



DOI: 10.54919/physics/56.2024.274jf6

Professional competencies of teachers in the new educational paradigm: Problems and opportunities

Sona Penkina*

Yessenov University
130000, 32 Microdistrict, Aktau, Republic of Kazakhstan

Aibek Kuldybayev

Zhangir Khan University
090009, 51 Zhangir Khan Str., Uralsk, Republic of Kazakhstan

Zaini Koksheyeva

Yessenov University
130000, 32 Microdistrict, Aktau, Republic of Kazakhstan

Rodion Dzhamaletdin

International College of Continuous Education
050000, 69A Zheltoksan Str., Almaty, Republic of Kazakhstan

Gulfiya Eskaiyrova

LLP "Chastnaja Shkola Sova School"
060097, 494B Sultan Beibarys Ave., Atyrau, Republic of Kazakhstan

Abstract

Relevance. This research article explores the importance of professional competencies for teachers in Kazakhstan's reformed educational system and examines the role of certification in assessing these competencies. It highlights the need for a deeper analysis of teachers' attitudes towards certification and its effectiveness in improving educational quality.

Purpose. The purpose of the study is to determine the effectiveness of the certification process in improving the professional competencies of teachers.

Methodology. The methods of analysis and synthesis, the comparison, observation, interview, and the author's questionnaire named "Certification process in the new educational paradigm" were used.

Results. This study describes a new educational paradigm of the Republic of Kazakhstan and a new approach to the certification of teaching staff. The leading professional competencies necessary for a modern teacher for successful professional activity within the framework of a new educational paradigm are described. The qualification categories that teaching staff can receive and the features of each of them are disclosed. The pedagogical competencies that a teacher must obtain in each of the qualification categories are analysed. The necessity of certification by secondary school teachers is substantiated. A survey was conducted among secondary school teachers of the Mangystau Region. The survey showed that the certification is perceived by most teachers only as a mandatory process, the main advantages of which they do not notice, which indicates the need to work with teaching staff and further improve certification programmes.

Suggested Citation:

Penkina S, Kuldybayev A, Koksheyeva Z, Dzhamaletdin R, Eskaiyrova G. Professional competencies of teachers in the new educational paradigm: Problems and opportunities. *Sci Herald Uzhhorod Univ Ser Phys.* 2024;(56):2746-2756. DOI: 10.54919/physics/56.2024.274jf6

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

Conclusions. The study found that most teachers perceive the certification process primarily as a means for career advancement and monetary incentives, rather than as a way to improve their professional competencies. Additionally, the research revealed issues with the transparency of the certification process and inadequate communication between educational institution management and teachers regarding professional development opportunities.

Keywords: qualification categories; performance evaluation; skills improvement; certification; teacher development.

Introduction

The modern educational process requires teachers ready for innovation and continuous improvement of their skills. The new educational paradigm of the Republic of Kazakhstan allows each teacher to find opportunities not only for professional but also for personal growth within the educational process. This approach would enable teachers to develop their professional competencies, improve their pedagogical image and educate a generation with modern views and advanced ideas, which will influence the development of the republic in the future. However, this is possible only if there are qualified teaching staff whose competencies are sufficient for effective training of the younger generation. One of the methods of checking the level of pedagogical qualifications, which is also able to motivate to improve professional knowledge and skills, is the certification process, which is mandatory for passing at least once every five years [1]. Based on its results, a teacher can get a higher qualification, which can affect the teacher's improvement of professional competencies, the educational process, and career growth.

E. Vasilyeva et al. [2], investigating the essence of updating the subject literacy of a teacher within the framework of professional development, concluded that the teacher who possesses the necessary knowledge and skills at a high level is capable of qualitatively preparing students for future professional activity and giving them a qualitative basis. The researchers also note that in the modern educational paradigm, there are changes in the certification process aimed at the teacher's independent search for weaknesses in their professional competence and independent development. G.N. Akbaeva et al. [3], revealing the features of the development of professional competencies of an English teacher, argue that a high-quality educational process is based precisely on the high qualifications of teaching staff and their motivation for continuous development in synergy with reforms in the educational process. N. Smanova and Sh. Tulegenov [4] revealed the impact of teacher training on the development of functional literacy of students and also concluded that the effectiveness of the educational process depends primarily on the professional development of teachers, in particular, on timely and effective professional development.

A.K. Akisheva et al. [5] considered the problem of the development of teachers' professional competencies in the context of a new educational paradigm and concluded that the purpose of improving pedagogical qualifications is to solve urgent pedagogical problems. The researchers attributed to the urgent tasks that a teacher should solve: the development of a holistic personality of students, their professional competencies, and changing methods and approaches to the educational process. A.A. Bulatbayeva and A.A. Kozhayeva [6], comparing the experience of certification of pedagogical personnel of the Republic of

Kazakhstan with the experience of Singapore and Finland, note that a modern qualified teacher is one who has mastered the highest level of professional competence, capable of creativity, generating new ideas and new teaching methods. A.Zh. Murzalinova et al. [7], exploring opportunities for professional development of teachers at small schools, concluded that professional development is necessary for the development of existing competencies and the acquisition of new ones, for additional education, improvement of practical skills, and for career growth. However, it has not been proven whether the teacher receives all the described competencies during the certification process.

