A Functional Matrix Approach to Pedagogical Enrichment of the Dispositional Core of Future Specialists' Experience of Social Interaction

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Summary
The new social reality emerging amid the global rise of communication links and integration processes acutely emphasizes the problems of communication in large and small social systems. The method of their communication becomes one of the keys to ensuring global security. It has become the mission of humanitarian education to prepare the younger generations for life in a changing world with no image of the future and increasing uncertainty. In psychological and pedagogical research, there is a growing scientific interest in the problems of interaction of the individual with the social environment. The mental trace of a person's practice in society shapes the experience of social interaction, which constitutes simultaneously the source, tool, and condition for the emergence and development of personality. The study outlines the methodological foundations for the study of individual experiences of social interaction. A hypothesis about the productivity of the functional matrix method is tested. Materials for the training of specialists in the humanities include interdisciplinary approaches to the study and transformation of the experience of social interaction and systematic methodology for the study of complex objects. Fundamental to the study is the systematic-dialectical method, and the matrix method is employed as the instrumental-technological method. The paper presents the results of a multidisciplinary overview of scientific literature concerning the essential characteristics and functions of social interaction and the respective experience. The overview points to the fragmented nature of scientific understanding of the elements of experience outside its integrity and systemic properties. Based on the formula "personality interacts with the social environment", the study presents an algorithm for the application of a systematic methodology for the study of complex objects, which made it possible to identify the system parameters of experience at three levels of cognition and develop the reference structural and functional matrices for the didactic system of its pedagogical enrichment.

Keywords:
social interaction, experience, dispositional core, pedagogical enrichment, systems methodology.

1. Introduction

The fundamental changes occurring in all spheres of life in today's Russia due to the systemic crisis and the destruction of the liberal model of the world order give rise to a new perception of the integration of large and small social systems and the mechanisms and contours of the transformation of their political and economic alliances and associations. New opportunities are opening for Russia to not only break out of its colonial financial and economic dependence on the collective West but also to gain and unleash a powerful impetus for the economic and socio-cultural development of the country. The newly emerging reality is calling for the mobilization of all material and human resources. The unfolding mobilizational strategy of Russia's future development implies the development of clear guidelines and vectors for this process, the realized values and meanings, images and means to attain them, and the change of the consumer society worldview paradigm to the paradigm of creation for the sake of the future of generations to come.

The emergence of the new reality demonstrates a high level of uncertainty, turbulence, and conflict, accompanied by a painful fragility of the value and meaning sphere of large social groups and national communities. Russia's civilizational subjectivity is defined by the subjectivity of the multinational Russian society and its citizens, capable of rallying and integrating their creative efforts to achieve the target parameters of development in a dynamically changing, adversarial environment. The development of the image of the future and its value and target priorities is possible through the hard work of all public social institutions to not only create adequate administrative and economic systems but also to develop and advance collective intelligence systems and collective civil society actors. The process of comprehending the new reality is philosophical in nature and depends on the extent to which society turns to the cultural and historical heritage of the Russian world, which carries a wealth of social experience of previous generations in solving the most difficult moral problems of mankind. The strategic direction for the development of all levels of Russian humanitarian education in this situation becomes training the younger generation to revive the greatness of Russia and its multinational peoples by rooting in the culture the worldview foundations of the youth's consciousness.

Research objectives: a) to substantiate the reference to the learner's individual experience of social interaction as a

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topical integrated educational outcome as part of the implementation of the competency approach; b) to demonstrate the systemic complexity and difficulty of defining and describing the essential and functional characteristics of said experience; c) to demonstrate the possibilities of the functional matrix approach in developing the didactic system of the transformation of said experience in the educational process.

Among the proposed ideas for improving the humanitarian component of Russian vocational education is the idea of "pedagogical enrichment of the future specialist's experience of social interaction". Interaction is an overarching category that expresses the essence and form of existence of all simple and complex objects of the universe. The genesis of the concept of social interaction reveals its evolution from a little-studied phenomenon considered insignificant to a predominant factor and an integral category of the development of social reality explored by many sciences (philosophy, sociology, psychology, pedagogy, etc.). The individual experience of social interaction very rarely becomes an object of research and is even more rarely viewed as an educational outcome. At the methodological level of our concept of pedagogical enrichment of the future specialist's social interaction experience, the problem takes the following form: what are the methodological foundations for the study of the individual experience of social interaction? As the working hypothesis of a solution to this issue, we test the assumption of productivity of the functional matrix approach in determining the constituent elements of the individual experience of social interaction and its pedagogical enrichment.

