



THE DEVELOPMENT OF TEACHERS' PROFESSIONAL COMPETENCE WITHIN THE CONDITIONS OF MODERNIZATION OF THE EDUCATIONAL ENVIRONMENT

O DESENVOLVIMENTO DA COMPETÊNCIA PROFISSIONAL DOS PROFESSORES NAS CONDIÇÕES DE MODERNIZAÇÃO DO AMBIENTE EDUCACIONAL

EL DESARROLLO DE LA COMPETENCIA PROFESIONAL DEL DOCENTE EN LAS CONDICIONES DE MODERNIZACIÓN DEL ENTORNO EDUCATIVO

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Abstract: The academic paper has determined that the teachers' competences can be considered as the result of Europeanization process, which has been formed in the education of teachers over the past 20 years. It has been investigated that the issue of teacher's competence required a strong political commitment regarding the combination of the teacher's competence and the teacher's career models. It has been revealed that in EU countries there has been a transition from a static approach and a dynamic approach in the development of teachers' professional competence. It has been revealed that both the development and implementation of the competence framework of teachers require taking into account the national and institutional context. This investigation is focused on the evolution of teachers' competence frameworks based on policy documents. Their impact on teachers' quality and, indirectly, on students' performance can be explored in future research.

Keywords: Constructivist Approach. Cognitive and Localized Approaches. Mentoring. Skills. Competence.

Resumen: O trabalho acadêmico determinou que as competências dos professores podem ser consideradas o resultado do processo de europeização, que se formou na formação de professores nos últimos 20 anos. Foi investigado que a questão da competência do professor exigia um forte compromisso político em relação à combinação da competência do professor e os modelos de

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carreira do professor. Foi revelado que nos países da UE tem havido uma transição de uma abordagem estática para uma abordagem dinâmica no desenvolvimento da competência profissional dos professores. Foi revelado que tanto o desenvolvimento como a implementação do quadro de competências dos professores requerem ter em consideração o contexto nacional e institucional. Esta investigação está focada na evolução dos quadros de competências dos professores com base em documentos de política. Seu impacto na qualidade dos professores e, indiretamente, no desempenho dos alunos pode ser explorado em pesquisas futuras.

Palabras clave: Abordagem Construtivista. Abordagens Cognitivas e Localizadas. Mentoria. Habilidades. Competência.

Resumo: El artículo académico ha determinado que las competencias de los profesores pueden considerarse como el resultado del proceso de europeización, que se ha formado en la formación de los profesores durante los últimos 20 años. Se ha investigado que la cuestión de la competencia docente requería un fuerte compromiso político con respecto a la combinación de la competencia del maestro y los modelos de carrera del docente. Se ha revelado que en los países de la UE se ha producido una transición de un enfoque estático a un enfoque dinámico en el desarrollo de la competencia profesional de los profesores. Se ha revelado que tanto el desarrollo como la implementación del marco de competencias de los docentes requieren tomar en cuenta el contexto nacional e institucional. Esta investigación se centra en la evolución de los marcos de competencia de los profesores basados en documentos de política.

Palavras-chave: Enfoque Constructivista. Enfoques Cognitivos y Localizados. Mentoría. Habilidades. Competencia.

1 INTRODUCTION

The modern educational environment is developing under the influence of individual needs in the formation of key professional skills, including digital ones. This trend is a consequence of the integration of technology into the educational process in order to improve the quality and efficiency of learning. Educational institutions that are not able to meet such needs, will not be competitive in the future; they will be characterized by low demand among the population. The ability of educational institutions to create and modernize the educational environment in accordance with the demand of the society will determine their market position and level of flexibility. Flexible models of educational institutions will become more common, as their ability to be flexible will be a competitive advantage. The educational environment is being modernized in accordance with the following trends: intensification of the use of interactive technologies (IT) (Stewart & Wolodko, 2016); increasing the level of flexibility due to IT application; the needs of students to force educational institutions to adapt and modernize the educational environment (Arrosagaray et al., 2019); development of the multiculturalism concept (Yang et al., 2018); implementation of lifelong



learning policy at the national level by developed countries (Pérez-Llantada, 2018); the need of the labor market for specialists with hard skills; the growing role of emotional intelligence.

