

# Individual psychological characteristics of personality as correlates of executive activity of university students

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**Abstract.** The theory of the executive activity of a personality and the ability to determine its correlates are analyzed. High efficiency executive activity is considered as a predictor of a high quality of life and professional activity of an individual. The results of the study of the individual psychological properties of the personality associated with the characteristics of performing activities are presented. A combination of properties is highlighted: irritability, sociability, extraversion, which positively affect the type of execution. They form a triad closely associated with all the properties of executive activities. Some personality properties that inhibit the development of characteristics necessary for effectiveness are identified. Aggressiveness and high emotional lability are characteristic of students with low responsibility. According to the research results, mutually exclusive properties are organization and openness. The definition of determinants and correlates of performing activities opens up opportunities for psychologists and educators to create spaces for the development of a highly effective personality. Executive activity is a system construct. Understanding its structure allows us to see its flexibility and form individual trajectories of learning and personality development.

## 1 Introduction

In the study of psychological determinants and correlates of efficiency and high labor productivity, management is in the focus of research. Traditionally, attention is attracted by the definition of the manager's capabilities, his individual psychological properties, and leadership style. Until recently, executive activities were in the shadows, since the executor was seen more as an object of managerial activity than as a subject of activity.

A complex of factors influences the implementation of a managerial decision. Conventionally, they can be divided into 2 groups of factors: object and subject.

Object factors include the type of organization, characteristics of the production task, management style, that is, parameters that are not directly related to the personality of the executor. Subjective factors that describe the characteristics of the subject of executive

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activity directly are the individual psychological characteristics of the executor, the type and structure of executive activity, and their features depending on the type of activity.

Assessing the significance of the executor as a subject of activity and its characteristics allows to increase both personal and professional effectiveness.

Thus, the theory of executive activity highlights the issues of distinguishing it as a psychological category, a description of its type-forming characteristics and formation factors (A. Zhuravlev, 2007), revealing the specifics of executive activity depending on the type of activity: workers (I. Galkin, 2009), military personnel (M. Shaposhnikov, 2009), students of the university (A. Uzdénova, 2011, F. Semenova, A. Uzdénova, 2011) [1-6]. When describing the characteristics of the executive activities of university students, combinations of characteristics specific to a given population were identified that made it possible to identify new types of execution: enthusiastic, postponing [4]. The psychological structure of the student's executive activities is justified and the ontogenetic laws of its formation are given [5, 6].

Currently, the theory of executive activity is searching for factors and conditions that determine its type, as well as correlates. According to A.L. Zhuravlev, individual psychological properties of the executor is the largest group of factors in the formation of the type of execution. The determination of the properties and qualities of the personality associated with executive activities will allow us to determine the development predictors of both highly effective and low-efficient types of it.

The theory of executive activity is one of the actively developing areas of scientific knowledge.

## **2 Problem statement**

The modern world makes high demands on the individual and professional effectiveness of the personality. Employers of various areas of the XXI century require their potential employees to have over-professional skills: systemic thinking, flexibility of mind, ability to work in a mode of high uncertainty and quick change of task conditions, high social and emotional intelligence, etc. (D. Sudakov, 2019). [7] However, despite the high professional competence of the employee, there is a significant part of low-efficiency executors (from 17% to 37% in various population samples) [2-4].

The type of executive activity determines the effectiveness of a person's professional activity. The ability to prevent and correct the formation of low-efficient types and to develop the characteristics necessary for highly effective types will significantly increase the level and quality of human life.

## **3 Research questions**

The identification of correlates of the executive activities of university students will highlight the factors that affect its properties, and therefore its type. This will allow more successfully adjusting and shaping executive activities when building an individual learning path and personality development.

## **4 Purpose of the research**

The assumption of the presence of dependences of the executive activities characteristics on some individual psychological characteristics of a person (irritability, sociability, extraversion - introversion, spontaneous aggressiveness, emotional lability, openness) were tested in this study.

## 5 Research methods

The executive activity of the university students and its structural components were diagnosed using the method of expert assessments - the method of generalization of independent characteristics [1], Freiburg personality Inventory (FPI), form B [8].

## 6 Study participants

Description of the expert group. University professors acted as experts in the study, as competent persons with knowledge of the study object.

