

Pedagogical Synergetics as the Activity Approach Basis in Professional and Pedagogical Training at the University

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Abstract

The article considers an idea of activity approach realization in professional training assuming not only change of the contents, forms and methods of students' educational activities, but also not less radical transformation of teacher's activities oriented at the students' development of creative self-realization experience. The authors represent this approach in the context of new scientific field-pedagogical synergetics, which they understand as an open system of interaction of subjects of the educational process with each other and with environment. This system, being a subject-oriented one, is aimed at the nonlinear development of a creative subsystem of a personality, having the qualities of synergetic systems, what opens the new opportunities of self-development for it. The elaboration of experience of the creative self-realization of a personality, the emotional and valuable attitude to the activities becomes of particular importance. The conceptual and methodological novelty of the idea is caused by the abilities of various systems to the self-development not only due to the inflow of energy, information, substance from the outside, but also due to the use of their internal opportunities. The authors, focusing on understanding of pedagogical synergetics as a field of psycho-pedagogical knowledge, reveal the structural and functional model of creative development of a personality as a system of integrity. Thus it is shown, that not a personality sets the activities and not the activities set a personality, but a subject of activities, overcoming the contradictions of external and internal determination, makes the creative potential actual. The creative development of a personality is provided with synergetic interaction of such objective principles as: the purposeful educational activities, including the set of acme-synergetically-oriented disciplines, the practical importance of which consists in self-knowledge, self-organization. The feature of synergetic systems, important for professional and teaching activities, is that they can be controlled from the outside, changing the operating systems of factors. Integrity, hierarchy and professional and pedagogical orientation of expansion of the acme-synergetic contents of professional training of a future teacher confirmed a necessity of transition from management to self-management, from development under the influence of external factors to self-development under the influence of internal factors.

Keywords: pedagogical synergetics, activity approach, acmeological follow-up, creative development of a personality, professional and pedagogical training

1. Introduction

Integration into the European and world sociocultural environment requires training of competitive, creative experts. In this regard, a problem of synergism, acmeologism, subjectivism in the educational process of professional training has considerably become pinpointed. Education thus is considered as the level and vital process, holistic in its elements, providing progressive development of the personality's creative potential, as finding of conscious independence in acquisition of professional training environment and creative self-realization in the process of professional competence formation by a student. Such an approach requires new principles for structuring the professional education system as a whole reflecting the system-integral unity of creative self-realization of a student and the educational environment. The educational environment, external in relation to a student, is an environment, which in turn develops itself and at the present stage can be characterized by such categories as dynamism, interdisciplinarity, informatization. It is pedagogical synergetics

that facilitates to such understanding of the educational environment.

A. Vorozhitova (Voznyuk, 2012) considers pedagogical synergetics as synthesis of multiple-factor interactions in the counter processes of upbringing and self-upbringing, education and self-education, teaching and learning, which are materializing in the personalities of students. V. Andreyev (Voznyuk, 2012) offers to call “a field of pedagogical knowledge, which is based on the laws and regularities of synergetics, that is the laws and regularities of self-organization and self-development of pedagogical, that is educational systems” as pedagogical synergetics. Thus, pedagogical synergetics enables a new approach to elaboration of problems of the pedagogical systems development, considering them, first of all, from a position of “openness”, co-creation and orientation at self-development.

The intended use of synergetic ideology is seen as the stimulating impact on the subjects of educational process for the purpose of their self-education, self-upbringing, revealing creativeness, development of critical thinking, actualization of internal opportunities of a personality in the process of formation of the professionally significant competences in order to train the competitive specialists. Nonlinearity, or synergetic nature of this system, is, first of all, that the process of knowledge acquisition is carried out not by a predetermined plan or algorithm, not by a tough curriculum with a result, known in advance, but in the terms of the problem situations allowing a student to make discoveries by himself, to learn new things by himself.

To the study of problems, related to synergetics (the theory of self-organization), are devoted works of V. Arshinov, Yu. Danilov, B. Kadomtsev, E. Knyazeva, S. Kurdyumov, J. Nikolis, I. Prigogine, I. Stengers, H. Haken, etc. Their works advance an idea that there is no absolute structurelessness and absolute disorder in the world; chaos becomes an object of science. Besides, chaos, and casuality, and disorganization can be not only destructive, but also in certain circumstances bear a creative and constructivist origins in itself. The certain aspects of the theory of self-organization from the pedagogical point of view reflected in works of M. Boguslavsky, V. Budanov, V. Vinenko, L. Zorina, V. Ignatova, G. Malinetsky, V. Matkin, N. Talanchuk, D. Trubetskov, O. Fedorova, S. Shevelyova, etc.

