

## Professional teaching competence in preservice primary school teachers: Structure, criteria and levels

**Zhanara Zhumash**<sup>a</sup>, Institute of Pedagogy and Psychology, Department of Pedagogy and Methods of Primary Education, KazNPU named after Abai, Dostyk ave., Almaty, Kazakhstan [zhanar83@bk.ru](mailto:zhanar83@bk.ru) <https://orcid.org/0000-0002-4453-3066>

**Aziya Zhumabaeva**<sup>c</sup>, Doctor of Pedagogical Sciences, Institute of Pedagogy and Psychology, Department of Pedagogy and Methods of primary education, KazNPU named after Abai, Dostyk ave., Almaty, Kazakhstan <https://orcid.org/0000-0002-3406-7145>

**Saniya Nurgaliyeva**<sup>b</sup>, Candidate of Pedagogical Sciences, S.Amanzholov East Kazakhstan State University Ust-Kamenogorsk, Kazakhstan <https://orcid.org/0000-0002-7653-9454>

**Gulbanu Saduakas**<sup>e</sup>, Candidate of Pedagogical Sciences, Associate Professor Institute of Pedagogy and Psychology, Department of Pedagogy and Methods of Primary Education, KazNPU named after Abai, Dostyk ave., Almaty, Kazakhstan <https://orcid.org/0000-0001-8291-7514>

**Larisa Anatolevna Lebedeva**<sup>d</sup>, Candidate of Pedagogical Sciences, Institute of Pedagogy and Psychology, Department of Pedagogy and Methods of Primary Education, KazNPU named after Abai, Dostyk ave., Almaty, Kazakhstan <https://orcid.org/0000-0003-4685-141X>

**Saule Bazarbaevna Zhoraeva**<sup>f</sup>, Candidate of Pedagogical Sciences, Faculty of History and Pedagogy, Department of theory and Methods of Preschool and Primary Education, South Kazakhstan State University named after M.Auezov, Shymkent, Kazakhstan <https://orcid.org/0000-0003-3765-2689>

### Suggested Citation:

Zhumash, Z., Zhumabaeva, A., Nurgaliyeva, S., Saduakas, G., Lebedeva, L. A., & Zhoraeva, S. B. (2021). Professional teaching competence in preservice primary school teachers: Structure, criteria and levels. *World Journal on Educational Technology: Current Issues*.13(2), 261-271. <https://doi.org/10.18844/wjet.v13i2.5699>

Received from January 03, 2021; revised from February 15, 2021; accepted from; April 15, 2021.

Selection and peer review under responsibility of Prof. Dr. Servet Bayram, Yeditepe University, Turkey.

©2021 Birlesik Dunya Yenilik Arastırma ve Yayıncılık Merkezi. All rights reserved.

### Abstract:

Competency beliefs are beliefs about individuals' ability to perform significantly regarding events that may affect their lives. People with higher levels of teaching competency beliefs do not escape from the experiences they have just encountered and have the determination to complete their actions successfully. Having general competencies of teachers and teacher candidates is of key importance in terms of creating more efficient and improving educational processes. Therefore, this study aimed to provide a systematic review on structure, criteria, and levels of professional teaching competence levels of preservice primary school teachers based on a comprehensive literature review. The study employs qualitative research methodology including document analysis and related content analysis. Various results were obtained from this study and the results were discussed with relevant literature and future implications are provided.

**Keywords:** Professional, teaching competence, preservice, primary school teachers, education.

## Introduction

Education is among the most important values of a society. It is known that education plays an important role in the development and promotion of societies. Education shapes the future of the country by shaping the individual who is the smallest part of society (Amare & Dagneu, 2020). In modern Kazakhstan, there is a formation of a new education system. In this regard, education becomes not a goal, but one of the auxiliary means of human intellectual development including learning how to independently obtain information, identify problems and find ways to solve them, be able to critically analyze and fulfil the knowledge and skills. The definition of education has been made by many researchers in different ways (Vasiliene-Vasiliauskiene, 2020). These definitions include the process of creating the desired differentiation through one's own experience in these behaviors; provide adolescents, adults and children with physical and mental abilities that should be acquired; activities carried out to achieve certain improvements in individuals' attitudes according to predetermined goals and the process of achieving the desired change in one's behavior. The aims of education can provide many benefits in individual and social terms. In this context, while education creates a strong society when considered in social aspects, it also creates an economically strong country composed of educated people. To put it in another way, it is aimed to be more productive and therefore more productive with education. The contribution of education to economic development can be handled in terms of family, individual and employment. In addition to these aspects of education, Silva and Alves (2019) stated that education is a fundamental human right for all individuals living in the society and this perspective is accepted and internalized by many legal regulations throughout the world.

