PERSONAL RESILIENCE IN THE SYSTEM OF ADDITIONAL EDUCATION OF CHILDREN AS A PEDAGOGICAL PHENOMENON

A RESILIÊNCIA PESSOAL NO SISTEMA DE EDUCAÇÃO ADICIONAL DE CRIANÇAS COMO FENÔMENO PEDAGÓGICO

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Resumo. O dinamismo da sociedade moderna, beirando a imprevisibilidade e manifestando-se num contexto de riscos sociais e ambientais crescentes, estipula a importância de construir resiliência numa pessoa – a capacidade de resistir eficazmente às flutuações ambientais destrutivas. O objetivo do estudo é analisar de forma abrangente a resiliência como uma qualidade integral de uma pessoa. De acordo com a hipótese de investigação levantada, desenvolvemos um questionário composto por 75 afirmações. A amostra do estudo foi composta por 918 alunos e 85 professores de sete instituições de ensino de educação complementar para crianças de três distritos municipais da República do Tartaristão. Foi realizada análise de correlação (método de correlação linear de Pear-son) dos resultados obtidos. Métodos adicionais de pesquisa foram análise de cluster e método de revisão por pares. O estudo revelou relações internas na estrutura de resiliência e relações externas. A capacidade de enfrentar e superar adequadamente circunstâncias e desafios adversos, ao mesmo tempo que se torna mais forte, parece ser uma metacompetência importante e, ao mesmo tempo, o alvo da educação. A relação da resiliência com as habilidades de design permite afirmar a possibilidade de utilização ativa do método de design no processo educacional como fator formador de sistemas no desenvolvimento da resiliência pessoal dos alunos e, como resultado, no aumento da resiliência escolar em geral.

Palavras-chave: personalidade, resiliência, atividade educativa, adaptação, design

Abstract. The dynamism of modern society, bordering on unpredictability and manifesting itself against the background of increased social and environmental risks, stipulates the importance of building resilience in a person – the ability to effectively resist destructive environmental fluctuations. The purpose of the study is to comprehensively analyze resilience as an integral quality of a person. In accordance with the research hypothesis put forward, we developed a questionnaire consisting of 75 statements. The study sample consisted of 918 students and 85 teachers from seven educational institutions of additional education for children from three municipal districts of the Republic of Tatarstan. Correlation analysis (Pearson's linear correlation method) of the obtained results was carried out. Additional research methods were cluster analysis and peer review method. The study revealed internal relationships in the structure of resilience and external relationships. The ability to adequately meet and overcome adverse circumstances and challenges, while becoming stronger, appears to be an important meta-competence, and, at the same time, the target of education. The relationship of resilience with design abilities allows us to assert the possibility of actively using the design method in the educational process as a system-forming factor in the development of students' personal resilience and, as a result, increasing school resilience in general.

Keywords: personality, resilience, educational activity, adaptation, designing

INTRODUCTION

The concept of resilience, which was initially borrowed from physics, was essentially neutral (like all physical properties), and meant the ability of bodies to spontaneously restore their original configuration when external influences ceased (Korableva et al., 2020), has received a clear positive emphasis in the humanities. Since for a person or communities the "initial configuration" seems to be sustainable development, then resilience is also characterized by the ability to recover through development, overcoming adverse circumstances and/or adapting to new conditions.

Traditionally, resilience is studied in two parallel directions – organizational resilience and individual resilience. When studying organizational resilience, general issues of the consistency of results (Seville et al., 2006; Pogosyan, 2021; Medvedeva and Mitina, 2021), system stability and performance (Dalziell & McManus, 2004), sustainability of enterprises (Sheffi, 2007; Korableva et al., 2020), as well as many others are analyzed. At the same time, the most common understanding of organizational resilience is its interpretation as "the ability of an organization to anticipate, prepare for, and respond and adapt to incremental change and sudden disruptions in order to survive and prosper" (organizational resilience); "the capability to anticipate risk, limit impact, and bounce back rapidly through survival, adaptability, evolution, and growth in the face of turbulent change" (Eachus, 2014). A separate direction in the area under consideration is the study of school resilience as the ability of an educational organization to provide an effective educational process in adverse conditions (difficult social context, problematic contingent of students, etc.) (Pinskaya et al., 2012). The ratio of the shares of students enrolled in high school and those who studied in secondary school (Pinskaya et al., 2018), high positions in the rankings based on test results (primarily in mathematics), as well as participation rates in olympiads and competitions (Pinskaya et al., 2011), were used as performance criteria.