Thus, recent studies have noted that the effectiveness of the educational process depends on the continuous development of teachers, improvement of professional competencies and acquisition of new skills. Specialists can effectively develop their professional competencies within the framework of passing a pedagogical certification, which can affect not only the effectiveness of the educational process, the training of students, but also the personal qualities and image of the teacher. However, the effectiveness of the certification and its impact on the improvement of professional competencies still require additional research. Based on this, the purpose of this study is to investigate the impact of advanced training on the professional competencies of a teacher and the quality of the educational process.

Materials and Methods

This study used the methods of analysis and synthesis, comparison, the author's questionnaire named "Certification process in the new educational paradigm", and the interview and observation methods. The analysis was used to describe the new educational paradigm of the Republic of Kazakhstan and the requirements that are put forward to the teacher within its framework. The analysis helped reveal the main qualification categories that a teacher can receive by developing their professional competencies and passing certification, and the features of each category. Due to the analysis and synthesis, those professional competencies that are necessary for teaching staff to obtain a particular qualification category were described. The synthesis was used to combine the results obtained during the analysis and to draw conclusions about the need for certification and the features of this process. The comparison method helped to correlate all the qualification categories to find the differences in them and the requirements for obtaining them.

The study participants were teachers at secondary schools of the Mangystau Region, namely: a secondary school of the Munaily District of the Mangystau Region, a secondary school of the Karakiya District of the Mangystau Region, two secondary schools in the city of Aktau. All the subjects were teachers of different disciplines who work with students of different ages and

have different work experience. The age of the subjects – from 28 to 43 years. The number of study participants – 84. The study participants were predominantly female (52 female participants, 32 male participants).

The author’s questionnaire “Certification process in the new educational paradigm” was used, which includes 15 statements, the results of which showed the attitude of teachers to the new certification system and revealed its advantages and disadvantages for teachers (Table 1). The

subjects were offered 15 statements, each of which they had to evaluate from 1 to 5, where 1 – absolutely disagree, 2 – rather disagree, 3 – rather agree, 4 – completely agree. The scores were summed up and a conclusion was made about the subjects’ attitude to the certification process, about the role of this process in improving their professional competencies and the workflow as a whole.

Table 1. The form of the author’s questionnaire “Certification process in the new educational paradigm”

No.	Statement
1	Teachers must pass a pedagogical certification.
2	Teachers must improve their professional competencies.
3	Pedagogical certification is an effective method to improve your competencies.
4	I was provided with all the necessary information about the certification process.
5	The administration of the educational institution facilitated the certification.
6	Information about the certification process can be found in the public domain.
7	The certification process is clear and accessible.
8	The certification process, evaluation, and results are completely “transparent”.
9	Passing the certification helped me to improve my professional competencies.
10	My certification influenced the educational process.
11	Passing the certification helped me to move up the career ladder.
12	Passing the certification helped me get “bonuses” in the work process.
13	Passing the certification influenced my views on teaching activities.
14	Passing the certification influenced my perception of myself as a teacher.
15	I am ready to go through the certification process again.
Key to the questionnaire	
0-15	Complete dissatisfaction with the certification process, the minimum level of improvement of professional competencies after its completion
15-30	Average satisfaction with the certification process, the average level of improvement of professional competencies after its completion
30-45	High satisfaction with the certification process, a high level of improvement of professional competencies after its completion
45-60	Absolute satisfaction with the certification process, the maximum level of improvement of professional competencies after its completion

For a more detailed study, 4 participants were additionally selected, whose views and experience of passing the certification were analysed in more detail: in addition to the questionnaire, interviews and monitoring of their activities were conducted with them. The names of the study participants are hidden to protect confidential information.

Teacher 1. Has been teaching biology to students in grades 6-8 for about a year, and intends to be certified in the summer, it will be their first certification, the teacher is going to apply for the qualification category “teacher”;

Teacher 2. Has been teaching English to high school students for 5 years, was certified last summer and received the qualification category “teacher-researcher”;

Teacher 3. Has 3 years of experience working with high school students in mathematical disciplines, did not pass certification in the fall of 2021, tried again in the summer of 2022 and successfully received a new qualification category “teacher-expert”;

Teacher 4. Has the longest work experience (15 years) and works with high school students, has not passed the certification and will try to get the qualification category “teacher-master” again next summer.

The interview method was used to obtain more detailed information about the certification process and the improvement of professional competencies of additionally selected subjects. During the interview, four additionally selected teachers were asked the same questions, which they could answer in detail:

1. Are you satisfied with the certification process under the new certification programme?
2. Did your educational institution facilitate the certification process?
3. What professional competencies have you managed to improve as part of the certification, and how?
4. How do you use the acquired skills and knowledge in the educational process, and to what extent, in your opinion, does professional development affect the effectiveness of your teaching?

The interview participants were guaranteed complete confidentiality so they could honestly answer questions without fear of evaluating their answers, criticism, or other negative consequences.

