

ACADEMIC ACHIEVEMENTS OF JUNIOR SCHOOLCHILDREN: COMPETENCE-BASED CHARACTERISTICS

Onopriienko Oksana, Senior researcher, Doctor of Philosophy, A Doctorate student of the Institute of Pedagogy of the NAES of Ukraine, oks_on@ukr.net

Annotation. In the article, the competence academic achievements of the primary school students were characterized; the legislative documents for the primary school in the context of the competence academic studying were analyzed. The provided material is illustrated by the examples of the standards development for the educational area "Mathematics". It is appropriate for the purpose that is the formation of the pupils' mathematical competence – personal background that characterizes the ability, to use the experience of the mathematical activity in the process of the solution of the educative and cognitive as well as the practically-oriented problems.

Keywords: competence, subject competences, subject Mathematical competence, National Qualifications Framework, the State Standard for the Primary Comprehensive Education.

Introduction. The modern stage of the evolvement of the homeland primary education in Ukraine is predetermined by the search for the ways of the realization of the didactic and the organizational conditions that promote the self-development of a pupil, the provision of the cognitive means for the purpose of the schoolchildren's effective functioning in the society. The background for the abovementioned issues is included in the legislative documents that define the state requirements for the junior schoolchildren's awareness.

In Ukraine, which is a state that intends to enter the European academic space, a systematic work on the coordination of the legislative educational database with the corresponding international documents is performed. Among

the measures aimed at the faster adaptation of the country to the European educational standards, the formation of the system of the lifelong studying, the increase of the level of its quality, it is noteworthy to emphasize on the implementation of the National Qualification Framework (NQF) as a component of the European Qualification Framework for the lifelong learning.

Materials. The European Qualification Framework, which was recommended by the European Parliament and the Council of the European Union in 2008 as a general systematic register of eight qualification levels, comprises all qualifications acquired in the process of the formal and informal education, in particular, the comprehensive secondary education, professional and technical education, and higher education. This is a tool aimed at the improvement of the comprehension, comparison, identification, and admission of the existing qualifications as well as the implementation of new qualifications in different European countries in order to promote the mobility of the citizens between countries and the lifelong studying.

One of the peculiarities of the homeland NQF became the introduction of the zero level on the basis of making changes in the Law of Ukraine “On the Pre-School Education” which led to the obligation to achieve the pre-school education by five-years old children. The main purpose of the innovations is to provide the same initial environment for their future studying at schools and the provision of the comprehensive education quality.

In the NQF both as in its European analogue, the requirements to the practical and the comprehensive competences of a human at different levels of education from the pre-school to the post-doctorate one were described. Each qualification level was provided in the terms of the teaching results which are determined taking into consideration knowledge, abilities, and competence. The descriptors of the academic results which must be achieved in accordance with the correspondent education level make a precise difference between various qualifications and provide the logical link between these levels [1].

In the NQF, knowledge is defined as academic information that was consciously mastered and is a basis for the conscious and goal-driven activity. Empirical (factual) and theoretical (conceptual) knowledge is found. On the first classification level, the primary one, there is a requirement for the graduates of the first degree of the comprehensive secondary education to obtain the elementary factual knowledge.

Skills are characterized as the pupils' ability to use the acquired knowledge, which is necessary to fulfill the tasks and to solve the problems. "Skills are divided into cognitive (intellectual and creative) and practical (on the basis of dexterity, mastery with the usage of methods, materials, instructions, and tools)" [2].

In accordance with the project of the Tuning European Committee, competence is a dynamic combination of knowledge, comprehension, skills, values, other pupils' personal qualities which describe the results of their studying in correspondence with the academic programs as well as the obtained realization abilities of a personality for the effective activity. Competences are the basis of the graduates' qualification. We analyze the academic achievements of the primary school graduates, which are foreseen by the first level of the National Qualification Framework.

The knowledge component of descriptors comprises the pupil's comprehension of the information, which reflects the facts, the concepts, the terms, the principles, etc. which were learnt and comprehended in the process of studying at the primary school. At the zero level of qualification, a child acquires the simplest concepts by means of the daily experience whereas the graduate of the primary school has a benefit from the presence of the factual knowledge about the lexical units and the grammatical forms of the Ukrainian (the state), the native and the foreign languages; the main norms of behavior and social values, the essence of the natural phenomena, the ways of the information representation, the numbers, the geometric figures as well as the definition of

quantity, the natural and the social phenomena, the cultural traditions, the norms of the healthy way of life.

The “skills” component is included in the requirements for the usage of knowledge and comprehension of reading, writing, oral and written speech that covers the certain topics, the simple arithmetic calculations and measurements, the description of the natural and social phenomena and processes, the fulfilment of the cognitive tasks in different academic situations. The skills to rely on the symbolic and visual (graphic) information using the simple means of the informational and communicative technologies, to conduct the simplest operations, to guarantee personal care, life security and a healthy way of life, to orient at the available range of goods and services are important.

Competence is considered as an ability of the graduate of a primary school to use various pieces of knowledge and skills in a certain context independently. They include the following characteristics: the judgment formation, communicability, autonomy, and responsibility, the ability to study and to develop (the ability to learn).

In the requirements for the judgments formation, we find the ability to demonstrate one’s opinion on everything that was seen, heard, read and covered the used lexical units, the simple cause-effect relations in nature and social life, relationships between nature people, the objects of culture, art, daily practice, the certain events of the social life, practice of environment protection, one’s own behavior and the behavior of others, the academic results, making the choice of actions and operations in the academic situations, the healthy and the ecologically proper way of life, the safe behavior.

At this level, communicativeness is observed as a social competence which is found in the ability to cooperate in groups in the process of the fulfilment of group tasks, to have profit from role behavior, to express opinions logically, to make dialogues using the corresponding terminology, to perform the social and useful activity.

