

Acmeological Aspects In Teaching Scientific and Pedagogical Staff

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Abstract: This paper reveals the topicality of the study of acmeological aspects in training scientific and teaching staff in modern conditions of Kazakhstan development and the importance of acmeology development as a new interdisciplinary field of knowledge in human sciences. A historical overview of acmeology development as a science has been given. On the basis of this review, acmeology is considered as a science that studies the personal achievements and high level of skills achieved in the professional pedagogical activity; stages of its formation and classification as a scientific field have been identified. Theoretical and methodological bases of scientific and pedagogical staff training in the magistrates are substantiated. In this regard, the methodological approaches and principles to the study of acmeological training of future scientific and pedagogical staff have been identified; the problems of creating acmeologically oriented system for training future teachers have been considered, fundamental categories of training future professionals with a strong creative potential have been studied; acmeological factors (objective, subjective- objective and subjective) that influence the development of professional competence of masters have been identified that served as the basis for the formulation of the author's definition of "acmeology"; and the essence of pedagogical acmeology has been revealed. In conclusion, there are the conclusions of the theoretical study of the problem.

Key words: Pedagogical acmeology • Acmeological approach • Acmeological aspects • Professional competence • Professional development • Acmeological factors • Acmeological regularities • Methodological principles • Creativity

INTRODUCTION

In modern conditions of Kazakhstan development the problems of professionalism improvement focuses on the intellectual, moral and cultural development, professional growth and creative independence of the future specialist. This determines the search for and implementation of new approaches to professional training, first of all oriented to the formation of personality, ready to act effectively in ever-changing socio-economic conditions, the creative individual, professionally mobile and capable of continuous professional self-development and self-improvement. In the implementation of the tasks a key role is played by the new interdisciplinary field of knowledge in the system of human sciences - acmeology. The subject of this science is the laws of development and self-development of a mature man and his creative readiness for future professional activities.

The above conditions a high degree of urgency of creating the acmeologically oriented system of future teachers training and predetermines the choice of the subject of our investigation: "Acmeological aspects of pedagogical staff training at the stage of post-graduate education." The purpose of the study is theoretical and methodological substantiation of acmeological training of the teaching staff.

Briefly analyze the stages of acmeology formation as a science in a historical aspect. Acmeological ideas about personality development were expressed by many philosophers of antiquity. In the works of ancient philosophers, the philosophical background of acme was especially complete and consistent, which is characterized by the peak achievements of human thought. S.D. Pozharsky identifies the following three stages in acmeology development in ancient philosophy:

- Development of acmeology concept occurred during the development of classical philosophy from 600 to 450 BC, when orientations in the understanding of nature were considered (Anaximander (610-546 BC), Heraclitus (520-460 BC), Pythagoras (580-500 BC), Empedocles (490-430 BC), Democritus (460-370 BCE)) [1, pp. 47-51];
- Development of acmeology concepts is framed by the development of classical philosophy from 450 to 322 BC, when the questions of understanding human nature were considered (acmeological achievements of Socrates philosophy (469-399 BC), Plato's Academy, Aristotle's Lyceum in Athens, Alexandria School) [1, pp. 51-57];
- Development of acmeology concepts fits into the time period from 322 to 260 BC and is characterized by comprehensive knowledge on the nature of human and ethical issues (Antisthenes, Pyrrho, Epicurus, Lucius Annaeus Seneca, Epictetus) [1, pp. 57-62].

Thus, ancient philosophers put the questions of comprehension of human interaction with nature, the essence of man and the autonomy of the individual.

Further, S.D. Pozharsky approached the analysis of acmeology considering the concept of "acme" through the prism of a phased development [1, p. 221]:

- The first phase, when the top in Greek was defined as (Acme), as a symbol of the mountain, the ultimate achievement and as a fixed state.
- The second phase, when the top was understood as the highest point of development, culmination, the point of highest tension, (in Latin, *culminis*) or as a symbol of prosperity and flowering (*floruit*).
- The third stage as a multi-dimensional concept, (in English) defined as top (peak).

This resulted in a necessity of a more specific analysis of the process of peak development and human evolution from the perspective of the direct formation of acmeology as a science. This process is characterized by the following stages:

In 1928, N.A. Rybnikov introduced the concept of acmeology as a science on the development of mature people [1, pp. 45].