The theoretical analysis allowed to emphasize the educational process in pedagogical science can be fully described by the terms of synergetics. It has the bifurcation (critical) points of destruction of old structures and emergence of a range of opportunities for the system transition to a new quality, its probabilistic development can be presented by the dissipative structures as the formations of higher complexity, than the previous destructible ones; it has the properties of nonlinearity, i.e. multi-versioning and unpredictability of the system transition from one state to another; it is unstable and nonequilibrium much, fluctuative, open for development, etc.

However, on the basis of the analysis of existing in pedagogical science views on the prospects of using the synergetic approach in the study of pedagogical systems it was concluded that the role of this approach in pedagogics methodology has not been manifested substantially yet and, therefore, it has not been adequately reflected in the contents of professional training at the university. Especially a question of interference of bifurcation points and dissipative manifestation as a new quality in the subsystem of creative development of a personality has attracted our interest.

This study attempts to investigate their interaction, which must be built so that the creative development of each student should be in harmony with the creative development of a teacher, what allows to come to the new ultrahigh level of interaction, treated as acme-synergetic interaction. Thus, the educational process must be an open system (must consist of subsystems, between which there is a continuous exchange of information; it is a subsystem of the system of higher order

and exchanges information with other its subsystems).

Interaction and interchange of a teacher with environment; activity, characterized by display of the initiative of him, aspiration to self-improvement, self-realization, increase in the educational process efficiency; free choice; change of relations in the system of pedagogical interaction, which can develop only in the system of dialogue and collaboration; a teacher's orientation at the goals of self-development, creative development of a student's personality, which are shown in updating of the contents of education taking into account such factors as openness, self-organization, self-development, creativity and nonlinearity of thinking, management and self-management, etc. At such an approach the result of education is present at each link of the holistic educational environment, what allows self-development of a student as of a subject of activity mastering competences of professional training at the level of individuality manifestation through self-acceptance, self-realization, self-organization. The main criterion of acmeological follow-up efficiency of students–future teachers was their advance to the higher level of their activities, which is characterized by manifestation of

activity and self-organization shown in creative self-realization. A student makes a decision on the course of transformation of the expected result on the basis of self-reflected past experience according to the real actions.

In our research we have defined the fact as far as the subsystem of creative development of a personality can be considered as the synergetic one: i.e. to be studied from the synergetics methodology position—as the opened, self-organizing, nonlinear system.

This has determined the research objective consisting in determination of theoretical and methodological underpinning and scientific and methodical support of actualization of the potential of creative self-realization of a student—future teacher in the activity approach realization in professional and pedagogical training at the Sholom-Aleichem Priamursky State University.

2. Methods

The research of a problem of actualization of the creative self-realization potential of a student—future-teacher has included some aspects: the analysis of the conceptual framework of the research problem, the definition of the essence and features of pedagogical synergetics, the elaboration of the structural-functional model of creative development of a personality on the basis of the activity approach. For this purpose the following tasks have been realized: the essence of the synergetic approach in the teaching activity has been defined, the features of acmeological follow-up of actualization of creative development of a personality have been revealed, the structural-functional model of creative development of a personality has been developed, the pedagogical terms, providing realization of the synergetic approach in the teacher of the university's activities, have been defined.

3. Results

For the synergetism realization in pedagogical interaction with students—future teachers in the process of professional training at the Sholom-Aleichem Priamursky State University the terms of creative environment for student's creative potential actualization, caused by the features of the developed model of creative development of a personality, are created: a) introduction of an innovative educational model on the principles of the modular-developing organizing system, b) substantial modification of the programs and inclusion of the synergetic approach in the subject contents of disciplines—“The acme-synergetic basis for teaching activities”, “Acmeology of creativity”, “Pedagogical design”, “Design of the educational environment”, “Educational management”, c) interdependent functioning of the behavioral mechanisms and a system of productive and creative attitudes in the process of the subject-oriented pedagogical organizing activities.