Many researchers note that organizational/corporate resilience is a consequence of the personal resilience of team members. "The community resilience, however defined, is determined by the resilience of its constituent individuals. If a significant part of the community is not resilient, then the community is unlikely to be resilient" (Eachus, 2014). At the same time, reducing organizational resilience to a set of individuals is not always justified due to the fact that, as the author of the research himself notes, "communities can provide resources and support structures that can promote the resilience of individuals and thus the community" as a whole (Eachus, 2014).

Individual resilience as the ability to withstand, adapt to, and recover from stress and adversity, and maintain or return to a state of mental health being is a formed (not innate) property of a person and "as a meta-competence implies: 1) the ability to 'reflect' negative factors, 'rebound' from them; 2) the ability to manage emotions; 3) understanding of one's own strengths and virtues; 4) reliance on emotional involvement; 5) resourcefulness; 6) a sense of one's own potential/subjectivity; 7) the ability to interact with others; 8) the ability to solve problems" (Muravyova & Oleinikova, 2017). A number of studies note a different set of qualities/properties as structural components of individual resilience (Li & Hasson, 2020; Wu et al., 2020; Markova et al., 2022): individual resilience involves behaviors, thoughts, and actions that promote personal well-being and mental health. Individual resilience will be the result of a number of components such as personality, sense of consensus, self-efficacy, social support, and life events (Eachus, 2014; Isaikina et al., 2021; Garcia, 2021).

The analysis of the definitions of resilience allows stating the lack of unity of researchers in understanding and interpreting this phenomenon and in determining its structure. Focusing on the goals and objectives of additional education for children, the following question had been answered: "What external conditions and personal competencies, and to what extent determine the resilience of children

studying in the system of additional education"?

MATERIALS AND METHODS

Fundamental to this research is the provision on the primordial unity of all that exists, on the conditionality and inadmissibility of dividing the universe into isolated and, moreover, hostile groups, on the limitations of antagonistic theories of confrontation between "man and nature", "material and ideal", "people and non-humans", etc. The proposition about the "unity of both nature and politics", reflected, in particular, in the philosophy of Bruno Latour (Latour et al., 2004; Latour et al., 2005; Kulikova, 2021), allows using a variety of views on the essence and nature of resilience as characterizing one and the same complexly organized object in its various manifestations. When regarding these positions, the results of resilience studies can be transferred from various fields of knowledge, including natural sciences, and used to answer the research question posed (Evans-Amalu and Claravall, 2021; Tarman and Kilinc, 2022; Kilinc and Tarman, 2022). If phenomena have the same name, they must be essentially similar, regardless of their nature. In particular, it is logical to assume that in relation to a person or a community, it is fair to say that their resilience, like that of physical objects, is determined by the nature of the connection between structural elements. Herewith, it is also possible to consider two types of bonding of elements that determine resilience – a rigid bond (as in an atomic lattice) and a flexible bond (as in a polymer chain). In the context of this research, the subject of analysis was the degree of influence and the relationships between the various components of personal resilience among themselves and with a set of other personal characteristics, which were discussed in more detail below.

Understanding personal resilience as maintaining a state of development or returning to development under unfavorable conditions had been evolved under a synergistic approach (Grigoryev et al., 2022; Saenko et al., 2019) which established openness as the main condition for the development of a personality, its orientation towards self-organization of educational interaction with the world. Within the boundaries of the conducted research, the relationship between resilience and openness was analyzed.