The observation was used in conducting classes by additionally selected teachers. This method helped to track in practice whether professional development affects the effectiveness of the educational process and to identify

innovative methods and technologies used by teachers in the course of classes.

Results

The Strategic Development Plan of the Republic of Kazakhstan until 2025 [8] is an intermediate stage in the longer-term strategy “Kazakhstan-2050” and is aimed at the comprehensive development of the state and all its spheres, and effective international cooperation. Changes in the educational system are also provided for in the Strategic Development Plan until 2025. It provides for detailed monitoring of the quality of education and certification of entire educational institutions and their management, as well as individual teachers, to check the effectiveness of the educational process and the competencies of teaching staff. By 2025, the profession of a teacher should become one of the most prestigious, which means there is a need for a teacher to meet high requirements and standards.

To meet the high requirements and standards in the new educational paradigm, the teacher must be ready for continuous self-development, and the process of improving professional competencies must be ongoing [9].

The requirements for competencies that are necessary for a modern teacher may differ in different countries. For example, in Britain, a complete system of pedagogical competencies has been developed, which includes:

- professional skills (understanding of the subject and the essence of its teaching, the ability to plan their activities, the ability to conduct research, the development of teaching materials);
- auxiliary skills (high communication skills, critical thinking, organisational and leadership skills);
- personal qualities (high moral qualities, empathy skills, stress tolerance) [10].

In Belgium, Canada, Greece, Hungary, Ireland, Italy, Japan, Turkey, Denmark, France, Norway, and Spain, the main requirements for teachers are the ability to use information and computer technologies (ICT), the ability to modify the existing educational programme to meet modern requirements, use an individual approach to each student, possess skills of self-control, creativity, responsibility, and be able to interact effectively with others [11].

In Kazakhstan, the competencies that a teacher should have differ depending on the qualification category to which he belongs and/or for which he applies. In the new educational paradigm, six qualification categories are distinguished: “trainee teacher”, “teacher”, “teacher-moderator”, “teacher expert”, “teacher-researcher”, and “teacher-master”, the requirements for which and the conditions for obtaining which are determined by order of the Minister of Education and Science of the Republic of Kazakhstan No. 83 [1] (Table 2).

Table 2. Comparative characteristics of qualification categories

Qualification category	Required length of service	Required competencies
Trainee teacher		Pedagogical or other professional education; taking courses.
Teacher	From 1 year	High knowledge of the content of the subject, teaching methods, assessment of students. The ability to plan and organise the educational process considering the individual characteristics of students and their psychological and age characteristics. The possibility of developing students’ socialisation skills and general culture. Participation in events at the organisational level. Possession of modern technologies and their application in the educational process. The ability to explore the lessons conducted (Lesson Study, Action Research). Compliance with the norms of pedagogical ethics.
Teacher-moderator	From 2 years	The use of innovative teaching methods in the educational process. Participation in professional skill competitions at the level of an educational organisation or district. The ability to reflect on the lessons conducted. The presence of positive feedback from colleagues on the lessons conducted.
Teacher-expert	From 3 years	Proficiency in the analysis of educational activities, educational process. The ability to determine the priorities of professional development at the level of the organisation of education (both their own and their colleagues). Participation in professional skill competitions at the district or regional level.
Teacher-researcher	From 5 years	Ensuring the development of students’ research skills. Possession of lesson research skills, the ability to develop assessment tools for students.

		<p>Participation in professional skill competitions at the regional, republican, international levels; participation or possession of the title of “Best Teacher” (if available).</p> <p>The possibility of pedagogical mentoring at the district or regional level.</p> <p>Joining the experts in the examination of textbooks, teaching aids, and complexes.</p> <p>Demonstration of their work experience on Internet resources.</p> <p>Demonstration of lessons at the level of the district, city or region and receiving positive feedback.</p> <p>The ability to analyse the lessons of colleagues.</p> <p>Participation and holding in pedagogical seminars, conferences (district /city/regional, if available – republican).</p>
Teacher-master	From 6 years	<p>Implementation of the best pedagogical practices and developments.</p> <p>Development of programmes implemented and approved by the Republican Educational and Methodological Council.</p> <p>Authorship (or co-authorship) of published textbooks, teaching aids and complexes approved by the authorised body (or an expert in international WorldSkills championships, or a teacher training coach, or the presence of a prize-winning place or victory in republican or international professional competitions).</p> <p>Generalisation of their experience at the level of the republic.</p> <p>The ability to manage own decisions, evaluate and adjust them.</p> <p>The presence of positive feedback from teachers and methodologists on the lessons conducted.</p>

It is advisable to consider in more detail some of the competencies necessary for a Kazakh teacher in the new educational paradigm. One of the competencies that a modern teacher needs to improve is the ability to self-reflection, in particular, to reflect on the lessons conducted. Reflection can help teachers expand their thinking, look at their activities “from the outside”, generate new ideas and use new teaching methods, which, in turn, is also a necessary competence for professional development [12]. One of the main competencies is also the possession of teaching methods and the ability to analyse and plan the educational process [13]. In addition, the subject component is also important: the teacher must have a high level of knowledge of their own subject and have basic skills in other disciplines.