In addition, Educational technology is a discipline that provides functional integrity between educational sciences and educational applications. In the information age we live in, science and technology gain a common importance in education. Modern educational technology is planning, organizing, implementing and evaluating learning-teaching processes by systematically employing manpower and non-manpower resources in education. consists of. In this process, students, teachers, teaching methods, learning environments, and assessment are very important elements (Alkan, 2011).

Having general competencies of teachers and teacher candidates is of key importance in terms of creating more efficient and improving educational processes. Knowing how much teachers and teacher candidates these competencies have is also important in terms of creating a competence profile. Teachers' and prospective teachers' self-assessment about the current general competencies will be able to provide concrete data on what issues they need support in terms of both professional and personal development. In this regard, it is considered that revealing the current status of primary school teachers and teacher candidates regarding teacher competencies are crucial. Since primary school teachers have an important role that guides the beginning of the education process and plays a critical role in gaining basic vital knowledge and skills. Therefore, it is important that the teacher, who can be qualified as the ideal classroom teacher, has general professional competencies. In this respect, it is necessary to determine the professional competencies of classroom teachers and to follow a development process in this framework. Accordingly, it is really important to create a corresponding

system of enhancing competence of teacher candidates in higher education. The creation of such a system is also currently an urgent problem in terms of pedagogical theory and educational practice in Kazakhstan (Yehya, 2020).

Teachers are expected to have a range of skills and competencies to meet the complex and increasing demands of today's education reforms. According to Akoul, Lotfi and Radid (2020), teacher qualifications and competencies must be high in order to provide a quality education in educational institutions and for students to reach success. In other words, the higher the quality of the teacher, the higher his success in education and training. However, teachers' having the desired level of qualifications is based on a number of criteria. One of the ways to determine these criteria is teacher competencies.

Teacher competence can be successfully fulfilled in a specific context. It is defined as the teacher's beliefs regarding the ability to organize or apply the direction of movement that needs to be brought. Teacher competence has important effects despite this simple definition. Teacher competence is the judgment of the teacher about the ability to make a difference in students' learning, especially in cases where there is a difficult and insufficient motivation (Bandura, 1986; Devyatlovsky & Ignatova, 2012; Sulistiyo, 2016). The Place of Checking and Bandura's Self-Efficacy Conceptualization Models were developed to measure the different competencies of teachers. These models analyze teacher competence in two dimensions: the dimension that teachers believe that the environment can be controlled, e.g. General Teacher Competencies (GTE), and assessing teachers' ability to influence student learning, e.g. Personal Teacher Competencies (PTE) (Liaw, 2006; Himawan, 2016).

Dmitrieva (2004) identifies the following components in the structure of professional competence of primary school teachers: content (knowledge), activity (skills), personal (self-consciousness) and social (social significance of professional activity).

According to the Sorokina (2002) the professional competence structure of teacher candidates includes: *Motivation component*, which is revealed the gradual development of the special focus on the students' educational and professional performance, which is based on the priority goals to develop the personality of junior pupil's; *professional-performance component*, which is included systems of educational and professional performances that suggest that students mastering the following skills; *specific analytical skills*, that allow perceive and evaluate the pedagogical situation as multidimensional, and constantly innovative pedagogical reality; *special professional diagnostic actions*, which allows the future teacher to transfer educational, subject material into the diagnostic one; *the basics of design actions*, the purpose of which is to create a flexible organization system for students' life. That system includes the special features of developments of junior pupils during the interaction process: with the teacher, with peers (during the studying process), with parents.

In the activity component of professional competence, groups of pedagogical skills are identified as gnostic, constructive-design, organizational, communicative and research, the description of which is presented in general terms and does not reflect the characteristics of the professional activities of a primary school teacher. In addition, Zakirova (2016) highlights such components of professional competence as: methodological, psychological and pedagogical, and subject competence in the structure of professional competence of primary school teacher. Olesova & Borisova (2016) emphasized the following components in the structure of professional competence of a primary school teacher: psychological and pedagogical, subject, method and personal competence.

