

## CRITERIA AND INDICATORS OF THE GENERAL COMPETENCE OF THE TEACHER

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### ANNOTATION

In the framework of this research, the criteria and indicators of general cultural competence are determined based on the proposed model of the process of developing general cultural competence.

**Keyword:** competence, Criterion, gnostic, philosophical-methodological aspect.

In the Great Soviet Encyclopedia, the concept of "criterion"<sup>1</sup> is defined as "a tool for making a judgment, a sign, based on which an assessment is made, a definition or classification of something, an assessment measure."<sup>2</sup> The criteria requirements can be summarized as follows: they are:

- "Must be objective;
- To include the most important, serious, main aspects of the phenomenon under investigation;
- It is necessary to cover the usual aspects of the event;
- It must be understandable, short, clearly expressed;
- Research must measure exactly what it is supposed to investigate<sup>3</sup>.

The following criteria were used in our study to assess the general cultural competence of the teacher:

1. Philosophical knowledge of the teacher.

Noting that "philosophical and methodological culture is becoming a necessary attribute of education, education, professionalism in any activity of a person"<sup>4</sup> A.A. Macarena and V.L. Scholars such as Obukhov write: "This applies especially to the teacher."<sup>5</sup> Today, the current practice of introducing students to the fundamentals of natural sciences and mathematics in general education requires serious reforms. Especially in modern conditions. It is self-evident that one of the most important tasks of the teacher is the need to comprehensively and objectively describe the philosophical-methodological aspects of the program material and show alternative approaches to the studied issues.

This criterion is primarily based on the teacher's gnostic, scholar N.V. It belongs to the component that Kuzmina calls the first of the five main components of pedagogical activity (gnostic, design,

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<sup>1</sup> In the explanatory dictionary of the Uzbek language: criterion: 2. Measure for comparison or evaluation, model (459 p.)

<sup>2</sup> Большая Советская Энциклопедия: В 30 т. /Гл. ред. А. М. Прохоров. - М.: Сов. Энцикл., 1970-1978, т. 13, 1973. - 608 с.

<sup>3</sup> Организация и проведение педагогического эксперимента в учеб-ных заведениях профтехобразования /Под ред. А. П. Беляевой. - СПб.: НИИ ПТО, 1992.- 123 с.

<sup>4</sup>Макареня А. А., Обухов В. Л. Методология химии. Пособие для учителя. - М.: Просвещение, 1985. - 160 с

<sup>5</sup> Макареня А. А., Обухов В. Л. Методология химии. Пособие для учителя. - М.: Просвещение, 1985. - 160 с

constructive, organizational, communicative)<sup>6</sup>. The named criterion is revealed by the following indicators:

a) to know the philosophical and worldview issues of the taught subject; awareness of the need to use elements of philosophical and methodological knowledge in teaching.

This indicator makes it possible to assess the level of the pedagogue's philosophical knowledge, the level of readiness to solve the issues of philosophical education of schoolchildren in the process of teaching their subject.

b) understanding the main traditions and trends of modern scientific knowledge.

This indicator is also necessary for evaluating the level of general cultural competence of teachers, because in the process of teaching the basics of natural and mathematical sciences, it is an important task to familiarize schoolchildren with the prospects for the development of scientific knowledge and its role in solving global problems facing humanity in modern conditions. Students are introduced to problems related to the social functions of science (confrontation of scientific-technical and humanitarian cultures, environmental problems, etc.) in introducing them, the teacher leads them to clearly understand the model and limitations of our perceptions of the surrounding world, to understand the duality and alternative-alternativeness of both natural and social events and phenomena. Scientist V.I. According to Zagvyazinsky, "the teacher must be able to see his science and related fields in their serious features and characteristics, to understand the logic of the movement and development of science, the dialectics of the spheres of reality reflected by this science, and to be able to give it to students"<sup>7</sup>.

v) level of independence of opinions, judgments related to philosophical worldview.

The existence of this indicator allows to assess the extent to which the teacher can independently decide on relevant issues without depending on other factors in the selection of means of influencing students in terms of pluralism of opinions and worldview.