To obtain higher qualification categories, it is also necessary to be able to analyse the activities of colleagues and be a mentor for novice teachers, which has a positive effect on the educational process as a whole: novice teachers receive feedback from more experienced colleagues, and more experienced colleagues, in turn, are able to evaluate the modern methods of young teachers [14]. Equally important is participation in various competitions, as it promotes the exchange of experience and increases the image of the teacher and the prestige of the educational institution in which such a teacher works. Research competencies (Lesson Study, Action Research) are also necessary for a modern teacher, which help teachers not only evaluate their own activities and the activities of their colleagues, based on which to improve the educational process, but also to conduct research. These processes can improve the activities of an educational institution, increase the efficiency of the educational process and develop the professional competencies of teachers [15].

The necessary competencies analysis shows that teachers must strive to improve their professional activities and successfully improve their qualifications. The success

of professional development and its effectiveness in the educational process is influenced by the teacher’s work experience, personal characteristics (such as motivation, character traits, moral and ethical views), as well as preferred types of professional development [16]. Effective professional development provides for the improvement of knowledge and skills, but whether teachers really improve their professional competencies as part of the certification process has not been determined. To test this assumption, a study was conducted among 84 teachers of four secondary schools in the Mangystau Region.

To determine the effectiveness of the certification process, participants were offered an author’s questionnaire, “Certification process in the new educational paradigm”. The survey included 15 statements that respondents needed to evaluate and was anonymous, which could affect the objectivity of its results.

Teachers who participated in the study unanimously noted that passing the certification and upgrading the qualification category is essential. However, not everyone considers it as important to improve professional competencies. This may indicate that teachers consider professional development only as part of career growth, as a way to receive monetary incentives (which was also demonstrated in the responses of respondents), while professional development is primarily aimed at improving the competencies of teachers [1]. This may indicate insufficient communication with the management of the educational institution. The subjects claim they did not receive proper information about the certification process and have doubts about its transparency.

All the subjects claim that passing the certification and obtaining a new qualification category influenced their career advancement. The attitude of the management and colleagues to them and their pedagogical activity has also changed, and the pedagogical image has improved.

Respondents generally revised their views on pedagogical activity in the new educational paradigm.

The survey showed the following results: 8 teachers are absolutely satisfied with the certification process and have improved their professional competencies as much as possible after passing it, 18 teachers highly appreciated the certification process and improved their professional competencies at a high level, 55 teachers suggest that the certification process was at an average level for them, the same level of improvement of their professional competencies, only 3 teachers were completely dissatisfied with the certification process and minimally improved their professional competencies.

The results of the study indicate a problem with the “transparency” of the certification process and

communication with the educational institution’s management. Respondents also do not note a high level of improvement in professional competencies and believe that the certification process is mandatory only for career growth and receiving monetary incentives. Within the framework of professional development, an average level of improvement in pedagogical competencies is noted.

A survey of additionally selected teachers showed similar results: teachers’ satisfaction with the certification process is average, and professional competencies were also improved at an average level (Table 3). To verify the results obtained, interviews were conducted with additionally selected teachers, including monitoring their teaching activities.

Table 3. The results of the author’s questionnaire “Certification process in the new educational paradigm” for additionally selected teachers

No. of statement	Teacher’s evaluation of this statement			
	Teacher 1	Teacher 2	Teacher 3	Teacher 4
1	2	2	1	4
2	3	2	2	4
3	1	1	2	3
4	1	1	2	1
5	1	2	2	2
6	3	3	3	3
7	2	1	3	1
8	2	2	1	3
9	1	2	1	4
10	1	2	1	3
11	3	3	3	2
12	3	3	3	2
13	1	2	1	1
14	1	2	1	1
15	3	1	1	3
Total	28	29	27	39

Teacher 1. They will undergo their first certification in the summer and plan to confirm their qualification category as “teacher”. They suggest that the certification process is important for a teacher, as it helps to move up the career ladder faster. Based on the information about the certification process, they are completely satisfied with the new certification programme. According to the respondent, the educational institution informs the staff about the certification process at a low level: most of the information had to be searched independently or learned from colleagues who had already passed the certification. Teacher 1 suggests that the professional development process does not affect the improvement of their professional competencies in any way, as they are accumulated over years of experience. Does not understand the impact of professional development on the educational process.

Observing Teacher 1’s pedagogical activity revealed uncertainty in their words and actions, which can be justified by insufficient experience. ICT and modern methods are actively used in the work. Since Teacher 1 is a young specialist, they will most likely apply current methods during their studies at a higher educational institution.

Teacher 2. They underwent certification last summer and confirmed their qualification category as an “educator-researcher”. They are not satisfied with the certification process. They believe that the educational institution does not know the details of this process, which is why it was not effective for some teachers. Teacher 2 claims that the management of the educational institution applied for the qualification category “teacher-researcher” of all teachers who have more than 5 years of experience, regardless of their pedagogical achievements and existing competencies, and irrespective of compliance or non-compliance with all requirements for obtaining this category. This led to some teachers being denied certification because they did not meet the criteria and did not have the right to apply for this qualification category.