2. Materials and Methods

The study was conducted based on the materials for training future specialists in the humanities (lawyers, cultural specialists, and teachers). The aforementioned directions of training were chosen due to the high importance of the influence of culture, law, and education on the formation and development of a person's inner world. The scientific sources studied within the framework of the research problem concerned interdisciplinary approaches to the study and transformation of the experience of social interaction and systematic methodology for the study of complex objects. As the basic methodological approach, the study employed the systematic-dialectical approach, which allowed us to determine the systemic parameters of the explored experience and to focus on its internal and external functions that ensure the integrative unity of the elements. The fundamental elements of a didactic system and the functional stages of pedagogical enrichment of individual experience laid in the basis of the functional and didactic matrix of pedagogical enrichment of the experience of social interaction of the future specialist. We defined this method was defined as the functional matrix method for the development of systematic pedagogical tasks.

3. Results and Discussion

The professional practice of specialists in the considered humanitarian professions takes place in the social environment in the process of interaction with other subjects in it. The all-pervasive ordinariness of social contacts, their multifaceted situational diversity, and the unlimited range of interacting subjects constitute a major obstacle to their study at the level of individual reflection in a person's experience. In scientific and everyday knowledge, this level is commonly represented by the results of research on the problems of communication (interpersonal, business, group, etc.), in which interaction is examined as a separate interactive element of communication performed by subjects in the form of reciprocal acts of influence. A.A. Bodalev [1, p. 8] points out that communication is always interaction and considers it "a mono-object, a holistic process to be studied in the human-human system in all the multidimensional dynamics of its functioning". Characterizing the patterns and factors of individuals' mutual cognition of one another in communication, Bodalev [1, p. 10] refers to the communicative experience of a person and the experience of social cognition, stressing the core function of "in a particular way organized experience of a person's interaction with other people composed of impressions about them obtained from direct and indirect contacts with them". Despite the indication of the core function performed by the experience of interaction in the process of communication, this phenomenon was not studied in depth at the time. As the leading function of communication, Bodalev and his school considered the function of a person's cognition by another person with a focus on the individual as the subject of the relationship. The question arises: what other functions of social interaction allow regarding the subjective experience of it as the individual integrative result of this process?

Philosophical and sociological literature reflects many other functions of social interaction: the function of interdependence [2]; the function of communicative exchange [3]; the coordinating function of systemic links of cyclical causal dependence of the interacting subjects [4]; the adaptive function realized in the adaptation of one person to the actions of another person [5]; a mode of the existence of social existence [6].

Discussion. An appeal to the existing definitions of experience in philosophy and psychology gives a general idea of the separate components of a person's individual experience of social interaction. J. Dewey [7, p. 55] presents it "as a discrete stream of life situations". S.V. Istomina [8,

p. 2] interprets the considered experience as a "dynamic information system of a person's inner and external world that defines the strategy and success of activity". C.A. Hildebrand [9] and A.B. Speer [10] examine the experience of social interaction in the context of social intelligence. M.A. Kholodnaia [11, p. 94] defines mental experience "through the ability to perceive, interpret, and evaluate reality on the basis of personal constructs", and E.A. Sergienko [12] – as a subjective resource of the methods of individual regulation. A.K. Osnitsky [13, p. 64] distinguishes regulatory experience as "a certain structured system of knowledge, skills, and experiences that make up a person's ideas about professional self-identification and ensure the success of the regulation of their activities and behavior". However, such a differentiated breakdown of the unrelated individual components of experience does not give insight into its integrity and systemic properties.

The search for such a foundation at the first levels of cognition of complex objects through the identification of separate properties, qualities, actions, and their manifestations, which is more commonly undertaken in applied research, proved to be unproductive. This led to the conclusion that the problem should be addressed at a higher, systemic level of their description, with social interaction being viewed as the supra-subject meta-activities of a future specialist, and the individual experience of such interaction regarded as a complex object of cognition.