Autonomy and responsibility is observed as ability and a desire of a child to use the components of the intellectual development, logics, modelling for the explanation of the world of nature and equipment; to make the operational control on the fulfillment of the academic tasks with different levels of the teacher's management; to realize the consequences of one's activity. We find the pupil's autonomy who works in a familiar environment as an index of this characteristic.

At the first education level, the generalized result of teaching (a competence) is an ability to choose and to find the necessary pieces of knowledge as well as the ways of actions for the solution of the academic problems; the ability to study and to develop on the basis of the comprehension of the common ways of the organization of the academic activity, to realize the necessity to continue education, to evolve the individual cognitive experience.

Therefore, the National Qualification Framework is a basis for the homeland standardization system; it means that it is a document which defines the key fundamentals of the designing the area standards, academic programs, criteria, pupils' educational achievements assessment, etc.

Results. The idea of the competence-based academic results assessment is implemented in the content of the new edition of the State Standard for the Primary Comprehensive Education (2011) [3]. In the document, it is notified that "the standard is based on the personality-oriented and the competence-based approaches which predetermine the precise definition of the effective component of the content of the realization of the comprehensive primary education". As in the National Qualification Framework, in the standard, the academic results are provided in the categories of the competence-based education model; it means that the attention is concentrated not on the increase of the content volume but on the results component of the primary education. In the standard, the innovative aspect is the definition of the key and the subject competences necessary for the successful teaching and socialization of pupils

[4]. In the standard, the following terms are included: “a competence”, “a competency”, “a key competence”, “a subject competence”, etc. They are concretized and filled with certain content for each subject area. We analyze them on the example of the branch “Mathematics”.

It is defined that the main purpose of this area is the formation of the pupils’ subject mathematical competence which is a polyfunctional personal background that characterizes the ability to create the mathematical models of the processes in the environment, to use the experience of the mathematical activity in the process of the solution of the educative and cognitive as well as the practically-oriented problems. Correspondingly, the purpose of the primary teaching of Mathematics is determined as the formation of the pupils’ mathematical and the competences which are necessary for their self-realization in the fast-changing world.

Mathematical competence is formed in the process of the pupils’ obtaining of subject competences. Subject mathematical competences are the socially achieved academic result; it is represented in the standard for the education content whereas the requirements for its comprehension are provided in the part “The State requirements for the level of the pupils’ comprehensive education”. They are combined with the key competences that are significant for this area: the ability to learn, the communicative competence, etc.; they are generalized and enumerated in the list of tasks that must be fulfilled by a pupil in order to achieve the following:

- the integral world perception, the comprehension of the role of Mathematics in the reality cognition; the readiness to find the problems that can be solved using the mathematical methods, the ability to solve the plot problems, to think logically, to specify one’s won actions, to act using the algorithm;
- the ability to use mathematical terminology; to orient in the space and sub-space; the experience to use one’s evaluative skills in the practical situation; the comprehension of the essence of the definition of quantity process;

- the interest in teaching Mathematics, the creative approach and the emotional and evaluative attitude to the mathematical tasks fulfillment; the ability to learn.

In the updated academic program, the subject competences are differentiated in accordance with the classes: from the first to the fourth one. In the basis of the development of the program, the idea of the competence-based education implementation is laid. In correspondence to it, the purposes that are connected to the formation of the key competences in the process of teaching Mathematics are concretized. In particular, the indexes of the ability to learn as the key competence of special importance for the junior schoolchildren are determined, namely, the ability of a pupil to perceive and to determine the purpose of the academic activity, to concentrate on the subject of activity, to choose and to use the necessary knowledge as well as the ways of the activity for the solution of the set problem, to implement the acquired expertise in a certain academic or life situation, to express one's own value-conscious attitude concerning the result and the process of one's own activity, to realize, to analyze, to assess and to correct the results of one's own activity.

In the program, the terms of the subject mathematical competence and competencies are defined. In particular, it is emphasized on the fact that subject competences are the structural elements of the mathematical education content. Knowledge, skills, abilities, ways of activity achieved by the pupils in the process of studying is its basis. In the context of the primary teaching, the subject mathematical competence is observed as an ability of a pupil to analyze, to integrate, and to use the obtained knowledge, skills, and ways of activity in the certain life or academic problematic situation.

In the document, the features of the subject mathematical competence are determined. The range of the tasks which must be fulfilled in the process of Mathematics teaching and are important for the development of the pupil's individuality is defined; an emphasis was put on the significant scientific and

methodological aspects of the development of the primary mathematical education content. The competence results of teaching are provided in accordance with the level of the content comprehension: knowledge, understanding, usage, specification that will promote the accurateness of their assessment.

Conclusion. Therefore, the modern normative provision guarantees the process of the implementation of the education model, which is aimed at the junior schoolchildren's academic competence-based achievements in the homeland system of primary education. Educational outcomes, which comprise knowledge, skills, abilities, value attitudes are combined with the experience in academic and practical activity, will provide the pupils an opportunity to be independent and successful in a fast-changing world.

References

1. European Qualifications Framework [Electronic resource]. – Access mode: <http://www.volsu.ru/rus/info/part5.doc>.
2. The Order of the Cabinet of Ministers of Ukraine “On the Confirmation of the National Qualifications Framework” of November 23, 2011 № 1341 [Electronic resource]. – Access mode: <http://zakon4.rada.gov.ua/laws/show>
3. The State Standard of the Primary Comprehensive Education [Electronic resource]. – Access mode: http://www.mon.gov.ua/newstmp/2011/20_04/12
4. Savchenko O. Ya. The Concept of the Development of the New Edition of the State Standard of the Primary Comprehensive Education / O. Ya. Savchenko // Primary school. – 2010. – № 4.