In the process of observing the pedagogical activity of Teacher 2, confidence in words and actions, the use of game methods in work, and a high level of mastery of the material were noticed, which indicates well-developed pedagogical competencies.

Teacher 3. They did not pass the certification in the fall of 2021, tried again in the summer of 2022 and successfully received a new qualification category, “teacher-expert”. They claim that they are confident in

their professional competencies regardless of the certification process, which is considered only a formality. They suggest that for successful certification, it is enough to have the necessary work experience, all the required certificates, and luck; true professional competencies do not play a significant role, which raises doubts about the “transparency” of the process.

In the process of observing the pedagogical activity of Teacher 3, uncertainty in some of their actions and problems in working with documentation was noted. However, Teacher 3 showed high communication skills in interacting with students and colleagues. This may indicate an average level of development of pedagogical competencies.

Teacher 4. They have the most extended work experience, have not passed the certification and will try to get the qualification category “teacher-master” again next summer. They claim that they did not know about the possibility of obtaining the next qualification category until the management of the educational institution contacted them and informed them that they were suitable both for work experience and for the conditions for obtaining this qualification category. However, due to insufficient time for preparation, Teacher 4 did not confirm their qualification category. Information about the possibility of obtaining the qualification category ahead of time was also not provided, although such a possibility exists. They suggest that the certification process in the new educational paradigm is fair and transparent and is necessary for all teaching staff to improve their professional competencies. According to Teacher 4, it is professional development that motivates self-development and improvement of their knowledge and skills.

In the process of pedagogical activity, Teacher 4 showed high confidence and calmness, adhering to traditional teaching methods and incorporating innovative components into their work. Having a long work experience, they are a mentor and assistant for their colleagues and motivate them to self-development and professional development. Interviews and observation of Teacher 4’s activity indicate a high level of pedagogical competencies.

The conducted interviews and observation of the pedagogical activity of the study participants confirmed the results of the author’s questionnaire. One of the critical problems of professional development is the disrupted communication between teachers and the management of the educational institution [17]. The management of educational institutions does not always have detailed information about the certification process, does not always inform about the possibility of its passage in time and does not motivate teaching staff to improve their skills. However, it is the school management that should facilitate the professional development of teaching staff and provide maximum assistance and support in the certification process [18].

It was also noted that those teachers who positively assess the process of professional development and understand its essence have highly developed professional competencies, while teachers who consider the process of professional development only a formality for career advancement demonstrate an average or low level of professional competencies. To eliminate the problem, it is

necessary to conduct educational work both with the management of educational institutions and directly with teachers. Educational work should include familiarisation with the process of professional development, a description of the professional competencies necessary for a teacher, as well as the opportunities and advantages of professional development, including: the ability to update their knowledge considering the new educational paradigm, the ability to apply modern technologies and techniques in their work, confirmation of their professional competencies, both for themselves and for colleagues and educational institutions [19].

In addition, the results of the study showed that teachers do not consider the process of professional development as a method of improving their professional competencies. To eliminate this problem, it is advisable to introduce seminars, training, and cooperation between educational institutions and exchange of experience, without which it would be impossible to confirm the qualification category.

It is also important to improve the qualifications of teachers of higher educational institutions. The researchers concluded that the issue of professional development of teachers of higher educational institutions should consider the position of the state, in particular educational, governing bodies in the certification process, the motivation of teachers to the process of professional development, the possibility of learning based on the study of their experience and the experience of colleagues, the positive atmosphere in the educational institution, and the positive attitude of teachers to the process of professional development [20].

Professional development should give teachers career advancement, monetary remuneration, a higher professional image, and new competencies and approaches to the educational process [21]. In the new educational paradigm, an educator who is ready for continuous learning, self-development, and successful professional activities to benefit their country’s future is highly valued.

Discussion

In the new educational paradigm, professional development and improvement of professional competencies are essential for a teacher who wants to meet modern requirements. S. Dhungana and L. Gnawali [22] investigated the educational policy in the field of teacher training and agreed that teacher professionalism is a crucial factor in education development, and professional development programmes are the basis for regulating modern educational paradigms. R. Chandra [23] revealed approaches to the professional development of teachers and noted that a modern teacher should use innovative methods and technologies, think critically, and continuously develop, which corresponds to the strategy “Kazakhstan-2050”, which was described in this study and based on which the modern educational process in the Republic of Kazakhstan is built.

R. Chandra [23] also concluded that it is important for a teacher to research their pedagogical activity, which in this study is one of the competencies that must be developed to obtain the qualification category “teacher” and all subsequent qualification categories. The study of their lessons and their interaction with students helps to revise approaches to conducting classes, teaching methods

and techniques and introduce to them what will increase the effectiveness of the educational process.

R. Larasati and P. Kuswando [24] investigated the features of the influence of professional development of teachers on their resilience and noted that professional development can be a factor that will influence the desire of teachers to stay in the educational field and teach the younger generation. In addition, the researchers describe the types of professional development teachers can use to improve their competencies. These include courses, seminars, conferences, individual or collective research, and coaching. These methods may be necessary for Kazakh teachers who are not aware of the role of the certification process in their professional activities and perceive professional development as a way to receive monetary encouragement and move up the career ladder.