A.V. Petrovsky and M.G. Yaroshevskiy noted that the understanding of perfection was considered not only by the philosophers of antiquity, but also their predecessors, because "... generations of Greek sages were behind them..." [2, p. 53].

Greeks used the word "acme" to define the period of age in human life, when a maturity of all human capabilities is manifested and when a person's forces are blooming at the peak of his potential" [3, p. 11].

In the development of acmeology there are four main phases (A.A. Derkach, 2004) [4, p. 93]:

- Latent - discreet and gradual formation of historical, cultural, social, philosophical, scientific, pedagogical and practical background of distinguishing the acmeological sphere of human being in scientific knowledge;
- Nomination - awareness of social needs in such knowledge;
- Incubation - appearance of conceptual ideas about the need to design the acmeological studies and to propose a program for distinguishing acmeology as a separate discipline;
- Institutional - creating social structures: acmeological departments and faculties (the first chair of acmeology and psychology of professional activities in the Russian Academy of Public Service under the President of the Russian Federation), laboratories in universities and the International Academy of Acmeological Sciences. After two years in St. Petersburg, the scientific and social organization "Academy of Acmeological Sciences" was established. In 1995 the St. Petersburg Acmeological Academy, now the St. Petersburg Institute of Psychology and Acmeology, was established; and the collection of scientific articles "Acmeology" and scientific and practical journal "Akmeologija" are published.

According to HAC speciality passport, acmeology, as an integrative science, refers to both the pedagogical and psychological fields of science and expresses the modern view of human development.

In modern science, acmeological aspects of teaching the pedagogical staff in postgraduate education have not been studied. We believe that the implementation of acmeological aspect in the modern system of postgraduate education will encourage the realization of creative potential, identification and productive use of personal resources to succeed in the professional activities of future teaching staff.

Formulate the proper interpretation of the concept of teaching acmeology from the perspective of scientific and teaching staff training in postgraduate education.

According to A.A. Derkach (2004), *Acme* is a multi-dimensional human condition, covering a considerable period of his life; it always shows really the successfulness of the person as a citizen and as a professional [4].

Acmeology is the science that emerged at the intersection of natural, social, human and technical disciplines; it studies phenomenology, patterns and mechanisms of human development at the stage of maturity and especially when he reaches the highest level in this development" [5, p. 5].

"Acmeology is a new area of scientific knowledge in the sciences of man. The subject of its research is patterns, factors and conditions of self-realization of human creativity on the way to the highest levels of the professional and non-professional life and activities" [6, p. 3].

Based on the analysis of acmeology genesis the following methodological principles may be distinguished [7, 8]:

- The principle of vertices (acmeology investigates the laws of reaching the top in all types of individual activities);
- The principle of integrity (acmeology synthesizes knowledge gained in various scientific fields);
- The principle of historicism (acmeology reveals the proper level at different historical stages);
- Variety (acmeology studies the human achievement of vertices in different areas, which is his acme);
- The principle of development (acmeology studies the process of human self-development as self-realization of his creativity);
- The principle of integrity (acmeology serves as an integrative science). S.D. Pozharsky (2002) gives the following classification of this science [9]:
- Classical acmeology (considering human development from the point of view of his mentality in adulthood).
- Fundamental (basic) acmeology (considering the person as an integral system).
- Applied (industrial) acmeology (considering a person through the lens of specific issues of special knowledge).

Thus, in terms of methodology, acmeology is the complex science of fundamental and applied nature. The fundamental nature is determined by the knowledge of the laws of reality, not studied by other sciences. The applied character is manifested in practically oriented acmeological technologies.

The Fundamental Categories of Acmeology at the Present Stage of its Development Are: professionalism, skills, professional development, creativity, creative potential and competence.

The stage of professional maturity (professionalism) and the so-called peak of maturity (Acme) is a multifunctional human condition, which does not occur suddenly and immediately. The whole preceding life of the individual, including the deep science-based vocational education with proven effectiveness, works for it. This is what ultimately determines the potential of the graduate of professional school approaching the stage of professional maturity, his value orientations and attitudes that form the core of his personality and the abilities, knowledge and skills that characterize him as the creating subject, the professional subject self-educating for his entire life.