As a result, a new student-centered approach is formed, which provides that the teacher is a consultant, actively cooperating with students (Pozdeeva & Obskov, 2015). In developed countries, the teacher-centered approach is gradually being replaced by new approaches to learning. These trends lead to the modernization of the educational environment, and accordingly – the development of teachers’ professional competences. Teachers should be responsible for the final outcome of training: specific skills, knowledge and skills to use them, competences. Forasmuch as the educational process should comply with the principles of “flexibility, mobility, fluidity and self-development” (Gural, 2014), teachers should possess the appropriate principles of teaching and policies for conducting the educational process under the new rules. “Teachers are expected to be ‘learning professionals’ who constantly expand their knowledge and skills and share both practical and theoretical insights in a community of colleagues” (Pedaste et al., 2019; Bulatov et al., 2020a). Standards based on the development of the teacher’s professional competence will be a tool to support professional development and meet the needs of the educational process (Simons & Ruijters, 2014).

In fact, new approaches to the development of the teacher as a person are being formed in the modern educational environment. Labor market transformation, globalization, integration of ICT into the educational process, the educational environment is modernized under the influence of a number of external factors and challenges of the external environment. This process requires all teachers to develop competencies throughout life. It also puts pressure on the teacher due to the constant necessity for development in order to be competitive in the labor market. New approaches are based on the concept of dynamism and flexibility in accordance with the needs of students and clear standards (Borodin, 2005; Bulatov et al., 2019). It is necessary for ensuring the quality of education and solving the problem of unpopularity of the teaching profession due to the static development of his/her personal professional qualities. The concept of flexibility of organizations is integrated into educational institutions, stimulating and requiring the introduction of teacher development programs in the educational process at the regional, national and international levels. Developed countries promote mentoring as a way to develop the teacher and his/her team skills. As a result, a new educational environment is formed: adaptive and flexible. It is built on the dynamics of teachers’ lifelong development in accordance with the needs of students and the labor market. All these trends and problems require detailed research.



The purpose of the academic paper is to identify current trends in the development of teachers' professional competence within the conditions of the modernization of the educational environment.

The basic issues of the investigation are as follows:

1. What approaches are implemented to develop the professional competence of teachers?
2. What approaches are implemented to assess the professional competencies of the teacher?
3. What approaches are implemented to the development of professional competence of teachers?
4. What factors determine the modernization of the educational environment and the development of a professional teacher?
5. What are the teachers' modern professional competences within the conditions of the modernization of the educational environment?

2 LITERATURE REVIEW

Simons and Ruijters (Simons & Ruijters, 2014) argue in favour of radical changes in the understanding of the professional. In the past, acquiring a profession did not require continuous professional training in the future, however, currently educational environment is not possible without training. Nowadays, the teacher is expected to be a "professional who learns". Simons and Ruijters (2014) point out about two necessary conditions for the formation of professional competences of teachers. The first one centers around commitment to teaching and support of students in learning, the seriousness of the perception of one's own lifelong learning. The integrity is the second condition. Compliance with these requirements will ensure the formation of such qualities, as:

1. Possession of theoretical knowledge and the ability to use them in practice.
2. Proficiency in action theory and willingness to use action theory.
3. Expertise in their own sphere of activity, constant development of skills based on individual and collective approaches.
4. Belonging to the professional community in order to overcome the difficulties that arise in the process of learning and sharing experiences.



Possession of certain qualities and compliance with the conditions provides a high level of independence and authority of the teacher. Teachers should be active in the formation and development of their own competence. Theoretically, professional standards can be used to improve the quality of professional training of teachers (Figure 1), maintaining their effectiveness and the final outcome, determining the level of theoretical knowledge; support of continuous professional training based on experience (practical knowledge obtained through the concept of theory in action); improving knowledge in the professional field by deepening the body of knowledge. This will provide support and development of professional competence.