Participation in seminars, courses, familiarisation visits to educational institutions can improve teachers' professional competencies, unlike the standard certification process, which is perceived as a necessity. J. Paudel [25] investigated the problems of professional development of a teacher and also noted that obtaining a new qualification category should be justified by obtaining new knowledge (for example, passing any qualification courses), not by work experience and certificates. This correlates with the results of interviews conducted in this study, in which it is noted that the process of professional development is a combination of the necessary experience, documents and luck, and not knowledge and skills, which requires a review of the certification process.

N. Hoang Doan Huy and P.T.T. Hai [9], exploring the possibilities of assessing the professional development of teachers, came to a similar conclusion and suggested that the certification system is not always aimed at a fair assessment of pedagogical competencies. Researchers argue that the assessment of pedagogical competencies and the receipt of qualification categories by teachers should correspond to the goals of the educational institution and all participants in the educational process: the management, the teacher, and the students. Each participant in the educational process should benefit from the teacher's professional development:

- educational institution and management receive a qualified specialist, which increases the status of the educational institution among others;
- teacher improves professional competencies and moves up the career ladder;
- students receive high-quality knowledge that they will need in the future and influence their development.

This correlates with the results of this study, which demonstrate the need for professional development not only for the teacher, but also for all participants in the educational process.

A.A. Myint Lay and G. Keczer [26] investigated the professional development of teachers in Europe and Myanmar and concluded that the development of pedagogical competencies should be a continuous process that will provide teachers with new opportunities. In particular, the researchers noted the need for new approaches to the professional development of teachers, for example, subject-oriented, practice-oriented, and research-oriented approaches, which echoes the results of this study, which determines the need for new approaches

and revision of the professional development process. In this paper, it was determined that the modern certification process is aimed at the career growth of a teacher, increasing the prestige of an educational institution, and practically does not include the acquisition of practical, research skills and in-depth subject knowledge by teachers. According to G. Fang et al. [27], seminars, courses, and training should be included in the professional development process, which will consist of the development of ICT skills, the ability to develop and apply new technologies and approaches in the educational process, the development of communication skills with colleagues and students, the ability to defend boundaries (both their own and their students).

In this study, it is noted that the key role in the professional development of teachers is assigned to the school management. This opinion is supported by U. Choeda [28], who investigated the principal's role in the teacher's professional development. The principal's task is to create a positive climate in the school environment, support the initiatives and successes of teachers, and promote and encourage their development. In addition, according to C.L. Kelly et al. [29], it is also vital for the management of educational institutions to improve their skills, competencies and, in particular, leadership qualities since it depends on the management of how the team will perceive their teaching activities and the need to improve their professional competencies.

D. Elvina et al. [30], investigating the evaluation of teachers' activities after passing the certification, came to the conclusion that the certification of teachers affects the economic development of the country, the prestige of the educational institution, the career growth of teachers, but has a low impact on the educational process itself and its effectiveness, which requires a revision of this process and correlates with the results of this study. The survey, interviews with additionally selected teachers, and observation of them showed that professional development practically does not affect the quality of the educational process.

Thus, the need for highly developed professional competencies for a modern teacher is confirmed by researchers. It is confirmed that a specialist with highly developed professional competencies is one of the critical factors in the development of education in the new paradigm. The researchers also agree that the certification and professional development process can effectively assess the effectiveness of the pedagogical activity. However, in the analysed studies, it is noted that the assessment of pedagogical activity in the process of professional development may be unfair since the level of professional competence improvement, the availability of modern knowledge and skills, and not the length of service and the number of certificates should be evaluated. To solve this problem, the researchers propose, firstly, to conduct educational work with the school management, which, in turn, should create a positive atmosphere in the team, support the initiatives and successes of teachers, and facilitate the improvement of their professional competencies. Further, seminars, courses, training, conferences, individual or collective research, coaching, and exchange of experience with other educational institutions should be introduced into the professional

development process, and confirmation of the qualification category should be made unavailable without passing the described stages.

It is necessary to revise approaches to the professional development of teachers towards subject-oriented, practice-oriented, and research-oriented, which can affect the effectiveness of the educational process. These recommendations will help make the assessment system of pedagogical competencies fairer, the certification process more transparent, and the effectiveness of teachers and their attitude to professional development.

Conclusions

This paper revealed the need for advanced training by modern teachers within the framework of the new educational paradigm and the strategic plan of the Republic of Kazakhstan until 2025. It was established that high-quality and comprehensive training for the younger generation is possible if teachers have professional competencies developed at a high level. The qualification categories that a teacher can receive (“trainee teacher”, “teacher”, “teacher-moderator”, “teacher-expert”, “teacher-researcher”, “teacher-master”) were defined, the conditions and competencies necessary for obtaining them were described, and the difference between them was revealed. Professional competencies essential for a modern teacher were described. This study was conducted using the author’s questionnaire among 84 teachers of four secondary schools in the Mangystau Region, which showed that most respondents assessed the certification

process and the improvement of their skills at an average level.