High professionalism and creative skills of experts is one of the most important human resources, which is a factor of optimal solutions to pressing problems of global-crisis. In this socio-cultural context, of particular importance is the new science of acmeology. For it is the one that studies patterns and technologies of the development of professionalism and creativity as the acme-forms of optimal implementation of various forms of professional activities.

Professionalism is the acmeology category with the widest content. The professionalism is commonly understood as an integral characteristic of business and personal qualities of experts, which reflects the level of knowledge, skills and experience, sufficient to produce a certain kind of activity that is related to decision-making. Professionally competent teacher is the one who has mastered the professional knowledge and skills, able not only to design the activities, but also to manage the pedagogical process and responsive to any changes in the educational process. In general, professionalism of the teacher is his knowledge about how to teach and educate students, how to translate them from one state of training and education to another, doing it quickly and efficiently.

Professional development is the process of qualitative progressive changes of mentality and personality of the working person during mastering the profession and performing the professional activity. In this regard, we consider the professional development as a process by which the person is able to maintain the quality and level of professional skills throughout the entire life. From the point of view of the public interest, professional development can also be seen as one of the points of the code of professional ethics: not

self-educating person can not be called a professional, as the main feature of professional activity is to rely on scientific knowledge.

Thus, acmeology studies the ways for optimizing professional development, develops the methods to stimulate the man as the subject of professional self-development, enhancing methods for the most complete realization and for reaching the top level of professionalism.

A very complex phenomenon is pedagogical creativity. There is no single definition of the concept in scientific studies. S.L. Rubinstein describes creative work as "an activity of a human, building the new material and spiritual values that have social significance" [10].

Creativity is creative ability of a person that can manifest itself in thinking, feelings, communication and individual activities and can characterize the personality as a whole and / or its individual aspects, the products of activities and the process of creation.

The concept of creativity as a universal cognitive creative ability gained popularity after the publication of the works of J. Guilford [11]. Guilford pointed out the fundamental difference between the two types of thought: convergence and divergence. He identified the ability to convergent thinking with the test intelligence, that is, intelligence, measured by high-speed IQ tests.

P. Torrens sees creativity as a process of emergence of sensibility to the challenges, defects or disharmony in existing knowledge, detection of these problems, their solutions, offering hypotheses, testing, changing and rechecking hypotheses and finally, forming and reporting the result of solution. Having generalized his own research, he came to the conclusion that the relationship between the level of intelligence and creativity is one-way [12, p.43-75, 13]. M. Wollach and N. Kogan believe that the transfer by Guilford, Torrence and their followers of the test models for intelligence measurement to creativity measurement led to the fact that the creativity tests simply diagnose IQ, as conventional intelligence tests [14, p. 348-369]. These authors are against the strict limits of time, the atmosphere of competition and the sole criterion of correct answer, that is, reject such a criterion of creativity as accuracy. Here, they are closer to the original idea of Guildford on the difference of divergent and convergent thinking, than the author himself. According to M. Wollach and N. Kogan, creativity needs a casual and relaxed atmosphere. It is desirable to study and test creativity in normal life situations, when the tested subject has a free access to additional information on the subject of the task. Many studies have shown that motivation of achievements, the competitive motivation

and the motivation of social approval block self-actualization and inhibit expression of its creative abilities. Wollach and Kogan's approach allowed taking a fresh look at the problem of connection between creativity and intelligence.

In 1980, the work of D. X. Dodd and Robert M. White was published [15]; there the authors analyzed the results of research of relations between IQ and estimates of divergent productivity.

One of the latest studies of the relations of intelligence and professional achievements was published in 1993 by W. Schneider [16, p. 311-324.]. It refers to the study of specificity of the intelligence of "experts" - people with expertise in a certain field. As a rule, the "experts" have average or below average intelligence. Schneider also believes that for each work there is the intellectual "threshold." If the intellectual threshold of activity is low, the individual may have a super-high and the average values of intelligence, but in any case it does not reflect on his professional achievements.

It should be noted that the predictive value of intelligence tests is higher for successfulness of professional training, than for professional activities. Obviously, the practical activities are less controllable than teaching and the result is often less rigidly evaluated, is not defined or is very remote in time.