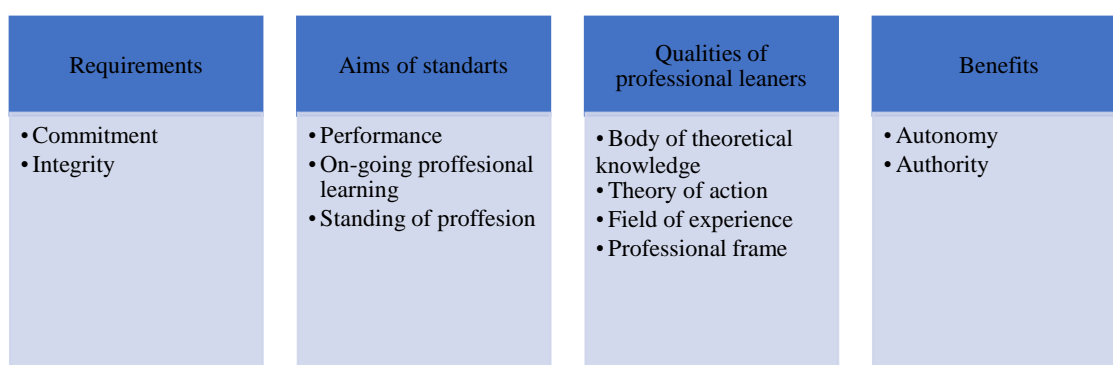


Figure 1 – Framework for achieving the aims of professional standards by integrating requirements and benefits of professional learners with the qualities of professional learners

Source: (Pedaste et al., 2019; Simons & Ruijters, 2014).

Focus on efficiency (Doğançay-Aktuna & Hardman, 2018), learning performance and continuous professional training motivates teachers to constantly update their knowledge and practical experience of their implementation, based on the achievements of theory and practice. At the same time, teachers – both individually and collectively – contribute to the development of new knowledge and skills, contained in the standards. Accordingly, there should be a connection between the goals of standards for the development of teachers’ competences, knowledge and skills. In addition, belonging to a professional educational community opens up new knowledge and skills, contained in the standards. Accordingly, there should be a connection between the goals of standards for the development of teachers’ competences, knowledge and skills. In addition, belonging to a professional educational community opens up new opportunities for learning in order to achieve better results, continuous professional training. The generalization of the study, conducted by Simons and Ruijters (2014) gives grounds to claim that the goals of the standards will be achieved, students will gain professional skills and knowledge subject to the development of



teachers' competences. Achieving the goals will increase the level of authority and independence of teachers, forming additional internal motives for the development of teachers' competences.

Modern teachers need to develop their professional competences and at the same time face difficulties in improving their skills in the case of certification (Doğançay-Aktuna & Hardman, 2018). The educational environment is influenced by the following factors: the growth of the authority of educational institutions; increasing the income of educational institutions by attracting foreign students to the learning process; increasing the level of students' mobility; increasing the level of English language proficiency of students (Doğançay-Aktuna & Hardman, 2018; Macaro et al., 2020). In studies (Galloway et al., 2017; Cho, 2012; Borodin et al., 2019), there is a list of problems that teachers face with in connection with these trends, namely: the feeling that the presentation of the material may not be as effective as before; forms of expression and teaching methods become limited; lectures become less accurate. Some studies have proven that young educators are less likely to experience these problems and the effects of educational modernization factors than older educators (Jensen & Thøgersen, 2011; Kaiser et al., 2016; Bulatov et al., 2020b; Wu et al., 2017). Thus, the issue of the teacher's ability to learn in new educational conditions is related to the level of knowledge and mastery of the subject, the actual current level of professional competence, understanding and perception of problems, skills of interaction with students.

3 MATERIALS AND METHODS

This study is based on a qualitative methodology and a comprehensive approach to the study of professional competence of teachers. Qualitative approach involved the usage of analysis to identify the essence of the concept of "competence", approaches to the development of professional competencies of teachers, based on research 2010-2020. Qualitative methodology included the analysis of: approaches to teaching and development of a professional teacher (constructive approach and transfer approach); approaches to assessing the professional competencies of the teacher (cognitive and localized); approaches to the development of professional competence of teachers (static and dynamic).

As a result, the issue is considered comprehensively in the triangle: development (training) of the teacher – assessment of professional competencies – development of professional competencies. This approach made it possible to consider the practice of teacher development in full in accordance with the changing educational environment. The analysis of scientific publications



has provided a comprehensive study of the issues: professional competencies of teachers in the XXI century; regional features of professional competencies in terms of research by scientists in different countries; approaches to the assessment and development of professional competence of teachers; factors of development of professional competencies; mentoring of teachers in the development of professional competence; static approach to the development of professional competence of teachers; a dynamic approach to the development of professional competence of teachers; teacher competence frameworks and policy in EU countries.