4. Discussion

Reflecting on updating of the contents, methods and forms of professional and pedagogical training of future teachers in primary school and preschool teachers within reforming of the educational process at the Sholom-Aleichem Priamursky State University, we have paid attention to the fact that the traditional education system functions as the closed one, what deprives it of an ability to self-development. At the same time, the contents of the federal educational standard of the higher professional education specify that the education system can be considered as the synergetic one—an open, self-organizing, nonlinear system. As “a student is transferred from a rank of an object to a rank of the creativity subject (creativity), and the traditional educational material—from a subject of mastering—to means of achieving some creative goal” (Serezhnikova, 2012, p. 78). And the need for self-development, self-actualization “starts” the process of intrinsic self-determination, first of all, depending on the internal potential of a student's personality as manifestation of intent to be himself. That is confirmed by the theoretical analysis of researches of the activities and their subject development (B. Ananyev, G. Ball, I. Bech, L. Vygotsky, A. Leontyev, S. Rubenstein, A. Sannikova, V. Tatenko, etc.); psychology and pedagogics of creativity (V. Andreyev, V. Zaretsky, I. Zyazyun, V. Klimenko, A. Ponomarev, etc.), essence and development of self-regulation (M. Borishevsky, A. Lisovskaya, G. Nikiforov, P. Shavir, I. Sharshov, A. Maslow), psychology and pedagogical concepts of formation of creative individuality of a person (G. Akopov, A. Grebenyuk, Ch. Shalley, etc.); theses of andragogy, acmeology; modern concepts of the higher pedagogical education (A. Bodalev, B. Gershunsky, N. Kuzmina, N. Sergeev, V. Slastenin, etc.), and also theories of interparadigm reflexion (E. Varlamova, I. Kolesnikova, I. Semenov, S. Stepanov), system-synergetic concepts of pedagogics (V. Haritonova, D. Labaree, Bass, M. Bernard).

In Makarova's (2000) opinion, the synergetic approach allows to consider a student as “an open and self-developing system, which is not in balance, but having stability due to self-organization of chaos of the potential states in certain structures and has its great opportunities for self-development with environment” (Makarova, 2000, p.133). The listed factors define a choice of the principles, which must become a basis for the developed training technologies. This refers to the principles of synergetics—openness, nonlinearity,

self-organization. These principles provide the non-standard approach to training, fullness and high quality of the subject knowledge, and the professional formation. In this case we rely on views of the essence of synergetic approach by Tretyakov (2003) and Sennovsky (2001)—that is “identification and knowing the general regularities, managing the processes of self-organization in the systems of various nature” (Prigogine & Stengers, 2003, p. 48). They consider the synergetic approach “assumes taking into account the natural self-organization of the subject or object” (Prigogine & Stengers, 2003, p. 48). Therefore, from the synergetics position it is natural to consider a student as the self-organizing and developing system, capable to reflexion and self-training (Serezhnikova, 2009). Self-organization is manifested in the self-consistent functioning of the system—a student as a subject of training, due to its direct communication and feedback with the external environment. Thus, the synergetic approach makes the pedagogical environment free from unlinearity and stamps, reveals polyfunctionality and multidimensionality of hypotheses and theories, allows to comprehend the features of creative thinking and imagination in a new way, to estimate the constantly updated variety of ways, methods, principles of development of a creative person, to create new conditions for revealing creativity (Makarova, 2000). Such an approach assumes an opportunity and necessity to allocate the new principles of students’ creativity development.

Summarizing, it should be noted, that in pedagogical literature within discussion of the approach to using the ideas of synergetics in education, two main trends are allocated: synergetics in the contents of education—formation of the basic synergetic notions through getting acquainted with the world of the complicated nonlinear systems, definition of these notions and their transfer to other fields of knowledge (Menshikov & Sannikova, 1999). It will allow overcoming borders between the curriculum disciplines. The process itself is directed not at increase in amount of information but at construction and studying the universal model of development (Serezhnikova, 2009); synergetics in the organization of the educational process is creation of the educational programs as a way of development, change of relations between the subjects of the educational process as a peculiar way of the stage-by-stage change of opportunities, on which the subject will move in the educational environment (Menshikov & Sannikova, 1999). When implementing the first approach, the synergetics, as we believe according to the scientists (Voznyuk, 2012), allows to strengthen the process of formation of a student’s personality methodologically as a subject of the activities, integrating to the following important principles of its functioning: student is a subject of education, takes an active and creative position in the teaching and educational process; freedom of self-expression and self-realization of a personality in the educational environment, search of the individual strategy of self-determination in life by a student; actualization of the student’s creative potential; a trainee and a learner are the open, self-regulating systems striving for development of subjectivity; free choice of a strategy of the professional creative self-actualization, it means, of a choice of the educational programs, courses, depth of their contents and of a teacher.