The impact on personal resilience of the ability to anticipate the development of a situation, to assume possible risks, and take preventive measures to minimize them (Eachus, 2014; Carothers et al., 2021) points to the possibly leading role of a person's design capabilities in ensuring one's stability. At the same time, an important role in the development of resilience can be played by the salutogenic approach, which is developing in medicine and focuses on the "causes of health" instead of the "causes of disease" as in the pathogenic approach (Patuano et al., 2022). Referring to the studies by Antonovsky (1993), Eachus notes that individual resilience is based on "a sense of coherence arising from a general feeling of confidence that stimuli/stressors, both internal and external, are structured, predictable and explainable. Moreover, a person has the resources to use/overcome them, and, finally, these problems are worthy of efforts to overcome them" (Eachus, 2014). As suggested by the outlined approach, an important factor of resilience is designing the development of the strengths of the personality as the basis for effective existence, and not getting rid of the shortcomings that prevent it.

The methodological foundations outlined in the research determine in all their entirety the choice of indicators of personal resilience, as well as a list of personal competencies and features affecting the state of resilience.

Research hypothesis

A person will be characterized as resilient when demonstrating the following properties:

- attitude to overcome difficulties;

- presence of a moral core;
- variability of thinking and behavior;
- susceptibility to information;
- meaningfulness of actions;
- awareness of one's own subjectivity;
- understanding one's own strengths;
- understanding the reasons for success/failure;
- ability to solve problems;
- ability to enjoy the support of others;
- ability to compete;
- ability to change the plan of action depending on the result;
- ability to interact with others.

In the absence of an agreed scientific position regarding the nature and content of the analyzed phenomenon, the above list of properties and abilities will be used in this research to assess personal resilience.

Personal resilience is formed and determined by the following:

- features of the environment, including other subjects, social communities, objects of the material and spiritual world, traditions of people's relations with each other and with the environment;
- personal abilities and characteristics, including the ability for self-regulation, self-stimulation, self-control, and self-indication; independence of thinking, communication, action, and cooperation; external and internal openness;
- designing competencies.

In accordance with the research hypothesis, a questionnaire was developed consisting of 75 statements, each of which the respondents were asked to rate on a scale from zero to ten, where the score "0" meant absolute disagreement with it, and the score "10", on the contrary, meant absolute agreement.

The questionnaire included several blocks:

The block "Assessment of personal resilience" included 15 statements reflecting the level of respondents' self-assessment according to 15 indicators of resilient personality indicated above.

The block "Conditions (external and internal) that potentially contributed to the formation of personal resilience" included several components:

- "assessment of the environment" was performed according to its four structural components – subjects, social communities, objects of the material and spiritual world, traditions of relations, the state of each of which, in turn, was assessed in four areas – communication and teamwork, creativity and criticality, independence and responsibility, resilience;
- "assessment of the personal orientation of the educational process", the key indicator of which was the educational freedom of children studying in the system of additional education as their ability to make a responsible choice of the content of education and ways of its implementation, on the one hand, and the support of this freedom by teachers, on the other hand;
- "assessment of the consistency of the attitudes of the subjects of education in relation to its intended results". The attitudes of the subjects of interaction to the mutual agreement of expectations, to the displacement of psycho-traumatic events, to respect for the "I-image" of others, to respect for the characteristics of people, to the maintenance of generally accepted cultural

norms, as well to respect for various ethnic communities, individuals, groups, representatives of professions, and society were assessed;

- "assessment of openness and complexity of the structure of interaction" included an assessment of the material base for the implementation of individual projects, the possibility of obtaining the necessary consultations, the presence of traditions of additional work with students, opportunities to participate in various types/levels of creative competitions and project groups of different ages and different profiles, integration of external events of an artistic and aesthetic orientation (competitions, creative projects, etc.) into a developing environment, the opportunity for students to present their achievements outside the educational organization.