Two types of data have been collected in this academic paper. At the first stage, the consideration of the authors of the articles, which study the trends in the development of professional competence of teachers within the conditions of the modernization of the educational environment, have been studied. At the second stage, experimental secondary data concerning professional competence of teachers within the conditions of modernization of the educational environment have been collected. As a result, the factors of development of teachers' professional competence, conditions of formation of teachers' professional competences and quality of teachers have been identified.

The analysis of scientific publications was conducted by studying the practice of developing professional competencies in different countries. The EU countries are also included where the issue is really acute due to the crisis and the unpopularity of the teaching profession. The search was performed in the databases Scopus, ScienceDirect, Google Academy by the following keywords: professional competence of a teacher, modern teacher competencies, professional competences of EU teachers, approaches to the development of professional competence, factors of professional development of necessary competence, teacher mentoring, mentoring, dynamic approach to competence development, static approach to competence development, European practice in competence development, Teacher competence frameworks, Teacher competence policy in the EU (Figure 2). First of all, annotations were studied. The articles that were re-encountered in different databases were excluded. The articles that did not contain novelty and conclusions concerning the professional competencies of teachers were also excluded. The studies that contained similar or insignificant conclusions were excluded. Preference was given to quantitative or qualitative research based on a detailed analysis of the regulatory framework, training practices, training programs in the EU countries, mentoring programs, competency frameworks and many other.



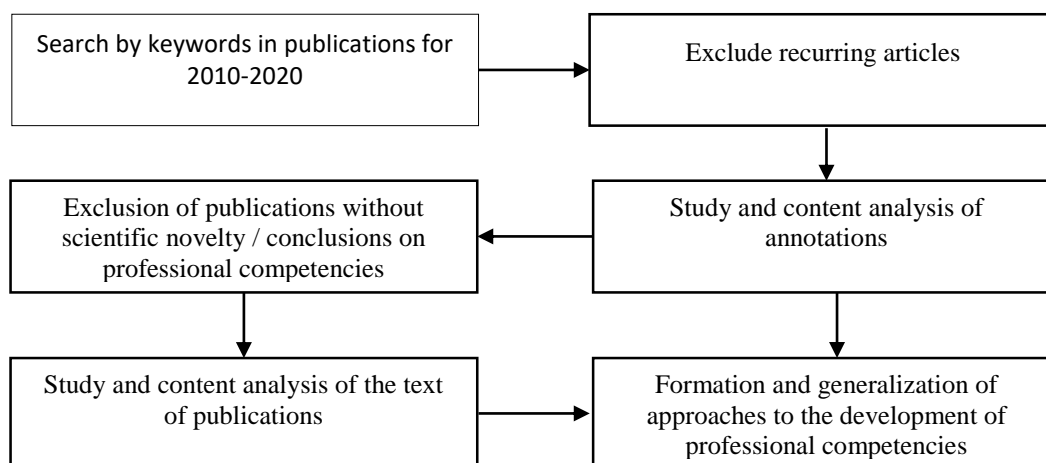


Figure 2 – Research methodology

Source: compiled by author.

The main limitations of the study are the lack of quantitative data in different countries concerning the quality of programs for the development of professional competencies of teachers, the quality of the educational environment and quantitative data to assess the relationship between the development of professional competencies and modernization of the educational environment. The study focuses on general trends in the development of professional competencies. Instead, it is important to consider the issue at the regional level in the future, comparing the practice of several EU countries. The study is also limited to the mentioned key areas and approaches, taking into account certain countries and examples of their situation. In the future, it is advisable to: 1) conduct a quantitative analysis of professional competencies and the impact of their development on the state of educational programs and the educational environment; 2) compare the practice of developing professional competencies based on a quantitative study of the quality of education.

