





## The role of the acmeological approach in future teachers' professional development

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### ABSTRACT

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#### Keywords

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This study aimed to identify the impact role of providing training to future teachers with acmeological approach on leading to the personal and professional growth, which is relevant and valuable for providers and clients of educational services. The study was experimental in nature, the sample consisted of 325 respondents who had undergone special trainings with acmeological approach and who had participated in psycho-diagnostic research carried out before and after the training, as well as three months after the start of the experiment. The methods embraced testing by the questionnaires for studying meaningful life orientations, self-relationship, testing for "assessment of self-fulfillment" and "readiness to self-development", and the indicator of self-change potential. The findings were compared with relevant indicators and their accuracy was confirmed via the students' t-test. In the control group, participants expressed a desire to understand themselves but felt unable to facilitate self-improvement. Conversely, students in the experimental group expressed a desire to understand themselves and possessed the ability to promote self-improvement. The majority of students favored the acmeological approach for enhancing motivation and cultivating a highly professional persona. Three months post-experiment, students in the experimental group exhibited a greater tendency towards self-change. The results of the experiment have shown the effectiveness of acmeological approach for developing future teachers professionally, and the experimental verification of its impact on students' self-awareness, meaningful life orientations, ability to self-change, and their potential for high levels of teacher professionalism.

**Contribution/Originality:** The study demonstrated the efficacy of the acmeological approach in training prospective teachers. This entails encompassing advancement of future professionals in their field. Several psycho-diagnostic indicators were assessed to determine the preparedness of potential teachers for vocational development, without incorporating academic evaluations.

## 1. INTRODUCTION

Pedagogical acmeology studies the progressive development of personality and the highest possible fulfillment of human potential (Kalugina, 2016). Pedagogical acmeology is the science of the achievement of professionalism and competence in teachers' work and has two directions – cultural aspects and integrative communication (Ayagan, Zhekibayeva, Aubakirova, Utebayev, & Kipshakov, 2021). The acmeological approach is a pedagogical method that facilitates the improvement of the learning process through interrelated active actions aimed at the development of one's personality (Barbosa & Vale, 2021), creation of motivational techniques, and application of creative potential (Govender & Govender, 2019; Thomas, 2022). The need for constant self-improvement based on the significance of professional and pedagogical activities sets strict requirements for teachers' levels of professionalism and personal qualities (Russell, 2022; Tsiuniak, 2020). The ability of self-improvement is an integrative characteristic of a professionally mature person, who can consciously set certain goals and objectives, successfully perform professional activities and improve in them (Bilyk, Tkachov, & Tkach, 2021; Tsiuniak, 2020).

The implementation of acmeological aspects in pedagogical education aims to enhance the motivation of future teachers and unlock their creative potential (Sarkadi & Rahmawati, 2020). Shaping the acmeological orientation of an individual graduate will help identify and make the most of one's resources to succeed in occupational activities and upgrade personal and professional skills (Chen, 2022; Hansen, Laverty, & Varrato, 2020). This presupposes the relevance of exploring acmeology-related problems within higher education and developing practical acmeology-based solutions to upgrade educators' occupational competence (Zhang, 2020). The elaboration of effective ways of using acmeological teaching technologies lies in defining their sequence and focus, justifying their selection for application under specific conditions of the academic process to the benefit of a certain students-and-teachers' community, regarding the peculiarities of their cognitive activity and professional self-awareness (Miranda-Calderón, 2020). The novelty of this paper lies in identifying the acmeological technologies that are impactful for students' self-awareness and meaningful life orientations, and enable better approaches to gain the knowledge required for future teachers.

This study aimed to establish the impact of using acmeology-based educational technologies on the personal growth of future teachers. The objective of the paper was to carry out a psycho-diagnostic study of the influence of acmeological approach in teaching on self-fulfillment and self-development of participants in the academic process, analyze the obtained results, formulate theoretical conclusions and practical recommendations, and outline the prospects for further research. The hypothesis of the study lies in the fact that the use of the acmeological approach in teaching future teachers contributes to their personal growth.