The block "Personal abilities and characteristics" included indicators of the need for activity, the ability to be an observer, imitation, voluntary performance, external control, the ability to self-regulate, self-stimulation, self-control, self-indication, independence of thought, communication, action and cooperation.

The "Designing competencies" block allowed assessing the ability of students to substantiate the relevance of the problems being solved, to verbalize problems, to set goals, to decompose the process of achieving the goal into a sequence of tasks to be solved and achieved intermediate results, to determine the opportunities and risks of implementing projects, to develop an action program, as well as to be involved in teamwork and the effective implementation of the plan. At the same time, not only the ability for actual design activity was taken into account, but also the ability to use its individual elements in solving various life problems.

The block "Assessment of the sincerity of answers (questions for lie detection)" included statements that were repeated in meaning, but formulated differently. Statements that excluded the highest possible self-esteem were also used.

Research design

The research sample consisted of 918 students and 85 teachers from seven educational institutions of additional education for children in three municipal districts of the Republic of Tatarstan. Within educational organizations, sampling was performed according to the quota principle, which ensured a proportional representation of all students in the sample population according to the characteristics significant for the study (age, period of study, success of training).

The survey of students, taking into account their age characteristics and the individual nature of educational activities, was conducted by teachers in the form of interviews after their preliminary preparation for this kind of work. The developed questionnaire was used as a form for an interviewer's survey.

After the survey, the received questionnaires were culled. Questionnaires containing more than 20% of inadequate answers to statements from the sincerity assessment block were not allowed for further processing. In total, 813 questionnaires (88.6%) were allowed to be processed.

In order to answer the research question, a correlation analysis (Pearson's linear correlation method) of the results obtained ($p<0.005$; Cronbach's alpha: $\alpha st= 0.922$) was performed. Additional research methods were cluster analysis and the peer review method.

RESULTS

The research revealed the following issues:

- internal relationships in the structure of resilience (between personality traits that determined one's resilience in accordance with the hypothesis);
- external relationships (between personal resilience and living environment, a complex of personal characteristics, and design competencies).

Internal relationships

In order to determine the relationships between the structural components of resilience, the overall resilience index was calculated for each respondent as an average value for the selected indicators. The obtained average values were divided into three groups, and only those respondents who entered the first third (39.0%), gaining the highest number of scores, were classified as resilient. The rest constituted the middle (41.5%) and lower groups (19.5%) on this basis. The results of statistical analysis of the obtained groups using Dunnett's test (Dunnett, 1964) demonstrated that the differences between groups were statistically significant. Further, after confirmation that there were criteria differences between different groups of respondents, a correlation analysis of the relationships between the components of resilience and personal resilience in general was conducted.

In terms of the degree of influence on the general state of resilience, the ability of a person to "change the plan of action depending on the result" played a key role. The indicated ability was statistically significant and was associated with the following six qualities:

- ability to solve problems;
- understanding one's own strengths;
- understanding the reasons for success/failure;
- attitude to overcome difficulties;
- awareness of one's own subjectivity;
- susceptibility to information.

The defined set of qualities could be attributed to the core of personal resilience, especially since they positively correlated with the remaining qualities. Thus, the ability to solve problems correlated with the support of others (the ability to use this support); understanding of one's own strengths correlated with the ability to interact with others; understanding the reasons for one's own successes/failures was naturally associated with the ability to compete.

The correlation pleiad, based on the attitude of the individual to overcome difficulties, appeared to be interesting. In accordance with the results obtained, its positive impact on personal resilience was largely due to the complex relationships between this attitude and the meaningfulness of actions, the presence of a moral core, and the variability of thinking/behavior. In general, all of the above allowed defining a model of personal resilience in the following way (Fig. 1).