4 RESULTS

The idea of competence, which is widespread in educational curricula of different countries, has great potential for the professionalization of teachers. In addition, teachers need skills set to introduce these competences into the practice of teaching and supporting students in their development. In the context of the study of European space, a classical definition of competence can be cited, which characterizes it as a general ability based on knowledge, experience and values that a person has developed through participation in educational practice. The specific competences of teachers, on the contrary, can be represented as a set of knowledge-based strategies that make it possible for teachers to successfully develop curricula and teaching programs aimed at different

audiences as well as solve conflicts and difficulties that arise in their professional practice (Villalba-Condori et al., 2020). According to the “Future of Education and Skills 2030” proposed by the Organization for Economic Co-operation and Development (OECD), “competence” refers to the flexible application of knowledge and skills in everyday life, which can be expressed in self-learning, problem solving and adaptation to the future (Wang et al., 2019; Wang, 2020).

Recent studies determine two opposing approaches to the training and development of a professional teacher. The constructionist approach makes it possible for teachers to take responsibility for the development of their practice in the framework of teachers’ training. The transferring approach develops these practices on behalf of educators and encourages teachers to use them. There is some empirical evidence from studies to suggest that while the transferring approach may lead to changes in practice that are procedurally consistent with teachers’ training and development, the constructionist approach may lead to changes that have a stronger conceptual basis. Moreover, the constructionist approach seems to be more consistent with the emphasis on different contexts of education, emphasized by key competences, and therefore is more likely to help teachers use their own competences in training (Gjedia & Gardinier, 2018; Buribayev et al., 2020).

In the educational environment, two approaches to the assessment of teachers’ professional competencies have been formed: cognitive and localized. As a result of the complexity and contradictions of their use, their integration has taken place. The cognitive approach involves an analytical assessment of the development of teachers’ professional competence, the completeness and depth of the structure of teachers’ competences, partially including the emotional component (for instance, beliefs and attitudes). Some studies have proposed differentiated competence’s assessment models. This led to the emergence of a localized approach to assessing the professional competences of teachers. The complex interaction between the professional competences of teachers and the high importance of teaching practice are essential for the development of teachers as professionals, which has led to the integration of both approaches (Kaiser et al., 2016; Khamzin et al., 2015).

Recent studies include factors’ assessment of the development of teachers’ professional competence (Table 1). Teachers’ self-efficacy is connected with self-efficacy in the skills of making inquiries to identify research problems, design and research procedures, data collection using appropriate tools and procedures, analysis and interpretation of the collected data, substantiation and reporting of research results, etc. Although the factor 10 indicates that teachers can create



learning conditions for students that help them understand the nature of science, including such questions, as: “I help students understand that scientific theories are derived from evidence”, “I help students understand that scientific theory can be used to design new experiments”, etc. (Wu et al., 2017).

Table 1 – Descriptions, number of items, and sample item for the 10 key factors

Key factor	Descriptions	Sample item
1. ISSE	Self-efficacy in inquiry skills	Teacher can provide reasonable argument to support research findings.
2. CLE	Providing students a cooperative learning environment	Teacher guide students to discuss with others on how to interpret experimental results.
3. GISE	Self-efficacy in guiding students to develop inquiry skills	Teacher are capable in guiding students to use laboratory equipment with adequate manipulative skills,
4. ITSE	Self-efficacy in instructional skills for inquiry teaching in math/science.	Teacher is able to design extended inquiry activities in order to help students learn.
5. ATLE	Capable of raising students’ attitudes toward math/science	Students in class indicate that the topics and the ways teachers teach are very interesting to them.
6. GILE	Providing students with an environment to learn math/science through guided inquiry	Teachers guide students to read outside reading materials in science, including books, magazines, and journal articles.
7. SUSE	Self-efficacy in the knowledge of students’ understandings of math/science	Teachers are knowledgeable of helping students to overcome their potential difficulties in learning the topics covered in a given unit.
8. ISSE	Self-efficacy in the knowledge of math/science instructional strategies	Teachers are knowledgeable of the methods and/or procedures in the application of various science instructional strategies (for example, learning cycles, analogy, conceptual change teaching and learning, etc.).
9. IOSE	Self-efficacy in the knowledge of instructional orientations in math/science	Teachers have own opinions or viewpoints on the use of instructional approaches in science teaching at the elementary school level (for example, focusing on knowledge transmission, process skills, or inquiry).
10. UNLE	Providing students with a learning environment that helps them understand the nature of math/science	Teachers help students understand that knowledge in science needs evidence to support it.

Source: (Wu et al., 2017).