To confirm the survey results, 4 teachers were additionally selected, with whom, in addition to the survey, interviews were conducted, and their pedagogical activities were monitored. The findings of the study show that teachers perceive the certification procedure as a necessary process for career advancement and monetary encouragement. The study also demonstrated a lack of understanding by teachers of the advantages of passing certification to improve their professional competencies. There is a problem with the transparency of the certification process and the availability of information to teaching staff, which requires improvement. There is a need to improve the interaction between the departments of education and between the staff of the educational institution, in particular, to enhance the communication of the directorate of the educational institution with teachers.

Further research may involve exploring the role of interaction between educational institution management and teachers in their professional development and analysing subject-oriented, practice-oriented, and research-oriented approaches to improving teachers’ professional competencies.

Acknowledgements

None.

Conflict of Interest

None.

References

- [1] Order of the Minister of Education and Science of the Republic of Kazakhstan No. 83 “Concerning the approval of the Rules and conditions for certification of teachers holding positions in educational organizations implementing general education curricula of preschool education and training, primary, basic secondary and general secondary education, educational programs of technical and vocational, post-secondary, additional education and special training programs, and other civil servants in the field of education and science”; 2016. <https://adilet.zan.kz/rus/docs/V1600013317>
- [2] Vasilyeva E, Krokmal S, Popova E, Sartene O. Updating the teacher’s subject literacy as a necessity for improving his professional competence. *Bull Kh. Dosmukh Atyrau Univ.* 2020;59(4):62-67.
- [3] Akbaeva GN, Asanova DN, Zhuman AK, Eralinova TE. The features of formation of professional competencies of an English language teacher (on the base of the European Framework for CLIL teacher education). *Bull Karag Univ Ser “Ped”.* 2020;4(100):155-166.
- [4] Smanova N, Tulegenov Sh. The role of the system of professional development of teachers in developing the functional literacy of students in Kazakhstan. *Bull KazNPU nam after Abay Ser “Ped Sci”.* 2023;76(4):116-125.
- [5] Akisheva AK, Asylbaeva AS, Kenzhegulova AS, Zhambabaeva GT. Underfilled school teachers’ professional competencies development in terms of education system reform. *Sci Herit.* 2021;4(78(78)):10-13.
- [6] Bulatbayeva AA, Kozhayeva AA. Transformation to Kazakhstan of the positive experience of the system of certification of teachers in Singapore and Finland. *Bull KazNU Ped Ser.* 2022;70(1):60-70.
- [7] Murzalinova AZh, Mukanova SD, Almagambetova LS, Ualieva NT. Improving the qualifications of teachers of small schools to reduce educational inequality. *Bull Karag Univ Ser “Ped”.* 2021;3(103):29-42.
- [8] Decree of the President of the Republic of Kazakhstan No. 636 “On approval of the Strategic Development Plan of the Republic of Kazakhstan until 2025 and invalidation of some decrees of the President of the Republic of Kazakhstan”; 2018. <https://faolex.fao.org/docs/pdf/kaz191496.pdf>
- [9] Hoang Doan Huy N, Hai PTT. Evaluation of teacher professional development: International experiences and recommendations for Vietnam. *VNU J Sci Educ Res.* 2023;39(2):93-103.
- [10] Pedder D, Opfer VD, McCormick R, Storey A. “Schools and Continuing Professional Development in England – State of the Nation” research study: Policy context, aims and design. *Curric J.* 2010;21(4):365-394.
- [11] Quang Huy M. Requirements for teacher capacity and teacher training in OECD countries. *VNU J Sci Educ Res.* 2022;38(3):15-22.
- [12] Segal A. Rethinking collective reflection in teacher professional development. *J Teach Educ.* 2023;75(2):155-167.
- [13] Agustina F, Suriyansyah A, Asniwati. Teacher professionalism development. *J K6 Educ Manag.* 2021;4(2):207-216.