The subject position of a student, within the framework of the synergetic approach, can be considered in two ways. On the one hand, this is a compliance of students’ goals, motives, ways of actions to the pedagogical requirements—the professional and pedagogical reflexion, on the other hand,—going beyond these requirements, submission of a system of the main relations to the tasks of personal self-realization, including the professional self-actualization (Bass & Bernard, 1999).

From the pedagogical synergetics position the professional and pedagogical training at the university can be presented as the system education, which includes the combined kinds of a teacher’s activities (teaching, upbringing, development) and students’ ones (learning, self-development, creative self-actualization) (V. Popov, 2012). A distinctive feature of such activities is the continuous interaction of their components causing their “self-movement” and actualization of the creative potential.

So, studying the laws of self-organization of the complicated systems, the synergetics proves the universal laws of their development resulting in the change of the status of scientific knowledge and thinking, which within the framework of synergetics appears paradoxical, multi-valued, carries the creative potential penetrating into the sphere of many scientific fields, in particular, into the pedagogics sphere. The synergetics is aimed at realization of one of the fundamental tasks of the contemporary education system—at its transition to the creative, problem methods of education and upbringing, which provide the formation of a creative person. Especially as the phenomenon of creativity belongs to such values of human civilization, without which a person cannot form its mentality, cannot be a personality, who by definition, is a unique and free nature (Osakwe, 2006; Psomos & Kordaki, 2012). Therefore, the orientation on creativity should be the fundamental methodological paradigm in any sphere of human activities, and especially in the pedagogical ones.

Creativity is always abundant and multidimensional, especially if in one context the different creative spheres merge and mutually potentiate each other (Puccio & Chimento, 2001). Creativity is a specific kind of human

vital activities, characterized by the fact that something new is created here, original, unique. The moment of creating the new in the act of creation finds the paradox of development, which is that if the new emerged from the old one, it already contains in this old hidden, non-manifested form and is not essentially new. Therefore, the new should emerge from something essentially new.

The stated above position assumes, that the holistic human body takes part in the act of creation (Rossman, 1976), all the aspects of human mental activity, therefore, creativity is produced when these aspects find the high level of actualization and are connected by the synergetic principle “talent is a synthesis of talents”.

The synergetic technology of the creative person formation thus is based on such theses of psychology and pedagogical science as:

1) Human beings, in which the search mechanism is essential to the creative process, are characterized by the positive emotionality about their environment and sensitivity to the need to help others. Thus, creativity is a basis for development of the personal empathic qualities, ability to understand another person’s point of view, formation of spiritual valuable and world outlook orientation of a personality.

2) Creativity provides going beyond the limits of the social-role attitudes of a personality, ability to distance from a situation, that creates the conditions for achieving one of the main goals of the person development—the status of a creative person, as creativity is an exit to the sphere of the multi-valued, multidimensional, paradoxical, bisociative understanding of reality and its acquisition; creativity provides actualization of out situatedness as the subject’s ability to go beyond the unambiguous structures of “external expediency” (Serezhnikova, 2009).

3) Creativity thus is a holistic formation, it is not limited to such aspects of functioning of human mentality as figurative, logical, behavioral one, etc., but it is manifested at all levels of human mental activities (Shalley, 1991).

4) The synergetic features are characteristic of creativity, as a creative person finds a phenomenon of creative multidimensionality, superadditivity, when an individual talent of a person is realized on the basis of a sum of its talents, therefore, the creative people appear two-faced, paradoxical, ambivalent beings, who are characterized by the traits of character and psychological qualities mutually excluding each other.

5) The creative people orient at the connections between subjects and phenomena of the world, they are capable to find the hidden properties of subjects and to establish new connections between them, orienting at hypothesizing—an ability to make hypotheses, what finds a need for actualization of the indistinct, significant fractal and holographic logic of perception of the world (Turgunbayeva, Bekzhanova, & Uaidullakzyzy, 2013).