One can identify key factors related to the perceived professional competences of teachers, in which there are significant differences between specialties in terms of different subjects of science. With the exception of factor 7 (SUSE, self-efficacy of students’ knowledge of subject comprehension), a significant difference has been found between the other 9 key factors. However, among these 9 factors, it has been noted that the differences identified were of moderate practical



importance only for factor 1 (ISSE) and factor 10 (UNLE). These two factors have been focused, respectively, on the self-efficacy of teachers in research skills in order to ensure the formation of the education environment that helps students understand the nature of science. On the other hand, the practical value of the other key factors is of small or low moderate, practical value. It is noteworthy that for factor 6 (GILE), referring to teachers' perceptions of providing students with an environment for learning science based on managed demand, the average scores for teachers were much lower than the other key factors. The professional competence of teachers in this sphere is relatively weak both for specialties in mathematics / natural sciences and for specialties that do not contain subjects of mathematics / natural sciences (Wu et al., 2017; Khamzina et al., 2020).

Recent studies note the effectiveness of mentoring in the development of professional competence. In the practice of European policy, mentoring is an important component of the continuous professional development of teachers (Wang, 2020). With a growing level of demand for evidence-based practice and an emphasis on teaching policy as the main factor in improving learning outcomes, mentoring in the early years of a teacher's career can help create effective teaching / learning methods that will be effective throughout the teacher's career. Mentors assess the following professional competences of teachers: scientific performance of the subject; planning of teaching and learning process; development of the class lesson; teaching methodology; motivation and assessment techniques; communication; didactic tools and equipment used in the classroom; teaching objectives based on pupils' level; collaboration with other stakeholders in the teaching and learning process (colleagues, parents, etc.); completion of educational records and school documentation (Gjedia & Gardinier, 2018).

According to the study, conducted by R. Gjedia and M.P. Gardinier (2018) "Scientific performance of the subject" is the most important element considered by mentors (67%). One of the most valuable aspects of mentoring is that it helps link theoretical training with teaching practice. Participants of the study of R. Gjedia and M.P. Gardinier (2018) felt that this was a positive step in the development of their professional skills, and noted that their relationship with mentors was generally very good. However, this indicates not only the importance of scientific training of teachers, but also the general dissatisfaction of mentors with the state of teachers' training, especially in the field of subject competence. Along with mentors' concerns about the lack of knowledge base of teachers-beginners, many pre-university school principals have unofficially criticized the methodological training of their teachers-beginners. Thus, the problem of teachers' training cannot be solved only by mentoring.



The practice of induction teachers' education began in the form of initiatives at the district and state levels, which aimed to solve the problem of burnout of teachers. The mentors, supporting teachers-beginners in the teaching practice, can be differentiated depending on the goals, objectives and processes depending on the type of training, novice teachers are recommended to go through. On the one hand, teachers' mentoring is often considered as part of the introductory program, rather than as a separate intervention in the learning process of novice teachers. In the United States, it has been revealed that novice educators, supported by mentors, increase their job satisfaction and self-efficacy by analyzing national survey data and surveys before and after the mentoring program with novice educators. Most mentoring relationships are structured and maintained through a variety of introductory programs with many support components, including financial and human resources, mentoring training, and assessment (Wang, 2020; Ridho et al., 2018).

5 DISCUSSION

Many European countries use their own system of competences to determine the quality of teachers. They usually formulate one level of teaching quality, which determines the level of competence that teachers should acquire after completing initial education of teachers. In addition, in most countries there are restrictions concerning career growth, which determine the opportunities for career growth in the profession of teacher. This leads to a situation where the only option for career growth is to move to a managerial position. The structure of competences, which creates opportunities for vertical and horizontal career growth of the teacher, can make teaching a more attractive profession. For example, EU governments offer teachers opportunities for "career advancement" and professional growth by providing school leaders with tools for better career guidance (Snoek et al., 2019; Titko et al., 2020; Ziyadin et al., 2019).

Many competence systems in Europe are static because they describe the qualities that a teacher in primary education is expected to master. For the most part, little attention is paid to how teachers can progress throughout their careers. This has serious implications for our understanding of the teaching profession and for the attractiveness of entry and development in this profession (Snoek et al., 2019; Vinichenko et al., 2018a). In order to make professional development a cornerstone of the teaching profession, it is necessary to rethink it as a dynamic profession, characterized not only by professional development but also by a clear understanding – informing



how this development in professional competences is reflected and recognized in new roles, expectations and recognition.

