



## Interdisciplinary Integration as a Factor of Complete Worldwide

*Jumanov Akhmadjon Mirzayevich*

*Associate Professor of Kokand State Pedagogical Institute*

*Yigitaliyev Mirzoxid Nematjon oqli*

*A student of the Kokand State Pedagogical Institute*

**Annation.** *In this article, from the philosophical point of view of the integration of sciences, the integrative issues of things and phenomena in nature are covered. In particular, it helps to have the correct understanding due to integrative ideas about man and nature, the structure of the Coyote, the Earth and the Sun, the moon and the stars.*

**Key words:** *integration and differentiation of sciences, integration of natural sciences, natural-scientific outlook, integration of chemistry and biology.*

Intelligent man (Homo sapiens) has been through many trades since his emergence as a biological species. Due to his weakness in the face of the forces and phenomena of nature, man tried to describe it differently and to the extent of his own mind. Explaining the structure of the universe in the dimensions of the Earth, Sun, Moon and stars itself has led to the creation of many erroneous thoughts, ideas, opinions, hypotheses and theories.

The dialectics of life and death, health and disease, the organism and its surrounding environment, the relative extents and prospects of the products of the natural and artificial and synthetic material worlds, and the interrelationship of biomaterial and bioenergetic boundaries have also generated much debate. .

Many global geological, tectonic, meteorological and other phenomena in the atmosphere, lithosphere and hydrosphere caused different interpretations of past processes on the planet Earth. Even the very nature and causes of such phenomena as reproduction, sex, and the birth of a boy or a girl were interpreted differently and unnaturally. The complexities of the biosphere, where living units exist, have presented new puzzles to humanity.

The sciences that have already appeared and managed to "find" the objects and subjects of their research, that is, concrete and worldly knowledge, shed light on many controversial issues. Socio-humanities revealed the laws of nature and society relations. Advances in technique and technology, industry and economy have led to the creation of certain and specific views of the world.

The integration of natural sciences such as physics, chemistry, biology, geography, geology effectively serves to create a general scientific picture of the world. However, separate fields of knowledge - natural, technical, social and humanitarian sciences - cannot form a complete picture of nature, society and man, their socio-natural phenomenon, standing apart from each other.

Philosophical outlook is clarified with the help of natural-scientific view of the world. For this, the most important achievements of the natural sciences should be integrated. Just one example: Benjamin Franklin (United States of America) invented the lightning rod and saved mankind from the scourge of the "tongue monster".

If we consider that 15,000 lightning strikes the Earth's surface every second and how many people die prematurely because of it, the value of this invention increases even more. Another unique American talent, Thomas Alva Edison, surprised the intellectuals of the world by making 4093 inventions and discoveries during his lifetime.



Since it is the highest form of science, it means that objective reality is eternally elevated to the level of ideality. It is known that sciences have already been divided into large groups that study living nature, inanimate nature, and social spheres according to their study objects and research subjects. However, it is a natural process for various sciences that study the material and spiritual world to interact.

At the same time, due to the narrowing of the scope of research, fine specialization in each of these disciplines inevitably occurs. Two objective trends in the development of sciences - differentiation (branching) and integration (combination) - as a result, have an incomparable place in the creation of a holistic, general scientific picture of the universe.

Many things and phenomena, such as the close relationship between the organism and the environment, the relationship of celestial bodies, the way life on Earth depends on cosmic factors, the connection of changes in the life of human society to geological and astrophysical phenomena, the connection of historical events on Earth with the activity of the Sun, are known due to the successful participation of the development of science in learning about the universe. it happened.

Such global scientific-creative, social-educational and anthro-noospheric processes continue unabated. Using philosophy and natural sciences involved in solving the most important and general issues and problems in the "world-man" relationship with its worldview, methodological, axiological, epistemological, ontological, praxeological, humanistic, educational, communicative, critical, integrative, prognostic and sociological functions. will be able to comment accurately and fully, objectively and in the mirror of reality

For example, chemical information should be widely reflected in the content of biology education. The chemical composition of the earth, the biogeochemical significance of soil and air, and the chemical relationships between living and non-living nature have become clear to mankind thanks to the integration of these two sciences. Now there is a need to cover these issues in the content of school subjects. However, there are some obstacles to solving this pedagogical problem: 1. Shallowness, dispersion and unsystematic nature of chemical materials in the content of biological educational literature. 2. Inadequate chemical literacy of biology teachers. 3. Inadequate organization of scientific and methodical support. 4. The establishment of intersubject communication has not been studied as a separate research object and subject. 5. Non-organization of integrative courses, etc.

At the same time when old and secular sciences such as biology and chemistry are intensively intermingled, there was a need to eliminate such defects in the education system. In this, it is necessary to call for help the information of such sciences as chemistry, physics, biology, geology, geochemistry, geodesy, geometry, biogeochemistry, cosmochemistry, biogeography, anthropology, ecology.

It's no secret that Uzbekistan, a country of great opportunities, has great chemistry. It is a didactic requirement that the achievements of the chemical and processing industry become a structural component of the biology course. In fulfilling such a task, it is appropriate to use President I.A. Karimov's work "Uzbekistan-towards a great future" as a guide.

The correct answer to such questions as the chemical composition of organisms, the continuous exchange of matter and energy with the organism and its surrounding environment, growth and development, and reproduction can only be found due to the cooperation of biology and chemistry.

Due to the didactic cooperation of the subjects of chemistry and biology, students' knowledge of these subjects will be strengthened, and their attitude to material and spiritual values will certainly change in a positive direction. In addition, the principles of patriotic education of chemistry and biology education are also fulfilled.

Issues such as lack of knowledge about the material and social world, the correctness and completeness of the general scientific picture of the world, and the finding of scientific and educational answers to the existing problems will be positively resolved through the strengthening of interdisciplinary communication, of course.



## Literature:

1. Omonov H.T. The role of integration and differentiation of sciences in creating a scientific landscape of the world. // "Social and humanitarian sciences in education" magazine, No. 3, 2007. - pp.135-138.
2. Jumanov A.M. Chemistry: Methodological problems and some issues of teaching // Kazakh studies. - 2010. - No. 3-4. – p. 112
3. Jumanov A.M, Ziyomiddinova M. Use of innovative technologies in the education system for integration purposes Asian Journal of Multidimensional Research (AJMR) <https://www.tarj.in> 220 Vol 10, Issue 9, September, 2021
4. Jumanov A.M. Specific aspects of teaching chemistry on an integrative basis in biology undergraduate education. "Smart technologies in education" Proceedings of the international scientific and practical online conference dedicated to the 15th anniversary of the branch and in honor of Academician V.B. Kudryavtsev December 24, 2021 Tashkent.c. 955-959.