## 2. LITERATURE REVIEW

The processes of successfully shifting the education role towards lifelong learning rely on the acmeological aspects of professional competence (Shtal, Lytovchenko, & Poliakova, 2018). Ways, patterns, and factors of self-directing to the top of professional excellence are revealed in a comprehensive study of the individual characteristics of a person (Skibitsky & Astashova, 2018). Acmeological approaches in education improve the education process of specialists and upgrade the level of their qualifications (Issakova, Kaltayeva, Bakhtiyarova, Ibrayeva, & Kudaibergenova, 2021; Novoselska & Strus, 2019; Shevchenko, Kolesov, & Smolonskaya, 2020). The value of the acmeological approach is based on the increase in future specialists in creative activities, including enhancing professional motivation; and effective use of personal resources (Doshbekov, Koldasbaeva, & Niyazakynov, 2020; Tsiuniak, 2020). The academic process, based on the acmeological approach, ensures the success of learning, contributes to the personality development of students, and helps fulfill the social requests of future specialists (Mamurov, 2019; Mikhaylova, Nikitaeva, & Kokodey, 2020).

The teachers' engagement in their personal growth and self-learning is considered one of the strongest factors in the motivation for students' education (Rivera, Baik, & Lodge, 2020). Teachers' knowledge of the effectiveness of

education technologies depends on their professional competence (Pahl, 2019; Selezneva, 2015) Introduction of innovations plays a key role in adapting education to society's requirements of Arnazarova and Ablokulov (2021) and Ayagan and Utebayev (2020); therefore, the professional activity of teachers must meet the trends of development in society. The main requirement of a specialist's personality is the worthiness of self-learning, self-improvement, and creativity (Arnazarova & Ablokulov, 2021; Leushina, 2018). This is assured by the acmeological approach in the system of education for teachers, designed to modernize their qualifications, and for their students, who believe that teachers should know everything (about the subject and teaching methods) considering this is their work (Hegarty & Thompson, 2019; Rivera et al., 2020). The minutiae of professional competence of future specialists should synthesize the knowledge of many sciences, thus forming the concept of "acmeological culture" (Ocheretna & Goncharenko, 2020).

Academic research has affirmed the efficacy of the acmeological approach in teaching mathematics (Maxmudova, 2022). Furthermore, Abdurakhmonova (2023) highlights the significance of implementing this approach in the training of prospective teachers as a means of fostering professional development. Radchenko (2022) provides a detailed account of the fundamental principles of the acmeological approach and its essential role in enhancing the competence of future teachers. Ocheretna and Goncharenko (2020) posit that the notion of an "acmeological culture" offers a particular interpretation of how professionalism and competence of prospective educators are developed. Meanwhile, Tahirova (2022) research underscores the efficacy of the acmeological approach in fostering the professional attributes of future education professionals. It enables them to identify and implement innovative, non-conventional strategies for addressing the challenges inherent in educating diverse age groups of children.

Although a substantial quantity of literature exists on acmeology, the implementation of acmeology-based educational technologies for the training of future teachers remains insufficiently explored. Therefore, this study aimed to investigate the effectiveness of the acmeological approach, a significant element of teacher occupational training, in shaping the personality of future teachers.

### 3. MATERIALS AND METHODS

The research methodology used was qualitative, primary, and experimental. We analyzed the influence of the course of the lectures on the fourth course students of the experimental group, debates, discussions among them, and teachers about methods of increasing professional level of students as future professionals, problems, and solutions in the pedagogical process.

The use of acmeological technologies involved enhancing pedagogical skills to an optimal level and integrating professional commitments with other facets of a professional. Continuous development of a teacher's pedagogical competence is crucial in the modern world, considering technological advancements, selecting optimal teaching methods for students of all ages, building a teacher's personal brand, and working effectively with children and parents. Therefore, the comprehensive development of a future teacher's personality is essential to understand the demands of professional activity.