According to the literature, there are many studies focusing on competencies of teachers (Andreia & Mata, 2011; Klug, Bruder, Kelava & Spiel, 2013; Bryakova, 2013; Efanova, 2014; Vazleev, 2019; Nurgaliyeva, Zeynolla, Tulenova, Zulkarnayeva & Yespolova, 2018). When the concept of self-efficacy is considered from the perspective of the teacher, the knowledge, skills, understanding and attitudes that a teacher should have in order to effectively perform the responsibilities required by the profession come to mind. In other words, teacher competence can be defined as the teacher's abilities that affect student behavior and success. Teacher competencies, as defined in the literature, play a role in teachers' beliefs about their ability to perform a wide variety of teaching tasks in many needed teaching and learning contexts (Wuttke & Seifried, 2017). Considering the importance of having high levels of professional competence among teachers, this study aimed to provide a systematic review on structure, criteria and levels of professional competence levels of preservice primary school teachers based on a comprehensive literature review.

## **Materials and Methods**

### ***Research Model***

This study used qualitative research methodology including document analysis and related content analysis. The basic process in content analysis is to compile similar data within the framework of specified concepts and themes and interpret them organizing in a way that readers can understand (Yildirim & Simsek, 2006/2013; Ekiz, 2009). Content analysis is a scientific frame that allows a systematic analysis of written, verbal and other resources. Cohen, Manion and Morrison (2007) defined content analysis as presenting the messages included in the existing documents briefly and succinctly.

### ***Data Collection***

In data collection, "competence", "professional competence" and "preservice primary school teachers" were used as keywords in order to obtain and analyze the relevant literature from different academic databases. Studies dealing with these issues have been included in the research, examined and interpreted.

### ***Data Analysis***

The data obtained in were analyzed by using the content analysis method. In the content analysis method, various categories and themes are obtained by encoding the words in a text composed of qualitative data according to various criteria. The purpose of this analysis technique is to reach various concepts that will make sense of these data based on the raw data and explain the relationships between these concepts. Coding and themes were made for the data obtained about each study, themes and sub-themes were visited and the data obtained for each theme were analyzed and explained in detail.

## **Results**

Achieving the goal of the study on the basis of the above designated approaches becomes possible when developing a structural and informative model of competence among preservice primary school education teachers represented by motivational, axiological, epistemological, praxeological and personal components in which together ensure the effectiveness of the research process.

The initial positions on structuring the competence of preservice primary school teachers in higher education institutions are that each component should characterize a certain feature, ability or talent of a person, which is a direct or indirect basis for the successful realization of professional functions. When establishing competence, it implies its description in the language of “readiness”.

Bryakova (2013) mentioned about the following components of competence:

- *axiological* (creative attitude to the human person as a value), motivational (the need for creative interaction, the desire to convey this need to the student),

- *cognitive* (ability to creative interaction through dialogue, which manifests itself in the creation of its own creative products; the ability to creatively use selected information and build it as a system of creative tasks; the ability to use knowledge to solve professional creative tasks)

- *operational* (the ability to creatively use the accumulated experience and create new techniques), reflexive (reflection about their own creative activity; reflection about their role as a teacher in the educational process).

Furthermore, Zalutskaya, Panina, Makarenko and Nikonova (2016) emphasized that a teacher with a high level of reflexivity accurately analyzes both his activity and the response behavior of the students. As a result, teachers with this ability are more objective when evaluating creatively gifted children. Based on these interpretations, the author’s structural and informative model of creative competence of students - future primary school teachers are represented by components: motivational-goal-oriented, axiological, gnoseological, praxeological and personal in which development in unity ensures the effectiveness of the process being studied. These components with the corresponding criteria and indicators of their evaluation are shown in Table 1 and each component are explained in detail.

The motivational component of creative competence of future teachers is characterized by the formation of personal professional orientation, which influences choice, professional self-determination, self-realization, stimulates the cognitive interest of students in teaching, professional activity after its completion and is manifested in the integration of motivational structures and volitional powers of professional personality. Many studies have shown that professional activities of a teacher allowed to identify problems and ways of developing the training of primary school teachers (Shkerina & Shkerina 2017).