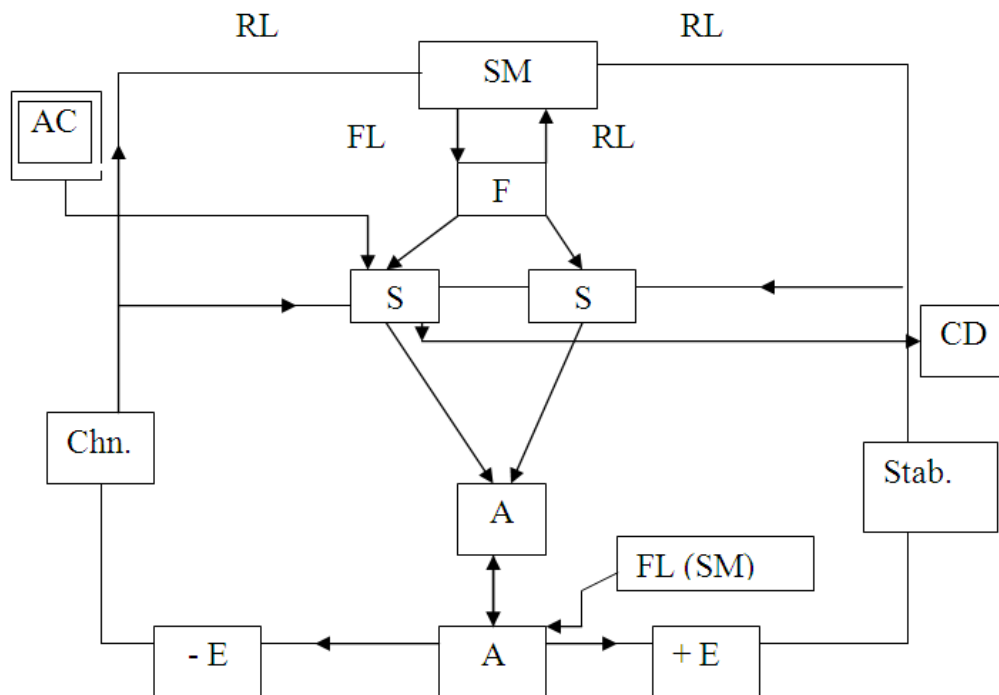
In the context of the said above, any activity of a person has its complicated organization and dynamic structure including a number of the interconnected and interdependent components. According to L. Buyeva (Derkach, 2010), “the certain orderliness, hierarchy of a structure of elements and relationships between them are characterized for the activity, there is a system, managing the activities of the individual or public subject and providing the functional unity of the whole system, in it”. And a personality in the pedagogical process is considered as a synergetic, social, self-developing system, the nature of which is expressed not so much as in acquisition and performance of the objective social roles by it, but in its creative development (Serezhnikova, 2012).

Considering the creative development of a personality as a subsystem, we will specify, that in bifurcation points a plenty of options for ways of development open before the self-organizing system. “Having chosen” one of them, which is the best, the system continues to develop progressively to the next bifurcation point. The emergence of instability involves a new type of the system behavior. And fluctuations, which arise inevitably in the systems, having many degrees of freedom, and represent the casual phenomena, are very important here. Fluctuations can amplify due to the casual external influences, which seem to “push” the system to choose a path for further development. “In the open nonlinear environments the small influence, fluctuation, accident may lead to the significant result. The small fluctuation can grow in the macrostructure” (Knyazeva, 2010, p. 4). “Fluctuation forces the system to choose the branch, by which there will be the further evolution of the system” (Prigogine & Stengers, 1986, p. 36).

Sometimes the particular fluctuation or a combination of fluctuations may become (as a result of positive feedback) so strong as the existed before organization does not maintain and is destroyed. At this turning point it is impossible to predict, in what direction there will be the further development: whether the system condition will be chaotic or it will pass to the new, more differentiated and higher level of orderliness or organizing, which I. Prigogine calls a “dissipative structure” (Prigogine & Stengers, 2003). Thus, the dissipative structures are

formations of higher complexity than the previous destructible ones.

Taking into account R. Serezhnikova's theoretical constructs (Serezhnikova, 2009), a concept of actualization of a student-future teacher's creative potential has been developed, which is presented in this article by its element—the structural and functional model of creative development of a personality (see scheme 1).