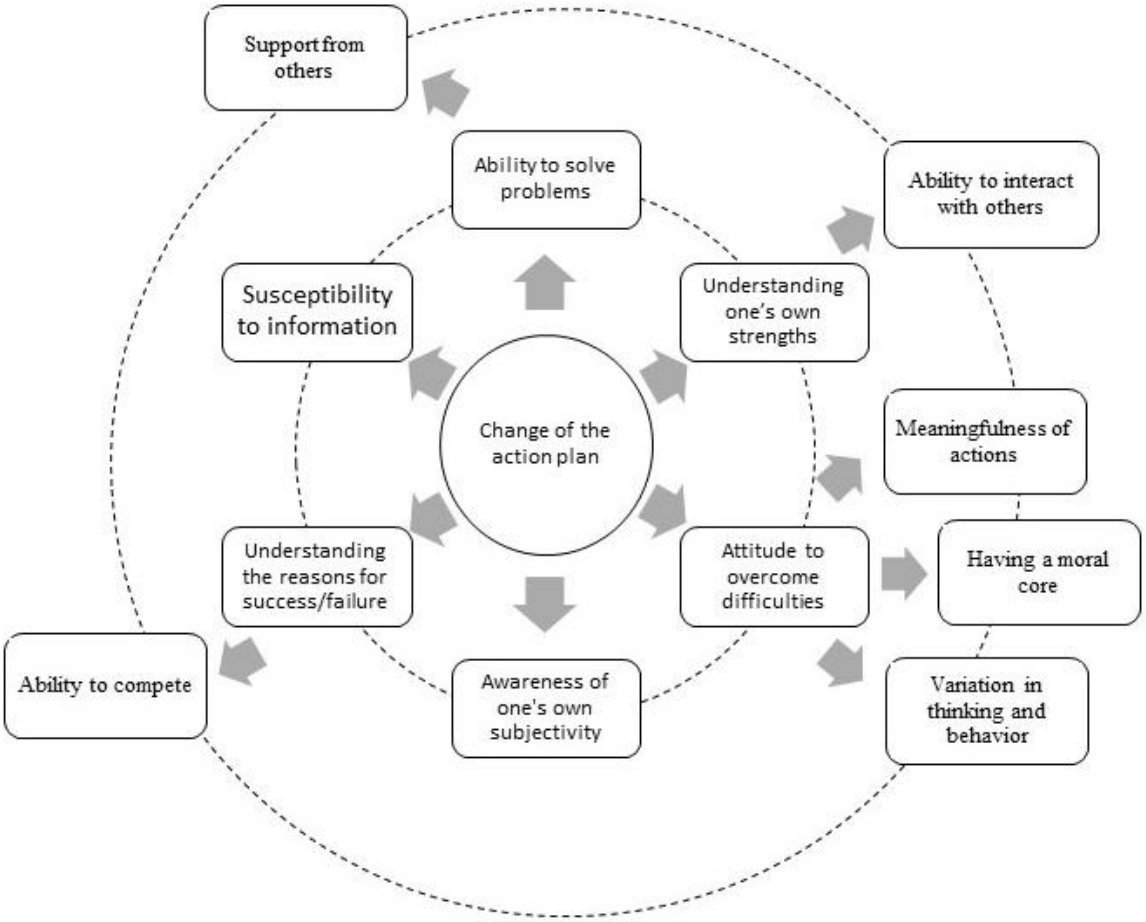

Figure 1. Model of personal resilience.

External relationships (general)

Analysis of the influence of environment on personal resilience was based on the understanding of the educational environment proposed by Yasvin and its four-component structure:

1) subjects of the educational process;
2) the social component of the educational environment;
3) the spatial and subject component of the educational environment;
4) technological (or psychodidactic) component of the educational environment (Yasvin, 2001, p. 172).

The indicated components were detailed, and in each of them, the elements that contributed to the development of students' communication skills, teamwork, creativity, criticality, independence, and responsibility were highlighted. Statistical analysis of the obtained results demonstrated an absolute influence on the development of personal resilience of the elements of the educational environment (in all its components) that ensured communication and teamwork. These were as follows: the opportunity to hold discussions with fellow students, to communicate on interesting topics; the presence of interesting cases involving teamwork; assistance in finding everything (information, premises, equipment) needed for the implementation of plans; offers to participate in various collective educational projects.