**Table 1.**

*Components, criteria and indicators of creative competence of future primary school teachers in the framework of mastering the compulsory discipline “Teaching Literacy”*

Components	Criteria	Indicators
Motivational-goal-oriented	Motivational-volition	Professional orientation of a person Formation of volitional self-regulation
Axiological	Value of meaning	Aspiration for self-realization
Gnoseological	Cognitive-intellectual	The presence of a system of basic and specialized knowledge course of professional and academic subjects Formation of research skills
Praxeological	Operational-technological	Formation of both universal (general cultural) and professional competencies Formation of the ability to apply scientific knowledge for the development and improvement of practical teaching activities. Possess the basic techniques of professional skills and strategies in the professional field
Personal	Socio-psychological	The formation of empathy, communication, organizational, leadership abilities and tolerance

## Discussion

Motivational-volition criterion clarifies the level of formation motivational component of creative competence of future teachers. It determines the degree of motivation-volitional criterion, manifested in the desire to master professional knowledge, skills and abilities, consciously controlling their own behavior in different situations, their own actions and desires. Indicators of the motivational-volitional criterion are the professional orientation of a person and his / her volitional self-regulation (exertion of So, we divided the axiological component of creative competence of future primary school teachers, which is based on the values of self-actualization, defining a person's ability to self-determination, setting goals, achieving professional “acme” and actualization their own potentials as the means of realizing the meaning of life. From another perspective, during the formation of the axiological components of future primary school teachers, creative competence is evaluated by the criterion of value. This allows to determine the degree of maturity of the future primary school teacher, which is provided by existential values, adequate self-estimation, attitude towards the reality, and so on. The person aspiration to self-realization is associated with the level of these criteria.

The gnoseological component of the creative competence of future primary school teachers is characterized by a system of general and professional knowledge, which is formed into academic skills, especially research and development, which together provide a high level of cognitive activity. This component is evaluated by cognitive-intellectual criterion. It reflects the level of theoretical preparation of students according to their professional subjects, which is based on the significant numbers of fundamental natural and social knowledge and also is based on the development of a level of research skills which provide rational operations such as analysis, synthesis, generalization, differentiation, abstraction, concretization, comparison and analogue, the determination of random correlations.

Cognitive-intellectual criterion is represented by two indicators: first is the formation base of a special knowledge from the course of professional and practical disciplines and another one is from the research skills. The content of the praxeological component of the creative competence of future primary school teachers is an accumulation of competencies which reflects universal (common

cultural) and, also professional competences that consists of complex skills that are part of the competence of the future teacher which determine the success of the teacher performance in the professional area as well as this in the labor market.

The main structural “units” in the system of the praxiological component of future primary school teachers will be educational and professional tasks and specially organized educational and professional situations, which are aimed at understanding and practicing the praxiological skills of future teachers. Also, it characterizes the potential behavioral response of future primary school teachers and their specific actions during their professional pedagogical activity, which is part of conscious actions. The purpose of such activities is a self-improvement, self-regulation in professional activities, considering concept about yourself as a professional, with your self-evaluation. This component reflects the level of practical preparation of future teachers for professional pedagogical activity (Marina, Vedishenkova, Yekaterina, Nikitina & Zhumabaeva, 2016).

The praxeological component includes not only professional abilities and skills but also educational and life experience. The training for the pedagogical activity of future teachers of primary classes will be successful if the training contributes to developing a certain system of skills. The efficiency of knowledge and using of them in teaching practice influence on the skills and abilities during professional pedagogical activity. Briefly, the praxeological component involves the formation of activities, which contribute to practical preparation for professional pedagogical activity. Also, need to bear in mind practical activity of the component, it is rational to extend it meaning with the organizing cognitive activity, which helps to have skills and supply scientific knowledge to get and improve practical pedagogical activity.

The personal component of the creative competence of preservice primary school teachers contributes to forming a complex of professionally significant personal attributes of future teachers. The socio-psychological criterion that characterizes a certain socio-psychological nature of quality, which determines the success of a teacher, is used to evaluate the component. It includes the following indicators: empathy, communicative, organizational, leadership ability and tolerance. Note that we have not encountered in the works of researchers about the creative competence of future primary school teachers of such personal qualities as leadership ability and tolerance. Therefore, the presented qualitative indicators of the formed levels of each creative competence component of future primary school teachers allow us to determine the integral characteristics of high, medium and low formed levels of creative competence of future primary school teachers in higher educational institutions.