Scheme 1. The structural and functional model of creative development of a personality

Let us consider the structural components of the system in more detail.

A block “System of Models” (SM) is a result of acquisition of the sociocultural environment: the image of the world and own activities in it created by the given moment; the idea of norms, ideals and, so to speak, anti-ideals; trying to understand all this, that is consciousness.

Beneath there is a filter “Here and Now” (F), which takes into account all the information on a particular situation in that time and place, where a personality is situated. It is connected to the SM block with the lines of the forward and reverse links, receives motivation for action and behavior models from there, considers a question of applicability of the offered model in these conditions and in case of discrepancy makes a request for a new option. The block F makes a choice of specific goals, ways and means of activities depending on the circumstances.

Actualization of the behavior model occurs by one of two possible ways: if the situation is recognized as the stable, habitual one (in the course of exercises (the traditional system of learning by heart is the linear transformation of knowledge) the behavior model is formed and is put in SM) the action happens by a skilled (S) way, automatically; if the situation is regarded as not quite usual or, especially, as the absolutely new one, the mechanism of search behavior (S) may start, in the presence of a student's subjective position. During the searching process the additional collecting information occurs, selecting the most significant information according to the advantages made by the given moment of the system existence, choosing a suitable form of behavior among those models, which are usually not used (actualization of the hardly probable), inventing a new model, if needed, forecasting the consequences and, at last, choosing a way of activities (A) in the given unique situation

The blocks of skill and search are united between themselves by the two-way connection. When some concrete set of skills fails, the search can be made over all the environment of skills, which a personality has, in the presence of the search motivated by the subject; on the other hand, the system of skills, formed in the course of exercises (the traditional system of learning by heart is the linear transformation of knowledge) can appear in a

situation of destabilization realized only by the activities with an indispensable exit in the search environment (the creativity mechanism).

The carried-out activities are always under control of the block of an assessment (A), connected to the SM block with the forward and reverse links, what causes self-control according to the stereotypic behavior. The assessment is carried out subconsciously, on the basis of the models of ideas of norms and ideals (mental experience) which are available in system. The assessment is carried out subconsciously, on the basis of the models of ideas of norms and ideals (mental experience), which are available in the system. Therefore, in terms of realization of the concrete activity the main role in the mechanism of an assessment is played by the emotions arising at the unconscious correlation of the results of activity with the samples, available in the system of models. The “correct” realization of the certain activity, according to the available samples, followed up by emergence of the positive emotions (+E), generates the competence of actions according to the system of models at the moment, a personality’s confidence in the actions, that is a basis for a personality’s competence. The divergence with the sample, incoordination, discrepancy with the social reality is followed up by the negative emotions (–E). This situation reflects the crisis of a personality’s competence, which is followed up by discomfort. The negative emotion accumulation promotes the subject’s abrupture from the given sociocultural environment.

Designing the developing educational environment, we allocate the additional conditions (AC). It is necessary to focus attention on a problem situation, the search activity facilitating actualization of the creative potential, the manifestation form of which is creative development of a personality (CD). It should be said, that thanks to creativity development a student overcomes the egocentric and egoistical positions, as creativity is the widely open doors to success in life. Striving for success, which facilitates a person’s self-affirmation in life, is inherent in the person. In psychology and pedagogical science the success is an experience of a condition of joy, pleasure of the fact that the expected result meets the desired. The category of success reflects the fact of achieving a set goal and on the basis of this condition the strong feelings of pleasure can be formed, the new, stronger motives of activities are formed, the level of self-assessment, introspection changes. It could be said, that the emotional assessment of activities not only provides the reverse link of the internal management of the system as the positive emotion, confirming the competence of the system of models, stabilizes it, and also the whole system of skills-stereotypes, which have been developed by the present time, but also provides realization of the activity approach in professional training.

The changes of the system of models, and also of the system of the formed skills of activities make a natural number of the stages causing the activity approach in the educational process, which is manifested in creative self-realization of a personality. “ This provides integration of four personal-oriented training strategies: a student-a trainee, reflection of deep immersion in training, training on the basis of projects and also the effective integration of technology and instruction” (Serezhnikova, 2012).

As it is known the synergetics proceeds from a principle of evolving of the world around under the nonlinear laws. In a broader sense, this idea can be expressed in multi-variant or alternative choice.