#### 3.1. Participants

The study was conducted in April 2022 among future teachers at the Faculty of Computer Systems and Vocational Education of the Saken Seifullin Kazakh Agrotechnical University. Through simple randomization with the help of Simpliers software, a group of 325 students (mean age of 21.3 years) was formed. This group was randomly divided into two subgroups: experimental (161 students) and control (164 students). As the study focused on comparing the results of the control and experimental groups, gender was not taken into account.

### 3.2. Survey Instruments

A specialized training based on acmeological approach was developed and implemented during the study. In this experiment, the method of training future specialists proposed by Bekzhanova, Ahmetova, Aldibayeva, and Igenbaeva (2013) and Mamurov (2019) was applied.

The data necessary for this study were obtained through the implemented techniques. A psycho-diagnostic study was conducted before and a month after the experiment's onset using the methods listed:

1. Test of meaningful life orientations by Leontiev consists of 20 scales representing a statement with two opposite answers, between which there are seven possible gradations of preference (Shkarlet, Tkachuk, Reznik, Naumko, & Prokopenko, 2020).
2. Test "Readiness for self-development", consisting of 14 judgments and identifying one of the four states of the respondent. Zawadzka (2014) proved the reliability of this test.
3. Methodology "Evaluation of satisfaction of the self-fulfillment need", which allows for identifying the respondent's ability for personal and professional growth, which is assessed as follows: 55 or more points – there is an active process of meeting the need for development; 36-54 points – development is taking place, but its system is missing; 15-35 points – stopping the development process. The validity of this methodology was proven by Taormina and Gao (2013).
4. The self-relationship test questionnaire by Stolin and Panteleev allows for the identification three levels of self-relationship using a hierarchical model of its structure. Scale indicators evaluate according to the following parameters: less than 50 points – the sign is not expressed, 50-74 points – the sign is expressed, and more than 74 points – the sign is pronounced (Stanislav, Olga, Vladislav, & Nilufar, 2020).

After three months of classes using acmeological approach in the context of striving for the development of pedagogical abilities at the highest possible level, a survey developed and validated by Manukyan, Murtazina, and Grishina (2020) was conducted to determine the ability of students to self-change. A survey was conducted using Google Forms. This survey included 24 questions divided into the above mentioned four scales.

### 3.3. Data Analysis

Statistical analysis of the results was performed using Microsoft Excel. The comparison of indicators was assessed based on using Student's t-test. The calculations were performed using an online Social Science Statistics online calculator.

### 3.4. Limitations

The study was conducted only among students of one faculty; however, the randomization procedure allowed for extrapolation of the results to students of pedagogical faculties of universities in the Republic of Kazakhstan because they had the same admission rules, curricula, and programs. This research is classified as a pilot study, with a sample of participants who are relevant to the pedagogical faculties of universities in the Republic of Kazakhstan. We did not employ any dubious techniques of psychological influence, which are sometimes used as acmeological methods, due to their potentially unpredictable outcomes.

### 3.5. Ethical Issues

Ethical issues during the study were resolved through strict adherence to ethical norms, such as the principle of informed consent of respondents to participate in psycho-diagnostic research and questionnaires, anonymity, confidentiality, tolerance, and academic integrity. There were no conflicts of interest during the study; and no special funding was allocated for its implementation.

#### 4. RESULTS

The initial stage of the study aimed to identify meaningful life orientations, based on Leontiev's methodology, which should be considered while organizing the acmeology-based academic process. The distribution of responses was determined according to the results obtained from students of the control and experimental groups. Table 1 lists the obtained results.