- [14] Qaisra R, Haider SZ. The influence of in-service teachers training programs on the professional development of school teachers. *Pakist J Human Soc Sci.* 2023;11(1):507-516.
- [15] Sunata S. Classroom action research-based lesson study in determining the formula of circle area. *Int J Sci Appl Sci Confer Ser.* 2019;3(1):118-130.
- [16] Jentsch A, König J. Teacher competence and professional development. In: T. Nilsen, A. Stancel-Piątak, J.-E. Gustafsson (Eds.), *International Handbook of Comparative Large-Scale Studies in Education* (pp. 1167-1183). Cham: Springer; 2022.
- [17] Rawan B, Ahmad N, Hussain S, Shaheen N. Teacher professional beliefs and identity: An insight into the professional development of primary school teachers in Pakistan. *Int Res J Manag Soc Sci.* 2022;3(1):241-249.
- [18] Galdames-Calderón M. Distributed leadership: School principals' practices to promote teachers' professional development for school improvement. *Educ Sci.* 2023;13(7):715.
- [19] Miller Foster MJ, Foster DD. Advancing sustainable development through teacher professional development. In: M.M. Samy, R. Barrick (Eds.), *Agricultural education for development in the Arab countries* (pp. 230-254). Hershey: IGI Global; 2023.
- [20] Sapieva M, Bulatbayeva K, Mazbayev O, Pussyrmanov N. Professional Development of university teachers: Kazakhstan context. *Cypr J Educ Sci.* 2023;18(1):300-312.
- [21] Bahriadi, Suriasyah A, Sulaiman. Continuous professional development model to improve teacher professional competence. *Int J Soc Sci Hum Res.* 2022;5(12):6010-6017.
- [22] Dhungana S, Gnawali L. Educational policy and teacher professional development: A thematic review. *Harv.* 2023;2(1):93-106.
- [23] Chandra R. Professional development approaches for teachers. In: *Professional development of teacher educators in current perspective* (pp. 38-47). Noida: Bluerose Publishers; 2023.
- [24] Larasati R, Kuswandono P. Enhancing teachers' resilience through teacher professional development. *Lang Circ J Lang Liter.* 2023;17(2):391-402.
- [25] Paudel J. Teacher education and issues of professional development for quality and creativity of teachers. *Prag Darsh.* 2023;5(1):7-10.
- [26] Myint Lay AA, Keczer G. Professional development of teacher educators in Europe and Myanmar. *Andrag Stud.* 2022;1:83-104.
- [27] Fang G, Chan PWK, Kalogeropoulos P. Secondary school teachers' professional development in Australia and Shanghai: Needs, support, and barriers. *SAGE Open.* 2021;11(3). <https://doi.org/10.1177/21582440211026951>
- [28] Choeda U. Analyzing the school principal's role in teacher professional development. *Asian J Educ Soc Stud.* 2023;45(3):21-30.
- [29] Kelly CL, Brock LL, Swanson JD, Russell LW. Teacher engagement scale for professional development. *J Educ Issues.* 2022;8(1):261-278.
- [30] Elvina D, Wakhinuddin W, Edidas E, Ambiyar A. Evaluation of teacher performance in post-certification classroom action research at the vocational school. *J EDUC: J Pend Indon.* 2022;8(2):147-153.

Професійні компетентності вчителів у новій освітній парадигмі: Проблеми та можливості

Сона Пенкіна

Каспійський університет технологій та інжинірингу ім. Ш. Єсенова
130000, 32 мікрорайон, м. Актау, Республіка Казахстан

Айбек Кулдибаєв

Західно-Казахстанський аграрно-технічний університет імені Жангір хана
090009, вулиця Жангір Хана, 51, м. Уральськ, Республіка Казахстан

Зайні Кокшеєва

Каспійський університет технологій та інжинірингу ім. Ш. Єсенова
130000, 32 мікрорайон, м. Актау, Республіка Казахстан

Родіон Джамалетдін

Міжнародний коледж безперервної освіти
050000, вулиця Желтоксан, 69А, м. Алмати, Республіка Казахстан

Гульфія Ескайрова

ТзОВ “Щаслива школа Сова”
060097, проспект Султана Бейбариса, 494Б, м. Атирау, Республіка Казахстан

Анотація

Актуальність. У цій науковій статті досліджується важливість професійних компетенцій для вчителів у реформованій освітній системі Казахстану та роль сертифікації в оцінюванні цих компетенцій. Вона підкреслює необхідність глибшого аналізу ставлення вчителів до сертифікації та її ефективності в підвищенні якості освіти.

Мета. Метою дослідження є визначення ефективності процесу сертифікації у підвищенні професійної компетентності вчителів.

Методологія. Використано методи аналізу та синтезу, порівняння, спостереження, інтерв'ю, а також авторську анкету “Атестаційний процес у новій освітній парадигмі”.

Результати. Це дослідження описує нову освітню парадигму Республіки Казахстан і новий підхід до сертифікації педагогічних кадрів. Описано провідні професійні компетенції, необхідні сучасному вчителю для успішної професійної діяльності в рамках нової освітньої парадигми. Розкрито кваліфікаційні категорії, які можуть отримати педагогічні працівники, та особливості кожної з них. Проаналізовано педагогічні компетентності, якими має оволодіти вчитель за кожною з кваліфікаційних категорій. Обґрунтовано необхідність проходження сертифікації вчителями середньої школи. Проведено опитування серед вчителів середніх шкіл Мангистауської області. Опитування показало, що більшість вчителів сприймають сертифікацію лише як обов'язковий процес, основних переваг якого вони не помічають, що свідчить про необхідність роботи з педагогічними кадрами та подальшого вдосконалення програм сертифікації.

Висновки. Дослідження виявило, що більшість вчителів сприймають процес сертифікації передусім як засіб для кар'єрного зростання та грошового заохочення, а не як спосіб удосконалення своїх професійних компетентностей. Крім того, дослідження виявило проблеми з прозорістю процесу сертифікації та недостатньою комунікацією між керівництвом навчального закладу та вчителями щодо можливостей професійного розвитку.

Ключові слова: кваліфікаційні категорії; оцінювання діяльності; підвищення кваліфікації; сертифікація; розвиток вчителів.