With regard to the spatial and subject component of the educational environment, a significant role in the development of students' resilience was played by the creativity of the environment ("there were many original buildings, premises, monuments, etc. around me") and the ability to show independence and responsibility ("I have the opportunity to engage in creativity at any time convenient for me").

In terms of the personal characteristics of students that affected their resilience, the seven most significant were as follows:

- the attitude to displace the traumatic events ("I try to avoid unpleasant situations");
- the ability to use the help of a teacher ("Teachers can always help me if they are asked");
- the ability to identify one's own problem areas ("I clearly understand which weaknesses discourage me");
- the ability to self-indication ("I can easily determine whether I am doing something right and whether it will lead me to what I want");
- material (pragmatic) attitude ("The main thing for a person is to learn how to earn his own living on his own");
- the ability to imitate ("If I see that someone is doing something interesting, original, then I always try to repeat it myself");
- the attitude to comply with the norms of family-role, socio-cultural, interpersonal, and group interaction ("I believe that everyone should respect elders, parents, teachers").

Among the designing competencies, the following ones were characterized by the greatest influence on personal resilience:

- the ability to specify the problem ("I always see what specifically prevents me from achieving the goal");
- the ability to set goals ("Before doing something, I always clearly imagine what should happen");
- the ability to plan actions ("In order to achieve something, I carefully think over all my steps towards the goal").
- the ability to implement actions in accordance with the set goal and objectives ("I always achieve what I want").
- The obtained results allowed identifying internal and external relationships in the structure of resilience (between personality traits that determined one's resilience in accordance with the hypothesis);
- external relationships (between personal resilience, living conditions, a complex of personal characteristics, and design competencies).

CONCLUSION

Before summarizing the research results, it should be once again noted that the existing terminological uncertainty regarding understanding the essence of resilience does not allow making them absolute. The concept of resilience initially implied the ability of a person to demonstrate a set of abilities (features) "collected" from various sources and having presumably equal relative importance. At the same time, the obtained data allowed clarifying the initial provisions, as well as defragmenting them in a certain way.

Personal resilience is primarily the ability of a person to change the course of action depending on the result, which connects "resilience" with its original physical understanding implying "elasticity". "Elasticity" as the ability to return to the starting position should be understood as a return to the initial state of development, and not a return to the starting point.

At the same time, resilience/elasticity does not mean a person's total rejection of any plans (which is typical of amorphousness), as evidenced by its relationships with the ability to solve problems, understanding one's own strengths and the reasons for current successes/failures. Also, the attitude to overcome difficulties, susceptibility to new information, and the awareness of one's own subjectivity create a kind of foundation for the individual making it possible to dynamically respond to a change in the context of activity.

The defined "portrait" of personal resilience is complemented by external relationships of resilience with the living environment. The research allowed determining the most important components of personal resilience that provided communication and teamwork. This is very important since the modern era is the era of teams, not individuals. The one who can rely on a stable community of friends and colleagues turns out to be resilient.

The defined "portrait" is completed by a complex of personality traits that can provide resilience, among which the leading role is played by the attitude to repress psychotraumatic events, which allows avoiding negative changes in the context and, as a result, the need to recover. However, if this has already happened, then the winner is the one who is able to use the help of a teacher, to identify one's own problem areas on the basis of self-indication. Necessary support in a difficult situation can also be a material (pragmatic) attitude, the ability to use someone else's example, and adherence to traditional norms of family-role, sociocultural, interpersonal, and group interaction.

Finally, the relationship between resilience and design capabilities allows asserting the possibility of actively using the design method in the educational process as a system-forming factor in the development of students' personal resilience contributing to the increase in school resilience in general.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest.

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