**Table 1.** Comparison of scores on the scales of meaningful life orientations.

Scale	The average number of points on the scale						
	F	B	t-test	p	A	t-test	p
Goals	4.2±0.3	4.4±0.1	-1.01	>0.05	5.0±0.2	-3.84	<0.05
Process	4.0±0.5	4.3±0.1	-1.02	>0.05	5.2±0.3	-3.56	<0.05
Result	4.1±0.2	4.2±0.3	-0.13	>0.05	4.8±0.2	-4.29	<0.05
Locus of control –“Self”	3.8±0.2	4.1±0.1	-2.32	<0.05	5.0±0.5	-3.86	<0.05
Locus of control - Life	4.0±0.2	4.2±0.1	-1.55	>0.05	5.1±0.2	-6.73	<0.05

**Note:** This table demonstrates comparison of scores on the scales of meaningful life orientations of students of the experimental (A) group after training using the acmeological approach with the results of the primary (F) study and re-examination of the control (B) group.

As evidenced in the Table 1, the methodology's indicators were initially at an average level across all scales. After training using the acmeological approach, there was a statistically significant increase in all indicators of meaningful life orientations in the experimental group ( $p < 0.05$ ). However, within the control group, in which the training was delivered, statistically significant changes were observed only in the scale of the “I” locus of control. No differences were detected between the repeat and initial measurements at other levels of the statistical methodology. Table 2 shows the results of the test “Readiness for self-development” for the experimental group after completing the training and for the control group during the second measurement. Based on the calculations, it was established that the initial indicators of the students in the experimental group did not significantly differ from the results of the control group during the second change. Therefore, the results are not presented in Table 2.

**Table 2.** Comparison of indicators of readiness for self-development of students.

Scale	Experimental group		Control group	
	n	%	n	%
A: I can cultivate myself, but I don't want to know myself	26	16.15	33	20.12
B: I want to know myself and I can change	71	44.10	41	25.00
C: I want to know myself, but I can't change myself	56	34.78	67	40.85
D: I don't want to know myself and I don't want to improve	8	4.97	23	14.02
Total	161	100%	164	100%

In the control group, in which acmeological technologies were not used, the answer variant “I want to know myself, but I cannot change myself” prevailed (40.85%). The experimental group, where the majority of students initially chose this option, after the training using the acmeological approach, showed statistically significant changes towards more constructive options: after the training, the majority of students (44.10%) preferred the answer option “I want to know myself and I can change”.

Table 3 shows the results of a comparative study of the students' self-fulfillment needs within the experimental group after the training using the acmeological approach and within the control group, in which such training was not conducted.

**Table 3.** Comparison of the need for self-realization of students.

The level of need for self-realization	Experimental group		Control group	
	n	%	n	%
Active implementation of the need for development	89	55.28	56	34.15
There is no development system	60	37.27	78	47.56
Development stopped	12	7.45	30	18.29
Total	161	100%	164	100%

As can be seen from this table, the majority of students in the control group (47.56%) had no developmental system. A similar result was observed in the experimental group before training using the acmeological approach. However, after it, the ratio of indicators was statistically significant ( $p < 0.05$ ) and shifted towards the predominance of an active need for development (55.28%).

Table 4 illustrates the results of the study of the influence of training using the acmeological approach on the scope of the "I-image" of the respondents. The scope of the "I-image" and self-attitude initially revealed the average severity of self-esteem, self-interest, self-empathy, and other people's expectations attitude. The indicators of the seven scales representing attitudes towards internal actions towards the "I" of the respondents corresponded to the average level either, however, they were below average on the scales of self-understanding, self-accusation, and self-acceptance. The control group had statistically insignificant dynamics of self-attitude indicators on most scales ( $p > 0.05$ ), whereas in the experimental group, all indicators showed a statistically significant increase.

Table 4. Comparison of the "I-image" of the students.