The concepts of professional development of teachers and the progress of teachers are related in a holistic sense of the profession. In the process of developing and implementing a system of competences, we believe that it is important to avoid static images and develop systems of competences in such a way that they take into account and contribute to a more dynamic understanding of the profession. This requires a common understanding and a common professional vocabulary to ensure the dynamism of the profession. For instance, such a dynamic system of competences has been developed in the Netherlands (Snoek et al., 2019; Vinichenko et al., 2018b). The system of professional competences was established in 2017 by a group of representatives of the National Council of Secondary Schools and two national councils representing institutes of teachers' education. The reason for developing this dynamic system of professional competences was the widespread need for tools that could support the development of teachers throughout their careers. Such a system of development was absent in the Dutch educational environment until 2017. The initial structure of competences as of 2004 was adapted in the new Teacher Profession Act, where the scope of competences was narrowed to a broader view of the role of teachers, including cooperation with colleagues and parents. It included a clear focus on teaching, three main areas of competence, covering school subjects, the content of pedagogy and general pedagogy. The existing competence structure includes only one level, and career paths are not clearly defined (Snoek et al., 2019).

Teacher competence frameworks are considered as an important policy measure for the development of teacher quality throughout Europe and beyond. European Commission has recognized that the frameworks of professional competence is a controversial measure to improve the professional quality of teachers, as they may include various policies related to the professionalism of teachers, such as recruitment and placement of teachers, teachers' education and training and teachers' assessment (Caena, 2011; European Commission, 2018). In a similar vein, the Organization for Economic Co-operation and Development (OECD) stressed the need to create teachers' competence profiles in order to match the professional development and effectiveness of teachers with the needs of the educational environment as a key international priority (Symeonidis, 2019). Other international organizations have also promoted teacher competences as a political intervention to improve the quality of teachers' labor power (Symeonidis, 2019). As of today, there



are only a few examples of how European countries define and use teacher competence frameworks to simultaneously guide education, recruitment and promotion (Boosting teacher quality..., 2018).

Some EU countries define learning outcomes to initial teacher education (ITE) programs or introduce criteria for the recruitment and selection of teachers, assessing the professional development needs of teachers and providing professional learning opportunities throughout teachers' careers (Supporting teacher competence..., 2013). Some systems of education define competences at the level of central policy, while others define them at the level of ITE institutions or through professional associations. Moreover, competences in some systems can be defined as professional standards that are accurate and measurable, related to accountability and quality assurance processes, or they cannot be defined based on principles and codes of practice (Caena, 2011; Vinichenko et al., 2018c).

EU has often advised Member States to develop a teacher competence frameworks (Conclusions of the Council..., 2007; Council conclusions on the..., 2009; Conclusions on effective..., 2014), in such a manner as to promote “the agency, empowerment and responsibility of teaching staff, rather than their control and disempowerment” (Supporting the teaching professions..., 2012). This approach, focused on professional development, is opposed to the bureaucratic or technical approach, which emphasizes the regulation of human behavior. An approach to development requires the involvement of various interested parties in the development of competence frameworks, as well as inhering of these frameworks to teachers and their professional associations (Supporting teacher competence..., 2013). The development of a teacher competence frameworks has also been inextricably linked to the creation of the National Qualifications Framework (NQF), which European countries have created to improve the comparability and understanding of professional qualifications. NQF in Europe are developed on the basis of European Qualifications Framework (EQF) for lifelong learning, which has eight benchmarks defined as learning outcomes to equalize qualifications across countries and systems.

Since the launch of the EQF in 2008, the concept of competence has been linked to the approach to learning outcomes, that is, competences are often articulated as “statements of what a teacher knows, understands and can do after the learning process” (Defining, writing and applying..., 2017). European Center for the Development of Vocational Training (Terminology of European education..., 2014) understands competences as “the ability to apply the educational process adequately in a certain context (education, study, work or professional development)” (Defining, writing and applying..., 2017). In this sense, they can be perceived as achieved learning



outcomes, confirmed by the individual's ability to apply them in practice, in society and at work. The approach to learning outcomes is aimed at shifting the point of view from simple substantive knowledge to the skills and competences that individuals need for the labor market. Competences, formulated as learning outcomes, have become widely used among European countries through the development and implementation of teachers' educational programs, although progress has been uneven (Halász, 2017; Vinichenko et al., 2018d). Several countries have used European Social Fund (ESF) and other structural and research funds provided by European Commission in order to support the development of teachers' learning outcomes (Symeonidis, 2018).