2. Scientifically and pedagogically prepared to reveal the humanitarian content of the relevant scientific foundations.

Its importance has been emphasized many times in both classical and modern pedagogy. The teacher "needs to know his subject and its pedagogical specifications (the essence of the subject and the separate, unique tasks and principles arising from its systematics (classification))"<sup>8</sup>. It is necessary to include this criterion, because it is the presence of subject-pedagogical preparation that serves as a characteristic, distinguishing feature of the general cultural competence of the teacher, which distinguishes it from the general cultural competence of other professions. The science-pedagogical culture of the teacher is one of the main conditions for the pedagogue to create conditions for the intellectual self-expression of students in the organization of the educational process. This qualification of the teacher is especially important for gifted students whose skills development is important for society.

In our research, the named criterion is studied through the following indicators:

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<sup>6</sup> Кузьмина Н. В., Кухарев Н. В., Психологическая структура деятельности учителя (Тексты лекций). – Гомель: Гомельский государственный университет, 1976. – 57 с.

<sup>7</sup> Загвязинский В. И., Педагогическое предвидение. – М.: Знание, 1987. – 80 с. – (Новое в жизни, науке, технике. Сер. Педагогика и психология. Вып. 1987).

<sup>8</sup> Крупская Н. К. Мерила оценки педагога: В кн. Н. К. Крупская об учителе. Избранные статьи, речи и письма. – М.: Изд-во АПН РСФСР, 1960. – 360 с., с. 254-255.

a) deep, informal knowledge of the fundamentals of the taught subject, knowledge of the latest achievements in it.

This indicator is self-evidently an indispensable, mandatory quality of the teacher, without which the successful implementation of the educational process is impossible. For example, scientist A.V. In the researches of Usova, for example, it was determined that "the teacher's knowledge of the content and meanings of the concepts formed in modern science in students" is considered the primary condition of the pedagogue's successful work on the formation of the system of scientific concepts in schoolchildren<sup>9</sup>. Scientist L.Ya. According to Zorina, the pedagogue's "in-depth knowledge of the scientific field he teaches not only helps him explain complex material on the basics of science in an understandable way, but also changes his attitude to science and creates a unique sense of patriotism in him"<sup>10</sup>.

b) to know the history of the subject that the teacher teaches the basics of.

The introduction of this indicator is conditioned by the fact that free mastering of the basics of the studied subject is impossible without knowing the history of its emergence and development. When organizing the teaching process, the teacher should show the historical-cultural specificity of the period to which the studied material belongs. V.N. Moshchansky and E.V. The historicity of teaching scientists like Savelova:

a) is one of the important means of developing interest in science among schoolchildren; b) contributes to the improvement of the quality of students' knowledge; c) serves as a means of forming the scientific outlook of schoolchildren; g) came to the conclusion that it serves as one of the means of their moral, spiritual and social education<sup>11</sup>. The importance of historicity in the process of teaching the basics of science was expressed by the scientist Louis de Broyle in the most general way: "The history of science can give us useful instructions about the method of teaching science"<sup>12</sup>.

c) knowledge of the relationship between the subject taught by the teacher and the relevant educational subject as its reflection in the educational process.

The presence of such knowledge allows the teacher to develop and polish the studied material didactically, to adapt it to the existing conditions and the level of development of the students. This knowledge serves as an important component of the constructive component in the activity of the pedagogue and predetermines his creative attitude towards the program and textbook.

g) to understand the need to implement the humanitarian content of the taught subject and know the ways to implement it.

Today, the problem of humanizing the teaching of natural and mathematical sciences occupies a special place among the main development traditions and trends of education. Scientist V.N. According to Moshchansky, the humanization of the educational process is "... to influence not only the intellectual, but also the emotional sphere of the adolescent's personality..."<sup>13</sup>. In our proposed interpretation of the general cultural competence of the teacher, we emphasize that this concept is

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<sup>9</sup> Усова А. В. Формирование у школьников научных понятий в процессе обучения. - М.: Педагогика, 1986. - 176 с.

<sup>10</sup> Зорина Л. Я. Программа - учебник - учитель. - М.: Знание, 1989. - 80 с. - (Новое в жизни, науке, технике. Сер. "Педагогика и психология", № 1).

<sup>11</sup> Мощанский В. Н., Савелова Е. В. История физики в средней школе. - М.: Просвещение, 1981. - 205 с.

<sup>12</sup> Бройль, Луи де. По тропам науки. Перевод с французского. - М.: Изд-во иностр. лит-ры, 1962. - 408 с.

<sup>13</sup> Мощанский В. Н. Гуманитарный аспект при изучении физики в средней школе. - Псков: Изд-во Псковского облИУУ, 1994. - 68 с.

closely related to the humanitarian aspects of the subject taught by the teacher, therefore, it is considered necessary to include the above-mentioned indicator.

d) knowledge of theoretical issues of education as a process of upbringing and education (its value base, goal, landmarks, strategic principles, etc.).