Scale	The average score on the scale						
	F	B	t-test	p-value	A	t-test	p-value
S (Integral feeling "for" and "against" one's "I")	51.2±0.3	51.4±0.1	-1.095	>0.05	68.2±0.3	-69.402	<0.05
I (Self-respect)	52.4±1.0	53.2±0.5	-1.886	>0.05	58.4±0.1	-10.341	<0.05
II (Auto-sympathy)	55.1±0.5	56.1±0.3	-2.970	<0.05	62.5±0.5	-18.126	<0.05
III (Expected attitude from others)	53.4±0.2	55.1±0.4	-6.584	<0.05	58.8±0.2	-33.068	<0.05
IV (Self-interest)	53.7±0.3	53.8±0.2	-0.480	>0.05	60.4±0.1	-36.697	<0.05
1 (Self-confidence)	58.1±0.5	60.0±0.5	-4.654	<0.05	62.1±0.8	-7.344	<0.05
2 (Attitude of others)	53.2±0.3	54.2±0.1	-5.477	<0.05	59.1±0.2	-28.343	<0.05
3 (Self-acceptance)	48.6±0.2	50.0±0.5	-0.041	>0.05	56.8±0.4	-26.010	<0.05
4 (Self-leadership, self-direction)	50.1±0.5	51.3±0.2	-3.860	<0.05	61.5±0.5	-27.924	<0.05
5 (Self-accusation)	43.5±0.5	44.0±0.2	-1.608	>0.05	42.1±0.2	4.503	<0.05
6 (Self-interest)	53.5±0.1	53.8±0.2	-2.324	<0.05	66.3±0.2	-99.148	<0.05
7 (Self-understanding)	45.1±0.2	46.2±0.3	-5.284	<0.05	58.5±0.5	-43.099	<0.05

Note: This table demonstrates comparison of the "I-image" of the students of the experimental group (A) after passing training using the acmeological approach with the indicators of the control group (B) and the primary study (F) according to the method of Stolin and Pantelev.

The results of the survey confirmed that the level of students' interest and, therefore, their motivation to study and pursue their career, and continuous self-education could be increased through the competent implementation of acmeological technologies into the process of training future teachers.

The results of the questionnaire item "What will ensure the implementation of the acmeological approach?" are shown in Figure 1.

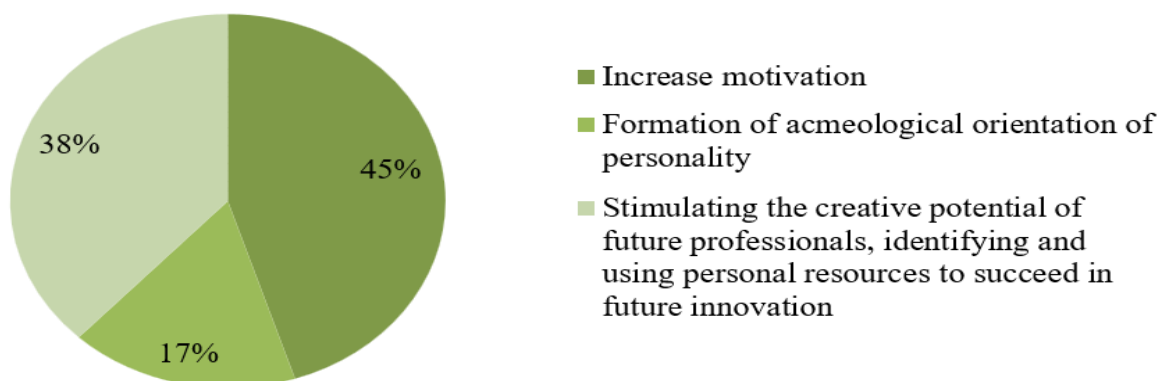


Figure 1. The results of a survey among the students about implementing the acmeological approach in the academic process.

The answer “increase motivation” was ranked first (45.34%), stimulating creativity was ranked second, as well as identification and use of personal resources to achieve success in future innovative activities (37.89%), the formation of an acmeological orientation of the personality was ranked third place (16.77%). After three months, we conducted a study to determine the ability to self-change using a survey developed by [Manukyan et al. \(2020\)](#). A survey was conducted using Google Forms. The results showed that students in the experimental group were more inclined to self-change. [Table 5](#) presents the results of a survey of students in both groups three months after the experiment, regarding their readiness for self-change.