Thus, the development of creativity contributes to the formation of creative maturity of experts in the course of self-actualization and achievement of their personal, professional and spiritual peaks (akme). At a high level of self-actualization of a creative person the creative maturity of a specialist is more sustainable, productive and durable in reality; it is the source of creative maturity.

Creativity is seen as an integral dynamic personal formation. The creative potential of the individual is a systemic characteristic (or a system of personality traits), which provides an opportunity to create, to find new, make decisions and act originally.

To understand the phenomenon of competence in terms of social constructivism we should mention the theory of "collective competence", developed by K.A. Bogeish and aimed at overcoming the systemic and institutional constraints of the prevailing educational practice as a consequence of the education system orientation to the values of individualism, as a condition for competitiveness and individual responsibility for the professional relevance and education throughout life. The author believes that it is appropriate to supplement the understanding of competence as individual phenomenon with the perceptions of competence as a collective, a group phenomenon, taking into account the substantive and procedural aspects [17, p. 5-17].

The individual aspects of intellectual competence were studied by R. Glaser. He defines it as the individual's ability to effectively deal with problem situations in a particular subject-cognitive sphere, based on a specially formed base of knowledge obtained by the intellectual operations. Features of knowledge of the subject are characterized by his competence, that is, a psychological quality, which also serves as a criterion for the development of individual intelligence. A high level of competence requires a high level of understanding of the problem in some domain [18, p. 93-104].

Of fundamental importance is the search for an answer to the question how higher education can contribute to the development of competencies needed for sustainable human and social development [19, p.249-256]. It should be noted that the essential criteria of description of competencies of sustainable development are universality and compatibility. For example, within one of the projects of the European educational space it was indicated that "competence is a dynamic combination of cognitive and metacognitive skills, knowledge and understanding; interpersonal, intellectual and practical skills and ethical values" [20, p. 18].

Foreign studies emphasize the dynamism and openness of the concept of "Education for Sustainable Development", which allows the subjects of the educational process to design their own vision of sustainable development [21, 22] in the context of the educational activities organization.

In the context of the organization of educational activities for the preparation of future science and pedagogical staff it is important to take into account the specificity of personality socialization in postgraduate education, which ensures the quality of training. The peculiarity of socialization in postgraduate education is the inclusion of the individual in social relations among the postgraduate students, who contribute to the acquisition of relevant knowledge, skills and self-creative activity. But of paramount importance, of course, is a professional socialization, understood as a process resulting in formation of a leading expert, a professional who has mastered the relevant knowledge and professional skills and abilities, capable to act according to social norms and rules adopted in his professional community [23, p. 45].

Thus, in the context of our study the generalizing psychological and acmeological category is *professional competence*. Professional competence (from the Latin. "competens"- "appropriate", "capable", "having jurisdiction", "adept"), of the teacher is seen as a high

level of readiness, conditioned by the knowledge of a strategy for productive educational activities, interacting structural components and the criteria for measuring the degree of its productivity. Professional competence is an important component of the indicator and a high level of professionalism. Professional competence is manifested in the successful solution of a certain class of professional tasks that underlies different types of competence (social-perceptual, communicative, organizational, etc.) [23, p. 47-48].

Using the term "professional competence" we believe in the approach that the "professional competence" is the mastery of complex productive technologies of professional activities on the basis of professionally important personal qualities that ensure the individual's ability to implement a productive career and commitment to professional self-improvement.

Master's level of education involves the formation of the aggregate of different types of competence in students, namely: social, psychosocial, communicative, conceptual and professional. The educational process in the magistrates is associated with the problems of competence - the block of questions that the future of Master will decide functionally and be accountable for these decisions. The competence as the ability to integrate knowledge, skills and methods of their application at changing requirements, includes a set of similar knowledge, skills and attitudes, necessary for successful performance.

History of acmeology shows that pedagogy has a special place in acmeology development, since the actual construction of acmeology as a disciplinary area started since the inception of pedagogical acmeology. In the first stage, the object of acmeology was mostly the professionalism of teachers. Later it became clear that the problems of the professional, personal, subjective and individual evolution of human encompasses not only the work of a teacher, but also other areas of vocational education. Therefore, new forms of acmeology were formed and the concept of pedagogical Acmeology was developed.