Teacher's V.A. The professional analysis carried out in the works of Slastyonin shows that the training of a pedagogue should be based on the analysis of the educational system and the traditions and trends of development. Thus, in our opinion: knowledge of theoretical issues of education serves as one of the indispensable characteristics of the universal competence of a pedagogue.

3. General cultural (including general scientific) knowledge is erudition. As noted in a number of dissertations completed in recent years, the teacher's general culture is one of the factors of his professional success<sup>14</sup>. "The range of interests of a real pedagogue cannot be limited to his specialty (it must not be limited)"<sup>15</sup>.

The cultural base, goal, landmarks of the modern school require that the consideration of culture, its phenomena and the laws of development should become a component of natural-mathematical education of schoolchildren. Teaching the basics of natural sciences and mathematics in modern conditions involves introducing students to universal culture, revealing science as its integral component: "... it is necessary to overcome today's distance and alienation of science from the society (and individual person) by revealing the importance and value of scientific knowledge for every student in the lessons on a regular and planned basis"<sup>16</sup>.

Broad universal knowledge, erudition makes it easier for the teacher to make interdisciplinary connections with the humanities in the educational process, to reveal to schoolchildren the fact that science and artistic culture are created by one (single) source - the creative activity of a person: "even in geometry. Poetry also needs inspiration"<sup>17</sup>.

In our study, the named criterion is revealed by the following indicators:

a) to know the etymology (origin) of the terms used in the textbooks of the taught subject.

It is self-evident that for a teacher, knowing the specific language of the taught subject is one of the important components of his speech culture. The need to include this indicator is also justified by the situation of introducing students to the etymology of the studied scientific terms and integrating and uniting the schoolchildren into the universal culture, therefore, it must be said that today the relevant information is not given enough in modern textbooks<sup>18</sup>. In addition, it should be noted that the teacher's work on the etymology of scientific terms facilitates the formation of scientific concepts in students.

b) necessary knowledge in the field of artistic culture.

According to the conducted surveys, not all pedagogues have good knowledge and information on the problems of Balinese culture and its interactions with scientific knowledge. For example, 153 math.

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<sup>14</sup> Бенин В. Л. Теоретико-методологические основы формирования и развития педагогической культуры. Автореф. дис. ... докт. пед. наук. - Екатеринбург: УГПТУ, 1996. - 32 с.

<sup>15</sup> Моносзон Э. И. Учитель и всестороннее развитие личности школьника. - М.: Знание, 1986. - 80 с. - (Новое в жизни, науке, технике. Сер. "Педагогика и психология", № 7).

<sup>16</sup> Шербаков Р. Н. Наука против антинауки на уроках физики //Физика в школе, 1993, № 3, с. 25-31.

<sup>17</sup> Пушкин А. С. Отрывки из писем, мысли и замечания. Соч. в 3 т. - М.: 1987. - Т. 3. - С. 440-446.

<sup>18</sup> Диркова Е. Ю. Школьная картотека физических терминов. //Физика в школе, 1993, № 3, с. 18.

physics, chemistry teachers "What do you think science and artistic culture have in common?" to the question, only 7 (i.e. less than 5%) teachers answered that in one way or another, both science and artistic culture are created by the creative activity of a person. In this regard, it should be noted that the authors of natural-mathematical science textbooks (for ordinary classes) do not pay due attention to the interaction of the main content with general cultural issues. Individual successful attempts: M.I. Bashmakov's mathematics textbook for grades 10-11, N.M. Shakhmaev's 8th grade physics textbook test, example (1982) - in this sense, it is seen as an exception to the general rule.

v) knowledge of additional (public scientific, biographical, etc.) literature on science, including literature written by the classics of science.

Reading additional literature in the field of educational science is an important tool for deepening and expanding the knowledge, erudition of the pedagogue, and serves as an integral indicator of his universal competence. In this, it is of particular importance to study primary sources - the classics of science, including books and articles written by "programmatic" scientists.

The above-mentioned criteria and indicators were positively evaluated by all respondents in the survey conducted among 234 teachers of mathematics, physics, and chemistry. The results of the conducted research show that they have a sufficient level of generalization and at the same time specificity and concreteness to perform an approximate (approximate) assessment of universal competence during professional development courses.

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