control (3.5)	Complacency (3.4)
Humor (laughter) (3.4)	Thinking-reasoning (using logic) (3.4)	Good mood, patience etc. (3.4)
Self-control (3.4)	Searching activity (search for solutions to a problem, etc.) (3.3)	Self-control (3.2)

Communication as a way to relieve stress (3.4)	Good mood, patience etc. (3.2)	Improving your own motivation (3.2)
Good mood, patience etc. (3.3)		

Let us single out the most striking differences in the frequency of using methods of psychological states regulation in various forms of educational activity. It has been established that the highest “inclusion” of regulatory processes requires a tense situation of an exam. It should also be noted that the involvement of regulatory methods is higher in the case of a lecture than in a seminar. The lecture acts as a more rigidly organized form of training than a more “flexible” seminar.

In a tense situation of the exam, the frequency of using almost all methods and techniques of psychological states regulation increases, in particular: the use of actions of the opposite nature, breathing exercises, control and regulation of movements, speech, as well as control of facial and skeletal muscles.

7. Conclusion

Thus, as a result of the study, the following patterns were established:

1. Found that the most intense psychological states in various forms of educational activity are cognitive states.
2. By the increase of stress intensity of the training situations the number of personality traits that are most often manifested in educational activity decreases.
3. Students mostly resort to such methods of regulation as introspection (self-reliance), self-control, the use of logic, a positive attitude and high searching activity.

Acknowledgments

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References

- Berger, A. (2011). *Self-Regulation: Brain, Cognition, and Development*. American Psychological Association.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. Cambridge University Press.
- Vohs K. D., & Baumeister, R. F. (Eds.). (2016). *Handbook of Self-Regulation: Research, Theory, and Applications*. Guilford Publications.
- Kuhl, J. (1987). Action control: The maintenance of motivational states. In F. Halish, & J. Kuhl (Eds.), *Motivation, intention, and volition* (pp. 279–291). Springer.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. Springer.
- Prokhorov, A. O., & Chernov, A. V. (2016). Refleksiya i psikhicheskiye sostoyaniya v razlichnykh situatsiyakh uchebnoy deyatel'nosti studentov. [Reflection and mental states in different forms of students' educational activity]. *Psychological journal*, 37(6), 47-55.
- Prokhorov, A. O. (2009). Smyslovaya regulyatsiya psikhicheskikh sostoyaniy. [Semantic regulation of mental states]. *Psychological Journal*, 4, 5-17.
- Prokhorov, A. O., Chernov, A. V., & Yusupov, M. G. (2016). Vzaimodeystviye psikhicheskikh sostoyaniy i kognitivnykh protsessov v khode uchebnoy deyatel'nosti studentov [The Relationships of Mental States and Intellectual Processes in the Learning Activities of Student]. *International Journal of Environmental and Science Education*, 11(6), 1031-1037.
- Pulkinen, L. (1992). Life style in personality development. *European Journal of Personality*, 6, 139-155.
- Schmeichel, B. J., & Baumeister, R. F. (2004). Self-regulatory strength. In R. F. Baumeister, K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 64–82). Guilford Press.