Competence of preservice primary school teachers in educational institutions is characterized by a strong demonstration of aspiration to master professional knowledge and skills; the desire to work as primary school teacher and improve their qualifications; sustainable manifestation of the ability to self-behavior; and strong initiative and perseverance in achieving the goals set; a strong personal endeavor for self-realization: Formation of values of a mature person, high need for knowledge, high level of creativity, strongly demonstrated adherence to principles, adequacy of self-esteem and high level of communication; deep, strong and systematic knowledge in the cycle of professional disciplines; strongly demonstrated ability to realize the entire volume of research abilities; steady manifestations of mental abilities; sustainable manifestations of organizational and communication skills; a clear manifestation of leadership ability; demonstration of tolerance in conflict, significant manifestations of conflict resistance (Efremova, Meskhi & Shvedova (2019).

Competence of preservice teachers in the university is characterized by moderate desire to master professional knowledge and skills; work as a teacher in primary school and improve skills. Situational manifestations of initiative and perseverance in achieving the objectives; moderate manifestations of personal desire for self-actualization: mastering the values of a mature person, moderate need for knowledge, the average level of creativity; sustainable adherence to principles; optimal self-esteem with a tendency to underestimate, knowledge in the cycle of professional disciplines; the ability to realize most of the research skills independently.

When preservice primary school education teachers have low levels of professional competencies, they tend to experience a lack of desire to master professional knowledge and skills; lack of desire to work as a teacher in primary school and improve skills; weak initiative and perseverance in achieving the objectives; the absence of manifestations of personal desire for self-actualization: unformed values of a mature person, no need for knowledge, low level of creativity; non-compliance with the principles; low self-esteem, fragmentary knowledge in the cycle of professional disciplines; the ability to implement research skills only with the help of a teacher; prevailing inability to empathy; lack of organizational and leadership ability; low level of resistance to conflict.

## Conclusion

Results of the present study implied that the practice of the formation of creative competence is an ongoing issue under discussion in the academic community. Analysis of the literature showed that the proposed models of the formation of students' competence are implemented in the process of learning special (core) disciplines, focused only on a specific training profile and are not universal. In the logic of the present study, the methodological aspects of literacy were revealed, aimed at the formation of the competence of future teachers. In order to achieve this, the structure and levels of formation of the creative competence of the teacher were determined.

Based on the analysis of scientific literature and the existing experience of assessing students' competences in work, an approach is proposed for evaluating and measuring the competence of future primary school teachers in the framework of mastering the obligatory discipline "Teaching Literacy" in the process of their professional training at the university, based on determining the level of formation of the structural components of the creative competence.

In addition, each component in the aggregate characterizes a certain personal property, skills or talent, which is a direct or indirect basis for the successful implementation of professional functions. It is believed that the proposed method of formation will provide the teacher with the opportunity to regularly monitor the development of creative competence, which will allow to adjust the educational process and have a positive impact on its outcome.

In conclusion, it is noted that the proposed model creates a certain didactic basis for the successful development by university teachers of original programs focused on the diagnosis of the formation of competences in the process of studying various specialized disciplines. The problem described in this study is multifaceted and requires further development in the direction of improving the means of evaluating the competence of future primary school teachers in the process of vocational training at the university.

## Acknowledgements



Zhumash, Z., Zhumabaeva, A., Nurgaliyeva, S., Saduakas, G., Lebedeva, L. A., & Zhoraeva, S. B. (2021). Professional teaching competence in preservice primary school teachers: Structure, criteria and levels. *World Journal on Educational Technology: Current Issues*.13(2), 261-271. <https://doi.org/10.18844/wjet.v13i2.5699>

The article was developed as part of research work “Formation future primary school teachers' creative teaching competency in the process of “Teaching to read and write” (based on special complex tasks)”

### Conflict of interests

The authors declare no conflict of interest.