The dimension of the expert sample was 112 teachers. The age range of teachers who acted as experts in evaluating the executive activity of students is from 25 to 75 years, the average age is 39.2 years. 87.5% of experts have specialized education and 60.7% have two (or more) higher education. 41% of the expert have a psychological education. 64% of experts have a degree and/or academic rank. The average length of service is 16.1 years. At the time of the study, all experts were employees of universities whose students were evaluated.

The group assessment included a statistical analysis of the consistency of expert assessments for each characteristic of students' executive activities, for which the W. Kendall coefficient of concordance was used [9].

Description of the sample of students. In the research as subjects of executive activity took part the students 1 - 4 courses of bachelor's programs and 1 - 2 courses - magistracy of universities. The sample size was 564 students.

The study was conducted in 2018-2019. All participants agreed to participate in the study.

## 7 Results

The analysis of the results revealed three scales of the FPI: irritability, sociability, extraversion - introversion, which correlate with all the properties of executive activities (Table 1).

**Table 1.** The results of the correlation analysis of the executive activities characteristics and individual psychological properties

Executive activities	FPI Scales											
	1	2	3	4	5	6	7	8	9	10	11	12
Purposefulness	.0458	.1687	.0294	.4121	.2566	.1589	.1661	.1291	.0655	.5018	.0389	.0507
Interest	.0235	.0220	.0361	.5097	.3413	.1115	.1726	.0274	.0289	.4548	.1492	.1722
Independence	.0599	.1195	.0797	.4686	.3556	.0935	.0288	.0244	.0702	.3912	.1608	.1228
Organization	.1378	.1433	.1138	.4306	.1519	.0385	.0126	.0143	.2473	.3249	.1173	.0145
Responsibility	.0464	.2888	.0044	.4696	.2091	.1456	.0433	.1292	.2617	.2861	.2395	.0633
Competence	.1561	.0410	.0875	.6044	.2014	.0028	.0799	.1543	.1572	.3732	.0382	.0805
Creativity	.0631	.0722	.0689	.4949	.2679	.1973	.1907	.0409	.0217	.3408	.0256	.1831

Remark. In the table, the scales of the FPI questionnaire are indicated by their serial number in the methodology: 1) Nervousness, 2) Aggressiveness, 3) Depression, 4) Irritability, 5) Sociability, 6)

Placidity, 7) Domineering Tendency, 8) Inhibition, 9) Openness, 10) Ext. Extraversion, 11) Neu. Neuroticism, 12) Mas. Masculinity

Irritability, as an increased reactivity of the central nervous system, providing a high rate of emotional response, reveals a connection with all the properties of executive activities: competence ( $r = 0.6044$ ;  $p < 0.001$ ), interest ( $r = 0.5097$ ;  $p < 0.001$ ), creativity ( $r = 0.6044$ ;  $p < 0.001$ ), responsibility ( $r = 0.4696$ ;  $p < 0.001$ ), independence ( $r = 0.4686$ ;  $p < 0.001$ ), organization ( $r = 0.4306$ ;  $p < 0.001$ ), purposefulness ( $r = 0.4121$ ;  $p < 0.001$ ). A high degree of reaction power to irritants, the ability to react quickly, but not always adequately to signals, allows a person to strive a goal, to show enthusiasm and even engagement in ideas. This is able to form the competence of the executor, the speed of reaction, the search for creative and unexpected solutions. Irritability requires a person to be highly organized to solve problems whose motivation to achieve is not called into question, primarily by the performer himself, in view of his interest. As well as the development of skills for independent performance of labor operations: the higher the level of awareness of their obligations (responsibility), the higher the level of irritability.

The extraversion-introversion scale also correlates with varying degrees of connectivity with the properties of executive activities (in descending order): purposefulness ( $r = 0.5018$ ;  $p < 0.001$ ), interest ( $r = 0.4548$ ;  $p < 0.001$ ), independence ( $r = 0.3912$ ;  $p < 0.001$ ), competence ( $r = 0.3732$ ;  $p < 0.001$ ), organization ( $r = 0.3249$ ;  $p < 0.001$ ), creativity ( $r = 0.3408$ ;  $p < 0.001$ ) and responsibility ( $r = 0.2861$ ;  $p < 0.001$ ).

The more a person is focused on his inner world and the focus of interest - on the manifestation of his own needs, the higher the fixation on achieving goals and solving problems, competence in solving them, discipline and assuming responsibility for the result. The impulsiveness and sociability of the extrovert leads to the "estrangement of the subject from himself" (S. Golovin, 2003), to the dispersion of interests, aimlessness of activity, that is, to the formation of the polar opposite properties to purposefulness, organization, responsibility and other properties of the executor. [10] The more a person is able to concentrate on solving a problem (introversion), the higher the probability of achievement.