The social experience of a person originates in the presence of the other, other human beings as the carriers of an unlimited number of different qualities and characteristics of the human species, arising and manifesting themselves in the process of their joint activity, communication through a variety of types and means of communication. The experience of social interaction is informational in nature, but its medium and depository is not only memory but something more, representing the systemic organization of images and patterns of human interaction and relations with the world. To give rise to in-depth research of the phenomenon of social interaction experience, which in modern scientific knowledge is an insufficiently structured and integral complex object, it is necessary to resort to the apparatus of systems methodology in order to determine the systemic parameters of this experience.

As the initial system model of a person's experience of social interaction we accepted a triad of categories "personality", "social environment", and "interaction", unfolded in the formula "personality interacts with the social environment". In this construction, experience appears as the mental trace of human practice in society, a derivative and bearer of the systemic qualities of both the person and the environment, as well as the peculiarities of the interaction process itself. These exact factors determine the systemic parameters of experience that need to be defined and structurally grouped in accordance with the essential levels of the cognition of experience.

The system methodology of cognition of a complex object assumes three deepening stages, the levels of cognition set by the corresponding categorical foundations. In the classification of E.G. Vinograi they are represented by three groups of factors: a) system-generating factors (current contradictions, goals, current environment); b) system-forming factors (construction and dynamics determined by the functions, structure, and composition of the object); c) system-organizing factors (information and resource support, control, execution). Within the third group, in addition to the algorithms of systemic organization and self-organization of the object, Vinograi [14, p. 112] distinguishes another subgroup of the mechanisms of spontaneous self-organization (non-equilibrium, openness, nonlinearity, complexity, attractors, fluctuations). The application of this model disclosed the systemic image of the students' social interaction experience in the parameters of current contradictions, goals, and current environment and allowed for their description as part of social discourse in relation to the contradictions of the social environment associated with the new social reality of the changing world order, and the life goals of students aimed at overcoming external, environmental, and internal personal contradictions in the future professional practice. The personal essence of the social interaction experience of a future specialist was defined with the category of co-existence understood as a mode of social existence "living together for the sake of the future of generations to come".

Whereas the first level of systematic analysis employed general scientific theoretical research methods, the objective of determining the construction and dynamics of the studied experience required a reference to the psychological theories of personality and activity and the method of multidimensional modeling. This resulted in the identification of its functions (orienting, stabilizing, regulating, resource, the functions of self-organization, development, and integrity preservation) and the structure of the experience, including a) the dispositional core, b) the thought-activity component, and c) the regulatory-activity component.

The dispositional core of experience refers to "the relationship of its structural units on the one hand and the dynamic tendencies of the personality on the other hand" [15].

Determination of the composition of the structural components of the experience once again brought to the surface the problem of its differentiated scatteredness (knowledge, skills, experiences, feelings, methods of joint activity, etc.), which necessitated the search for adequate tools for its functional binding into structural components. The tool adopted to solve this problem was the matrix, a method for solving linear equations in mathematics that

originally had the name “Magic Square” in ancient China. The modern matrix method is widely used in social sciences, economics, management, and other spheres of human practice. The best solution to the problems of the study is the method developed by M.B. Miles and A.M. Huberman, which provides a category description strategy based on the construction of logically structured matrices. In this method, the matrices disclose the logical levels of the studied objects and the interactions between them. Multilevel analysis reveals the latent relations between categories, allowing to refer the categories under study to separate blocks [16].

In the study of the experience of social interaction, the matrix lines are formed by its functions and structure, represented by the above-mentioned components. The dispositional core of experience and, consequently, the matrix line are formed by values (E1), meanings (E2), ideals (E4), norms (E5), motives (E6), life principles (E7), and attitudes (E8) (Table 1).

The parameter of the dynamics of experience in the functional matrix line is expressed by the opposition of the dynamic tendencies of personality (mode of activity, sources of activity, methods of activity).

The scheme of the functional-dynamic matrix of the dispositional core of the learner's social interaction experience is presented in Table 1. The dynamic tendencies of personality are disclosed in the matrix through the basic element of experience – the binary mode of living, which is an indivisible unit at the level of system analysis:

- activity modality (adaptive (F1), transformative (F2));
- sources of activity (tendency “To be” (F3), tendency “To have” (F4));
- modes of activity (objective (F5), subjective (F6), polysubjective (F7)).