### References

- Akoul, M., Lotfi, S., & Radid, M. (2020). Effects of academic results on the perception of competence and self-esteem in students' training. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 10(1), 12-22. <https://doi.org/10.18844/gjgc.v10i1.4874>
- Alkan, C. (2011) Eğitim Teknolojisi (Educational Technology), 8. Volume, Ani Publishing, ISBN: 978-605-443-419-0, Ankara. <https://aniyayincilik.com.tr/kitaplar/egitim-teknolojisi/>
- Amare, Y. and Dagneu, A. 2020. Teachers' perceptions, practices and challenges of active learning strategies utilisation at secondary schools in Ethiopia. *Contemporary Educational Researches Journal*. 10, 3 (Aug. 2020), 97-108. DOI: <https://doi.org/10.18844/cej.v10i3.4846>
- Andreia, I., & Mata, L. (2011). Pedagogical competences - the key to efficient education. *International Online Journal of Educational Sciences*, 3(2), 411-423. [https://www.academia.edu/27664756/Pedagogical Compentences The Key to Efficient Education](https://www.academia.edu/27664756/Pedagogical_Compentences_The_Key_to_Efficient_Education)
- Bandura, A. (1986). *Social foundation of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall. <https://www.jstor.org/stable/258004>
- Bryakova, I.E. (2013). Creative Competence of The Student-Philologist. *Bulletin of the Chelyabinsk State Pedagogical University*, (8), 28-35. <https://cyberleninka.ru/article/n/kreativnaya-kompetentnost-studenta-filologa>
- Cohen, L., Manion, L., & Morrison, K. (2007). Observation. *Research Methods in Education*, 6, 396-412. <https://doi.org/10.4324/9780203029053>
- Devyatlovsky, D.N., & Ignatova, V.V. (2019). Praxeological culture of a student of a technical university: pedagogical factors and conditions for their implementation. *Science for Education Today*, 9 (4). <https://repo.nspu.ru/handle/nspu/2675>
- Dmitrieva, E. (2004). *Influence of emotional perception on achievements in mathematics*. Retrieved from <http://www.leeds.ac.uk/educol/documents/00003543.htm> on 27 March 2019.
- Efanova, M. E. (2014). Evaluation of the creative activities of the bachelor of pedagogical education. Retrieved from <https://cyberleninka.ru/article/n/otsenivanie-kreativnoy-deyatelnosti-bakalavra-pedagogicheskogo-obrazovaniya-inostrannyy-yazyk> on 07 January 2020.
- Efremova, NF, Meskhi, BC, & Shvedova, SV (2019). The quality assurance in the context of European integration. *Journal of Supranational Policies of Education (JoSPoE)*, (10), 40-56. <https://doi.org/10.15366/jospoe2019.10.003> .