**Table 5.** Comparison of indicators of readiness for self-change of students.

Scales	Experimental group	Control group	t-test	p-value
Scale 1	18.75±0.23	16.54±0.35	5.45	<0.05
Scale 2	20.32±0.51	14.41±0.27	7.42	
Scale 3	18.15±0.35	12.35±0.23	7.23	
Scale 4	17.14±0.22	14.25±0.25	6.53	

Summarizing the results of the conducted research, we consider the effective use of approaches in education, the basis of which is the development of one's pedagogical abilities at the best possible level, the constant enrichment of one's knowledge, abilities, and skills of teachers, and the formation of the ability to self-study and self-change. This creates favorable conditions for the comprehensive development of teachers and their effective future teaching.

## 5. DISCUSSION

This study proves that the acmeological approach in education is a factor in students' personal growth, confirming the relevance of the formation of future teachers' professional orientation ([Halili, Fathima, & Razak, 2022](#); [Zaiats, 2020](#)). The results of the survey demonstrate the need to raise students' professional self-awareness and enhance their motivation for self-education and self-improvement, which complements the results of [Mamurov \(2019\)](#); [Rivera et al. \(2020\)](#) and [Bradley, Priego-Hernández, and Quigley \(2022\)](#) confirms the necessity of implementing acmeological technologies in the academic process ([Shevchenko et al., 2020](#); [Shiryeva, 2018](#)). Scientific and technological progress requires changes in the learning environment ([de Blaquièrè , Nolan, & Wray, 2019](#)). Under ever-changing socio-economic conditions, teachers should use acmeological learning technologies not only for a one-time achievement of high performance by students, but also for their constant self-education. It should be used as a strategic guideline in the pedagogical process, based on creative thematic components, self-actualization, and self-fulfillment functions ([Knopik & Oszwa, 2020](#); [Tsiuniak, 2020](#)). Self-actualization is achieved through independent activities and the realization of one's professional potential ([Schoofs, Hornung, & Glaser, 2022](#)). The influence of training using the acmeological approach on the meaning of life orientations of the students in the experimental group points to the optimization of life goals, extended scope of the meaning of life, a sense of interest, and emotional richness. This will contribute to further professional self-development in the professional activity process.

After the training using the acmeological approach, there was a statistically significant increase in all indicators of meaningful life orientations in the experimental group. Identifying professional potential and traits will contribute to the resurgence of future professional activities. Awareness of one's strong professional traits and resurgence will contribute to successful self-realization at work, which is one of the vital psychological needs of a person ([Schoofs et al., 2022](#)). The content of the training and the material used were distinguished (game classes, theatre classes, seminars, lectures, discussions, holographic classes, conference classes, and integrated classes). It is advisable to use the methods of pair and individual work, small groups, and collective discussion ([Chen & Chen, 2021](#)). Such learning features dialogue, debate, or illustrative explanation ([Mimura & Yagi, 2022](#)). This will also

ensure the acquisition of problem-solving skills and effective cooperation with colleagues in the workplace, which, according to Schoofs et al. (2022) is one of the most important factors in job satisfaction.

The implementation of an acmeological approach to learning facilitates the acquisition of essential skills by future professionals. This is because effective education management for the upcoming generation relies on the progressive development of human qualities, social intelligence, and education systems within society (Shahat, Boone, Ambusaidi, Al Bahri, & Ohle-Peters, 2022). The usage of an acmeological approach in teaching aids the development of a thorough comprehension of the subject matter, and the necessary qualifying abilities of aspiring professionals. For whom learning signifies gaining insight, they must comprehend the content and purpose of the subject that pertains to their occupation (Taylor, 2014). Student learning outcomes are determined by the influence of pedagogy (through active learning), student motivation, and comprehension of the subject matter (Immonen et al., 2019). To address the needs of the modern world, it is crucial to choose teaching methods that are relevant. An outstanding challenge faced by the education sector is the discrepancy between theoretical concepts and the actual state of industries (Zhaksylykovna et al., 2022). Graduates who think and can self-assess their skills are more likely to be in demand at work (Bradley et al., 2022). Based on the findings of this research, implementing an acmeological approach to education aids in fostering the essential abilities of a contemporary expert.