Table 1. Functional-dynamic matrix of the dispositional core of the learner's social interaction experience

Predictors of the dispositional core of experience		**Dynamic personality tendencies**						
		F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**
Structural elements	**E 1**	1.1	1.2	1.3	1.4	1.5	1.6	1.7
	E 2	2.1	2.2	2.3	2.4	2.5	2.6	2.7
	E 3	3.1	3.2	3.3	3.4	3.5	3.6	3.7
	E 4	4.1	4.2	4.3	4.4	4.5	4.6	4.7
	E 5	5.1	5.2	5.3	5.4	5.5	5.6	5.7
	E 6	6.1	6.2	6.3	6.4	6.5	6.6	6.7
	E 7	7.1	7.2	7.3	7.4	7.5	7.6	7.7

The matrix elements formed at the intersections of its columns and rows, denoted by a combination of digits from 1.1 to 7.7, where the first digit denotes the row number and the second the column number, contain a description of the content of each element of the dispositional core of experience.

For example, row 1 “Values” at the intersection with the column “Adaptive modality of personal activity” (F1) forms the matrix element 1.1, which describes the values guiding a person in realizing this method of living: “being for oneself”, “being like others”, “having a social identity”, “striving to conform to the standards of the social environment”, etc.

To compare, the “Transformative activity” personality orientation (element 1.2) is different: “being for others”, “being yourself”, “freedom”, “openness”, “receptivity to new ideas and values”, “striving for originality”, “particularity and identity”, “striving for social difference and differentiation”, “for self-realization and self-actualization”, etc. Only in binary, anomic value coordinates does the learner manifest and develop the ability to self-determination.

For the implementation of the ideas of pedagogical enrichment of a future humanities specialist’s social interaction experience, the content of the functional-dynamic matrix offers a systemic foundation for optimizing the choice of social learning and upbringing content, the construction of enrichment technology, and the development of diagnostic tools for assessing the state of the dispositional core of experience.

It is important to emphasize one critical didactic feature of this method: the method of living, which is an elementary cell in a student’s experience, corresponds in the design of the educational process to a pedagogical objective. The matrix thus produces a systemic field of pedagogical objectives concerning students; mastery of various methods of social interaction at the level of the value-meaning substructures of personality.

In the study, this method was titled the functional matrix method. This method provided for the development and experimental testing of the following tools:

– the structural and functional matrix of the subjective regulation in social interaction;
– the structural and functional matrix of thought-activity experience in social interaction;
– the matrix of the individual executive concept in social interaction;
– the functional-dynamic matrix of the dispositional core of the learner's social interaction experience;
– the structural and functional matrix of the pedagogical enrichment of the social interaction experience of a future specialist in the humanities.

These tools allowed us to design and experimentally test a modular didactic system for the enrichment of the social

interaction experience of future humanities specialists based on the mechanisms of differentiated enrichment, integration, enlargement, conceptualization, crystallization, cultural embeddedness, and accumulation of the elements of this experience.

4. Conclusion

The new social reality is not only fraught with the aggravation of the contradictions of large and small social systems caused by the painful breakdown of the outgoing world power structure but also changes people's worldview stereotypes and the values and meanings of their social interaction.

In educational practice, there is a growing demand for ideas and technologies for social training and upbringing of development subjects, and for overcoming the personality-alienating nature of professional education. The student's experience of social interaction appears to be a promising object for psychological and pedagogical research into this direction of educational reforms.

The use of systematic methodology instruments for the study of complex objects allows determining the co-existence essence of the individual experience of social interaction, as well as its structure composed of the thought-activity and regulatory-activity components and the dispositional core, which ensures the integrated unity of the structural elements of experience and the socially important methods of activity.

During the design of a didactic system for the technology of pedagogical enrichment of the social interaction experience of future specialists in the humanities, we developed a functional matrix method, which allows constructing the systematic matrix field of pedagogical tasks in this process based on the functional-structural links of experience. Experimental testing of this method demonstrates its high effectiveness and broad perspectives of its use in pedagogical research and practice.

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