- Zhumash, Z., Zhumabaeva, A., Nurgaliyeva, S., Saduakas, G., Lebedeva, L. A., & Zhoraeva, S. B. (2021). Professional teaching competence in preservice primary school teachers: Structure, criteria and levels. *World Journal on Educational Technology: Current Issues*, 13(2), 261-271. <https://doi.org/10.18844/wjet.v13i2.5699>
- Ekiz, D. (2009). *Bilimsel arastirma yontemleri*. Ankara: Ani Yayıncılık. <https://aniyayincilik.com.tr/kitaplar/bilimsel-arastirma-yontemleri-201/>
- Himawan, M. S. P. K. K. (2016). The development of Indonesian teacher competence questionnaire. *Journal of Educational, Health and Community Psychology*, 5(2), 1-15. <https://dx.doi.org/10.12928/jehcp.v5i2.5134>
- Klug, J., Bruder S., Kelava, A., Spiel, C., & Schmitz, B. (2013). Diagnostic competence of teachers: A process model that accounts for diagnosing learning behavior tested by means of a case scenario. *Teaching and Teacher Education. An International Journal of Research and Studies*, 30, 38–46. <https://doi.org/10.1016/j.tate.2012.10.004>
- Liaw, M. (2006.) E-learning and the development of intercultural communicative competence. *LLT*, 10(3), 49-64. [https://scholarspace.manoa.hawaii.edu/bitstream/10125/44074/10\\_03\\_liaw.pdf](https://scholarspace.manoa.hawaii.edu/bitstream/10125/44074/10_03_liaw.pdf)
- Marina, V., Vedishenkova, Y. L., Nikitina, A., & Zhumabaeva, A. (2016). The development of parents pedagogical competence in pre-school science education institution. *International Journal of Environmental and Science Education*. 11(3), 107-117. [http://www.ijese.net/makale\\_indir/IJESE\\_104\\_article\\_570f6cf6cae16.pdf](http://www.ijese.net/makale_indir/IJESE_104_article_570f6cf6cae16.pdf)
- Mirzagitova, A. L., & Akhmetov, L. G. (2015). Self-Development of Pedagogical Competence of Future Teacher. *International Education Studies*, 8(3), 114-121. <https://doi.org/10.5539/ies.v8n3p114>
- Nurgaliyeva, S., Zeynolla, S., Tulenova, U., Zulkarnayeva, Z., & Yespolova, G. (2018). Features of institutional autonomy of the Kazakhstan's universities. *Opcion*, 34(85-2), 302-336. <https://dialnet.unirioja.es/servlet/articulo?codigo=7335582>
- Shkerina, L.V., & Shkerina, T.A. (2017). New didactic principles of theoretical training of students. *Bulletin of the Krasnoyarsk State Pedagogical University. VP Astafieva*, (3 (41)). <https://cyberleninka.ru/article/n/novye-didakticheskie-prinsipy-teoreticheskoy-podgotovki-studentov>
- Olesova, A. P., & Borisova, U. S. (2016). Formation of Professional-communicative Competence of the Future Teachers in the Conditions of the Yakut-Russian Bilingualism. *International Electronic Journal of Mathematics Education*, 11(10), 3435-3445. <https://www.iejme.com/download/formation-of-professional-communicative-competence-of-the-future-teachers-in-the-conditions-of-the.pdf>
- Silva, M., & Alves, D. (2019). State evolution and conception of the right to education as a fundamental right. *Global Journal of Sociology: Current Issues*, 9(1), 6-14. <https://doi.org/10.18844/gjs.v9i1.3596>
- Sorokina, V.S. (2002): Description of three new species of the genus *Paragus* Latreille, 1804 (Diptera, Syrphidae) from Asia, with a key to the Russian species of *Paragus*. - *Volucella*, 1-22. Stuttgart. [https://www.zobodat.at/pdf/Volucella\\_6\\_0001-0022.pdf](https://www.zobodat.at/pdf/Volucella_6_0001-0022.pdf)
- Sulistiyo, U. (2016). English language teaching and EFL teacher competence in Indonesia. *Proceedings of ISELT FBS Universitas Negeri Padang*, 4(2), 396-406. <http://ejournal.unp.ac.id/index.php/selt/article/view/7001>
- Vasiliene-Vasiliauskienė, V., Vasilis Vasiliauskas, A., Meidute-Kavaliauskienė, I., & Sabaityte, J. (2020). Peculiarities of educational challenges implementing project-based learning. *World Journal on Educational Technology: Current Issues*, 12(2), 136-149. <https://un-pub.eu/ojs/index.php/wjet/article/view/4816>
- Vazleev, V.A. (2019). Understanding As A Factor Of The Success Of The Educational Activity of The Junior Schooler. In *Cognitive development of primary school children* (pp. 33-37). <https://elibrary.ru/item.asp?id=37604022>

- Zhumash, Z., Zhumabaeva, A., Nurgaliyeva, S., Saduakas, G., Lebedeva, L. A., & Zhoraeva, S. B. (2021). Professional teaching competence in preservice primary school teachers: Structure, criteria and levels. *World Journal on Educational Technology: Current Issues*, 13(2), 261-271. <https://doi.org/10.18844/wjet.v13i2.5699>
- Wuttke, E., & Seifried, J. (2017). Modeling and Measurement of Teacher Competence: Old Wine in New Skins? In *Competence-based Vocational and Professional Education* (pp. 883-901). Springer, Cham. [https://link.springer.com/chapter/10.1007/978-3-319-41713-4\\_41](https://link.springer.com/chapter/10.1007/978-3-319-41713-4_41)
- Yehya, F. (2020). Promoting technology- implementation learning paradigm for online learning in secondary education. *Global Journal of Information Technology: Emerging Technologies*, 10(1), 12-21. <https://doi.org/10.18844/gjit.v10i1.4620>
- Yildirim, A., & Simsek, H. (2006,2013). *Sosyal bilimlerde nitel arastirma yontemleri*. (9<sup>th</sup> Extended Version) Ankara: Seckin Yayınevi. <https://dergipark.org.tr/en/download/article-file/63326>
- Zakirova, R. A. (2016). The Structure of Primary School Teachers' Professional Competence. *International Journal of Environmental and Science Education*, 11(6), 1167-1173. <https://doi.org/10.12973/ijese.2016.386a>
- Zalutskaya, S. Y., Panina, S. V., Makarenko, T. A., & Nikonova, N. I. (2016). Professional and Creative Formation of the Federal University Teacher. *International Electronic Journal of Mathematics Education*, 11(5), 1215-1229. <https://www.iejme.com/download/professional-and-creative-formation-of-the-federal-university-teacher.pdf>