In this study's framework emphasis was placed on the strong correlation between personality and learning approaches based on the acmeological approach. It will contribute to the satisfaction of the basic psychological needs of modern people (Schoofs et al., 2022) and the realization of their professional potential in different conditions of functioning of society and personal life circumstances (Bilyk et al., 2021; Shtal et al., 2018). Promoting the professional qualities of future teachers to expand their ability to teach students and form the right values in times of information oversaturation and the negative effects of the media and the Internet. Therefore, in modern pedagogy, the necessary comprehensive approach and development of a teacher's qualities should be at the highest possible level.

## 6. CONCLUSIONS

Education with acmeological approach contributes to a statistically significant increase in all indicators of life-meaningful orientations of students' personalities and the development of their ideas. After a break of three months after additional classes, students in the experimental group had a statistically higher ability to self-change. Training using the acmeological approach contributes to the development of the ability to freely make decisions. Readiness confirms this for both self-knowledge and self-change. Education based on an acmeological approach creates a conducive environment for activating students' creative potential and motivating them to succeed in learning and professional development to ensure highly efficient functioning of educational institutions.

The results of the survey proved the need to raise students' professional self-awareness and increase their motivation for self-education and self-improvement, which correlates with the scientific literature data and confirms the need to introduce acmeological technologies into the academic process. The acmeological approach to teaching future teachers affects their personal and professional development, and acts as a strategic guideline in the pedagogical process of modern teachers. Considering the dynamics of changes in modern society and the need for teachers to constantly improve their skills, knowledge, and abilities, the ability to self-change, and self-learning are necessary qualities for effective learning. Therefore, it is necessary to train teachers to develop professional qualities at the best possible level and the ability to combine pedagogical and other types of activity.

### 6.1. Implications

As a result of the study, it was found that the process of training future teachers should promote the comprehensive development of teachers' personality and professional qualities, and not just focus on the study of theoretical knowledge of pedagogy. The success of their future professional activities is difficult to predict given the



professional orientation of students. The modern learning process is significantly different from what it was a few years ago, which was connected to technological progress, social circumstances (the need to implement distance learning, and the development of mixed learning technologies), and a change in the mental activity of students and the students themselves due to the influence of the smartphone (positive and negative). It is necessary to have a comprehensively developed personality, and to be able to find pedagogical approaches, to master new skills to teach certain knowledge considering these and other conditions of society functioning. The possibility of self-development, self-learning, and self-change are important qualities of a teacher, given the dynamics of change in society. Therefore, it is necessary to train future teachers to use technologies that will contribute to the development of such skills. This will ensure the effective functioning of teachers in society, the formation of knowledge and values in students, and, as a result, the effective functioning of society as a whole.

The prospects for further research embrace revealing the pedagogical conditions for the training of future teachers based on the acmeological approach, as well as designing plans for methodological support for the implementation of acmeological technologies in a specific group of students, with due regard to their specialty, motivation, and level of cognitive activity.

## 6.2. Practical Recommendations

The authors suggested recommendations that are important for teachers who structure their activities based on an acmeological approach. To select and formulate the structure of training sessions based on the acmeological approach, the following are necessary:

1. To identify the level of training and knowledge of teachers in conducting training sessions based on acmeological technologies, determine what is suitable for each teacher to conduct the relevant classes and, if necessary, consolidate knowledge and skills (identification of strong and weak personal professional traits, abilities and skills, work on their improvement, problem-oriented training, and other methods).
2. Establish the level of cognitive activity and professional orientation of students in the selected groups.
3. To plan the use of acmeological technologies in the academic process to achieve the following deliverables: training a future specialist who is ready to work and motivated for self-education, self-improvement, and self-change. Such a sequence should ensure the successful application of acmeological technologies and of the entire learning process at the university.

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**Transparency:** The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

**Competing Interests:** The authors declare that they have no competing interests.

**Authors' Contributions:** All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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