The basis for the development of pedagogical acmeology was the researches of N.V. Kuzmina, who studied the impact of the abilities of an adult on the measure of productive activity in achieving the result. The works of N.V. Kuzmina and members of her scientific schools are the foundation of pedagogical acmeology. N.V. Kuzmina has made significant contribution to the development of didactic means of vocational training of managers. N.V. Kuzmina is the author of the most complete and accurate definition of professionalism as

activity-related component and the research of professional self-improvement. She was first who described the acmeological content of the phenomenon of productivity in research of professionalism of teachers and trainers and in the context of pedagogical creativity. The study focused on the ways of teaching self-education, self-organization and self-control, as well as the determination of low productive and unproductive teaching. Assessing the development of acmeological science, it can be noted that the studies of N.V. Kuzmina are the theoretical and methodological basis for new research directions in the study of the phenomenon of professionalism and the search of the best means of its development [24].

Thus, the pedagogical acmeology is the science of how to achieve the professionalism and competence in teachers work. But such a definition does not satisfy many researchers. The fact that teaching acmeology "by its subject and object is broader than the science of how to achieve the professionalism of teachers. In other words, the pedagogical work involves teacher and learners, subjects of pedagogical impact, who identify the norms of behavior and performance for themselves. Besides, at mutual influence it is necessary to take into account not only the physical and mental but spiritual personality traits that help to realize the purpose of development. Only the positive orientation in personal development of a human, his identity and individuality should be a key indicator of educational acmeology.

Summing up the analysis of different interpretations of the term "acmeology" and its categorical system, including the pedagogical acmeology, *we formulate our own interpretation of acmeology: it is the science of patterns, factors and conditions that contribute to the disclosure of human capabilities, based on which the one achieves the optimal results in professional development as an individual, entity, as a whole multi-dimensional person with individual creativity in a specially organized educational process.*

Analysis of scientific literature reveals that in the acmeological studies of training of the scientific and teaching staff in post-graduate education it is appropriate to rely on the following *methodological approaches: a systematic, subjective, competence, activity and cultural.* Acmeological approach is a basic umbrella term, serving as a set of principles, methods and techniques to solve acmeological problems. It is based not only on the above methodological principles, but also on the positions relative to the object under study, as well as on the use of proper acmeological methods of research and practical applications. Therefore, reliance on it may provide qualitatively new results.

A study of the scientific literature has revealed *acmeological factors that are considered* as the main reasons having the character of the driving forces, the main determinants of professionalism. Acmeological factors, as noted, are closer to the arbitrary impact of the subject of work and come in three varieties (N.V. Kuzmina): objective, manifesting as external preset and related to the real system of professional activity; subjective, related to the individual prerequisites of the measure of success in professional work, these are motivation, focus, interests, expertise, skill and etc.; the measure of their display explains subjective factors contributing to the growth of professionalism; objective and subjective, related to organization of the professional environment, professionalism of managers and quality of management.

CONCLUSION

The authors have presented a historical review of the historical development of acmeological science. Analysis of scientific literature reveals that studying acmeology of training scientific and teaching staff in post-graduate education it is appropriate to rely on acmeological approach, considered as integrating with respect to the rest of the methodological ones and aimed at the formation of the future expert's orientation to the highest achievements, the most complete self-realization in the learning process at the stage of post-graduate education. Analysis of the scientific and educational literature on acmeological problems allows identifying and justifying its theoretical apparatus that allows considering acmeology as a science revealing the optimal factors and conditions that enable a person to develop as a person, a subject of activity, i.e., to reach "acme" (especially in the professional activity).

Findings: In this regard, the analysis of the theoretical issues allowed making the following conclusions:

- Pedagogical acmeology is defined as the science of patterns, factors and conditions that help the person to disclose their capabilities, on which basis the best results are achieved in his professional development as individual, as a whole multi-dimensional person with individual creativity in a specially organized the educational process. It is important for improving the quality of education and opens the prospect for creating a model of professional training of future teachers.

- Acmeological aspects of the problem of training future teachers will improve the level of professional creativity of future professionals in postgraduate education that enhances the quality of training.

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