A weak relationship with high statistical significance ( $p < 0.001$ ) was revealed between sociability and the following parameters: independence ( $r = 0.3556$ ;  $p < 0.001$ ), interest ( $r = 0.3413$ ;  $p < 0.001$ ), creativity ( $r = 0.2679$ ;  $p < 0.001$ ), purposefulness ( $r = 0.2566$ ;  $p < 0.001$ ), responsibility ( $r = 0.2091$ ;  $p < 0.001$ ), competence ( $r = 0.2004$ ;  $p < 0.001$ ). Sociability has no connection with organization, as evidenced by the correlation coefficient between these two parameters ( $r = 0.1519$ ;  $p < 0.001$ ). Sociality as the need for communication and readiness to satisfy it also increases the probability of achieving the goal, because it causes high social activity, and in the conditions of the modern labor market, joint activities predominate, which is confirmed by the connection between indicators.

The ability to navigate in new communication situations, which is one of the basic qualities of sociability, creates favorable conditions for the preservation and manifestation of enthusiasm, interest and the creative nature of the search for solutions to educational and work tasks. Communicativeness and contact determines the desire for leadership, initiative, which in turn makes demands for decisiveness, independence in decision-making and their practical implementation, that is, the independence of the activity subject. The ease in creating and maintaining social contacts, the ability to navigate in a rapidly changing social situation of a sociable person develop their communicative competence, which significantly contributes to the formation of professional competence. Thus, sociability forms and in most cases is a structural unit of competence in many professional fields.

In addition to the connectivity of irritability, sociability, introversion-extraversion with all the properties of performing activities, more local dependencies were revealed:

organization and openness ( $r = - 0.2473$ ;  $p < 0.001$ ); responsibility and spontaneous aggressiveness ( $r = - 0.2888$ ;  $p < 0.001$ ), neuroticism ( $r = - 0.2395$ ;  $p < 0.001$ ).

The tendency for confidentially frank interaction with other people with a high level of self-criticism and openness to any situation (with the “recognition of the fundamental incompleteness of work,” according to K. Jaspers) reduces the degree of orderliness, following a previously adopted plan, which weakens the student’s organization. This effect is confirmed by a weak inverse correlation between openness and organization  $r = - 0.2473$  with high statistical significance  $p < 0.001$ .

Instability of the emotional state, frequent fluctuations in mood, increased excitability of the nervous system, as a result of insufficient self-regulation reduces the probability of experiencing a sense of duty, taking responsibility for the results of work. In the case of emotional lability, the person’s internal state is so unstable that he does not fully feel the subjectivity of his being. Frequent changes in mood caused by external stimuli and not always adequate to the strength of their effects deprive the learner of confidence in the ability to regulate, manage his mood, his life and make it impossible to feel responsible for the final result of the activity. An increase in emotional lability leads to a decrease in responsibility in fulfilling a student’s learning tasks ( $r = - 0.2395$ ;  $p < 0.001$ ).

The cumulation of negative emotions, the expression of impulsive and aggressive tendencies in behavior “block” the subjective experience of one’s responsibility for the implementation of educational tasks. Spontaneous aggressiveness can manifest itself in the form of irritation, resentment, suspicion, guilt

The indicators of spontaneous aggressiveness and responsibility have the inverse relationship ( $r = - 0.2888$ ;  $p < 0.001$ ). Readiness to manifest negative feelings under any influences (irritants), resentment for actual or imaginary actions, distrust and caution towards others (suspicion), outward aggression, self-guilt for actions that turn aggression on oneself make it difficult to realize the need, and sometimes the obligation to give someone (in this case, the teacher) a report in their actions, deeds. This prevents the formation of responsibility as a property of the executor.

## 8 Conclusions

Thus, the irritability-sociability-introversion / extroversion triad is a complex of high statistical significance of states and personality traits that are of paramount importance for the process of social adaptation, regulation of behavior, structure and type of executive activity. All three personality characteristics have a direct relationship with the seven properties of executive activities: purposefulness, interest, independence, organization, responsibility, competence and creativity.

In addition, a decrease in responsibility was revealed with increasing spontaneous aggressiveness and emotional lability of the student. A certain degree of mutually exclusive combination of organization and openness was established.

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