In the education system multivariance means creating the terms of a free choice in the educational environment and providing a chance of individual moving to success for each subject, stimulating for independent choice and making an important decision, ensuring development of an alternative and independent way, what the acmeological follow-up facilitates.

More specifically such a choice consists in an opportunity to determine an individual educational path (an individual schedule of training) by a student, to reach a different educational level (a level of a bachelor, of a specialist’s degree, of magistracy, the postgraduate level), to choose the academic disciplines and teachers, forms and methods of training, individual means and methods, creative tasks.

Thus, the contents of professional and pedagogical training require new principles for structuring reflecting the system-integral unity of a student and the educational environment. All of this should imply the introduction of new disciplines in teaching to a lesser extent, and to rely more on integration. So, the process of professional and pedagogical training of future teachers at our university (the training level—a bachelor degree, magistracy) includes the complex integrated disciplines: “The acme-synergetic basis for teaching activities”, “Acmeology of creativity”, “Pedagogical design”, “Design of the educational environment”, “Educational management” reflecting the features of pedagogical synergetics and facilitating both actualization of students’ creative potential and formation of their professional competences. The spiral building of the disciplines material allows to run courses repeatedly. In parallel with the courses the creative practice was conducted—the program of development of its participants’ creative abilities, based on the Imago-method and means of self-development in the process of

co-creation. The Imago-method is creating a self-image based on a certain image using special techniques: the translation of a story into a pre-given dialogue; an improvised dialogue; the improvisation of a pre-given situation. A scenario of the creative practice "I am in the world of teaching profession" included three practical studies: "The potential of the past", "My professional position", "The horizons of future creative pedagogical activities" and a creative project "The auction of pedagogical ideas". The students in small groups developed the original innovative version of pedagogical issues solution on the specific pedagogical problematics and thought critically about the proposed innovations.

The training of such kind expands the students' educational base at considerable reduction of study time, strengthens connections between the previous experiences and new knowledge. Thus, it should be noted, that development is understood not as the unlinear, unidirectional process, connected with a necessity, but as comprising an opportunity of a "choice" of one of many ways, a "choice", which is defined by an accident (Knyazeva, 2010).

However, we will note, that for the sinergetism realization in pedagogical interaction it is necessary to prove theoretically the interrelation of the process of incrementing of a personality's potential and social and psychological conditions of the education system as a whole within professional training reflecting the elements: 1) the educational model on the principles of the modular-developing organizing system; 2) functioning of the behavioral mechanisms and a system of social attitudes in the process of the subject-oriented pedagogical organizing activities; 3) the subject self-realization in pedagogical interaction (subject, personality, individuality, universum).

5. Conclusion

Characterizing the synergetic approach to professional and pedagogical education, it should be noted, that professional training, the way of communication of a student and teacher is a nonlinear situation of the open dialogue, of forward and reverse links, a situation of awakening of a student's own forces and abilities. The knowledge is not simply laid on a personality's structure or imposed on it, the synergetic education works latently. Therefore, the activity approach in professional and pedagogical training consists in the stimulating or awakening education, education as opening of a person or collaboration with itself. And this allows to comprehend the features of creative thinking and imagination in a new way, to estimate the constantly updated variety of ways, methods, principles of development of a creative person, to create new conditions for revealing creativity. Such an approach assumes the result of education, which allows a future teacher to solve the problems and tasks on the basis of knowledge carrying out the holistic activities.

The developed structural and functional model of creative development of a future teacher's personality reflects a problem of professional and pedagogical training in three interpenetrating planes: in the plane of creative development of a student's personality (the creative aspect), in the plane of a future specialist's attitude to the teaching activities (the motivational and valuable aspect) and in the plane of the subject activities (the reflexive aspect). Thus, the results, goals and means of activities are not connected among themselves directly, rigidly and unambiguously. The result is a consequence of an action, which can lead or cannot lead to achieving of a goal. That is, it is assumed, that not always the results reflect the activity goals directly. Nevertheless, the conceptual model of actualization of a student's creative teaching potential—of the valuable and operational spheres—the student's transforming activities (copying—creative imitation—imitative creativity) and a student's personality, based on the subject education and the professional reflexion, requires further development. We continue to work on the vector modeling of indicators of the actualization mechanism of the student's creative teaching potential, defining the creative environment of psychology and pedagogical training including the environmental components: the professional and educational component; the component of personal-oriented interaction and of professional creativity.

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