The political desire to define and implement teacher competence frameworks at the national level may also stem from international commitments concerning Bologna Process in higher education (Caena, 2014), which was launched as an intergovernmental initiative in 1999 to create European Higher Education Area through the overall restructuring of higher education systems by the introduction of a two-cycle structure of bachelors and masters. This sphere is increasingly "universalized" through Bologna reforms in the field of teachers' education in Europe (Zgaga, 2013), and the main consequences include changes in the structure of ITE programs, the introduction of the European Credit Transfer and Accumulation System (ECTS), quality assurance processes and EQF application (Iucu, 2010). The impact of Bologna on teachers' education is also interpreted as a process of legitimization and implementation of reform initiatives at the national level (Kuhlee, 2017). List of indicators for teacher competences:

1. His/Her pedagogical activity reflects sound scientific discipline-specific knowledge.
2. He/She is familiar with the curriculum, regulating documents that define and organize the content for the pedagogical activities in the institution, issued by the Government and the minister responsible for education, as well as with the major contents of his/her institution's pedagogical programme related to his/her disciplinary field.
3. He/She has knowledge on and consciously applies the connections of his disciplinary field, subject to other educational fields, subjects.
4. He/She knows and consciously applies cognitive processes, educational, teaching methods, and tools that are tailored to the specifications of his/her disciplinary field, subject.
5. He/She knows the important sources of information, the opportunities of their pedagogical application, reliability, and ethical application related to his/her disciplinary field, subject.



6. He/She uses terms in a professional manner that is adapted to the pedagogical situation (Symeonidis, 2017).

The results of research indicate that the introduction of Teacher competence frameworks ensures success in the development of professional competence of teachers. The broad process of Europeanization of teachers' competence and national policies ensure the effectiveness of Teacher competence frameworks (Symeonidis, 2017).

Teacher competence frameworks are being formed and developed in EU countries as a result of external political pressure and internal political priorities. On the one hand, their development is conditioned by Bologna reforms, which have been carried out through interventions in the development of EU. European Structural Funds have been an important policy incentive to promote competence-based teaching, while the approach to learning outcomes has influenced the development of ITE programs and the formulation of competences and indicators for teacher's development. Thus, the competences of teachers can be considered as a result of Europeanization process, which has been formed in the education of teachers over the past 20 years (Symeonidis, 2018). On the other hand, the transition to the competences of teachers is the achievement of key policy players who have influenced the process of change in the domestic arena. Although the issue of teacher's competence was not among the most controversial, it required a strong political commitment to combine the teacher's competence with the teacher's career model. However, studies of implementation make a clear distinction between what is meant by policy and what is put into practice (Symeonidis, 2017). The rush in the implementation process, the lack of consultation with professional organizations of teachers and strong political control were some of the main factors leading to resistance at the micro level. In addition, in countries where political commitment is not related to the possibility of introducing a high level of competence, successful implementation is possible, but unlikely, at least in the short term.

6 CONCLUSIONS

The competences of teachers can be considered as a result of Europeanization process, which has been formed in the education of teachers over the past 20 years. Although the issue of teacher's competence was not among the most controversial, it required a strong political commitment to combine the teacher's competence with the teacher's career model. Thus, there has been a transition from a static approach and a dynamic approach in the development of



professional competence of teachers in EU countries. The dynamic approach involves the active use of mentoring. One of the most valuable aspects of mentoring is that it helps link theoretical training with teaching practice, as well as it provides a positive step in the development of teachers' professional skills.

Both the development and implementation of the teacher competence frameworks require consideration of the national and institutional context. Their successful implementation involves overcoming several obstacles and requires investment in capacity building so that key players can use them at the local level as a foundation to guide the professional development of teachers. This investigation has been focused on the evolution of teacher competence frameworks based on policy documents. Their impact on teachers' quality and, indirectly, on students' performance can be explored in future research.

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