Ways To Increase The Effectiveness Of Education In An Integrated Environment.

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Annotation: The article provides a scientific analysis of the growing role of integration in the education system in modern society and ways to implement the integration of education, science and industry.
Keywords: integration, intellectual wealth, compositional, communicative, competent, category, modernization, integrated education, globalization, motivation.

The fact that the development of society takes place in general features, along with the positive aspects of development, but also its negative consequences, poses new challenges to humanity. This is directly related to the processes of globalization and integration. The process of globalization depends on the economic, political, military, spiritual and religious potential of states. The process of globalization has also accelerated the process of integration of industries, and at the same time requires that industries operate harmoniously.

The demand for intellectual wealth, high knowledge and potential in the XXI century implies the education of young people who have modern knowledge and skills, who are able to take responsibility for the future of the country, as a crucial factor in the path of sustainable development.

The development of society and the rise of people's lifestyles cannot be imagined without the active integration of education, science and industry. Commenting on the term integration, it is derived from the Latin word "integration", which means the restoration of certain units. In practice, the term refers to the processes associated with the unification of two or more subjects around a single goal [1,193-203].

The integration process involves compositional and communicative components that affect different levels of expansion. Compositional parts are related to content and structure and require the identification of informal and normative boundaries of merging subjects. The communicative part, on the other hand, implies a change in the form of the relationship between the content and the subjects, their principles and mechanisms in the new context.

The role of integration in the education system in modern society is growing, and the educational activities of general secondary education institutions are reflected in their creative and scientific abilities as a result of the personal development of university students. It should be noted that a traditional education strategy limited to the acquisition of the necessary knowledge and skills does not adequately respond to the development of the individual as a cultured and competent individual, reducing the individual’s need for acceptance of universal and cultural values. One of the solutions to this problem is the problem of integration in the educational process, which is reflected in many studies and scientific sources. The introduction of integrated approaches to the practical processes of the education system allows to know the historical development of integration in the conduct of

applied research, to observe, analyze and select the most relevant approaches available in accordance with national pedagogy.

In this regard, we agree with the opinion of the researcher A. Tajhanov that integration in education is a process of reforming the general structure of education, helping students to understand the information provided, to form their understanding and ideas about the interaction of all processes around the world. [2,1092].

The scientific status of the term integration was first given in the theory of integral calculus in the XVII century (Sh. Newton, G. Leibniz). Here, integration is seen, on the one hand, as an inverse process to differentiation, and, on the other hand, as a specific type of integration [3,170].

In education, the idea of integration was put forward by Ya.A. Kamensky, and this multifaceted concept was explained by Spencer in the XVIII century [4]. Theoretical foundations of integration as the most important concept in social pedagogy were laid by B.M. Kedrova, V.P. Kuzimina, V. We can see in the scientific researches of A.Lektorsky, V.N.Maksimova, A.P.Ogurtsova, A.I.Rakitova, V.S.Stepina, M.G.Chepikova, B.Ch.Yudina and other researchers [5,316].

Today, this scientific category is adapted to the context of pedagogical science. In the research of A.Ya. Danilyuka, NI Kondakov, Yu.S. Tyunnikov and others, integration is described as "principle, process and result", "unification of all scattered parts" instead of "integrity, integrity, systematization, generality" [6,21].

Emphasizing the need to understand the integration of sciences as a form of their interaction, BM Kedrov believes that there are common research goals and objectives in different areas of knowledge, a single system of knowledge is needed to solve and implement problems [7,81-85] .

In the context of modernization of the education system, its integration is an innovative paradigm, which can form a creative, competitive personality in the context of inseparable interaction and cooperation between the types of education. as a trend and as an integrative common subject in the system of human relations and relations with the world.

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As a result of scientific research, we have found that integration processes have been described differently in many studies and have analyzed the features that support and differentiate each other (Appendix 1).

At the beginning of the XXI century, Uzbek pedagogy is actively developing. Given the current stage of modernization of education, special attention is paid to the development of innovative development trends, integration educational programs, the introduction of integrated technologies. The result is a system of integrated educational institutions such as preschool and general education, schools and higher education, schools and lyceums. All this, according to VN Maksimova, allows to consider integration as a "principle and factor in the development of modern education systems" [9].

As a result of the analysis, we fully agree with the following scientific grounds stated by them, given their importance for our scientific article:

The research conducted by T. Lomakin considered two aspects of integration in the field of pedagogy: the integration of the content of education and the interaction of all educational systems [10,221]. In support of this description, we recognize in our article that integration processes in education are, first and foremost, the collaboration of all types of education

systems toward a common goal, followed by the integration of educational content that serves specific purposes.

The research of A.Ignatov, V.M.Maksimova, N.M.Belyankova and S.Yu.Polyankina states that in pedagogical educational processes it is effective to establish interdisciplinary relations, such as interdisciplinary relations, through the organization of integrated courses, departments and modules [11,76- 82] and this is also one of the most plausible descriptions in achieving the goal of our study. In our research, we want to provide a theoretical and practical basis for improving the quality of education and ensuring a high-performing learner who determines the quality outcome. We emphasize that it is an effective way to achieve this goal by conducting the learning process in interdisciplinary, interdisciplinary, interdepartmental integrated methods to form a high-performing student, supporting the above description of integration.

Joining the recognition of European scientists in the process of integration in education and its effectiveness as a factor that increases efficiency, we, together with our local scientists G.I. Muhamedov and U.N. Khodjamkulov, emphasize the practical importance of integration processes in education, material and financial, technological, we have argued that there is a need to mobilize all resources in the field of information, methodological and human resources [12,280].

As a result of the analysis of integration research, we classify the integration that corresponds to our research object into several types:

- integration of educational content;
- Integration of scientific and theoretical approaches, methods, practices and technologies in the implementation of new innovations in education;
- integration of theoretical and practical activities;
- integration of all types of education in the field of education into a single system of continuing education (preschool education, general secondary education, secondary special education, higher education, postgraduate education, special and additional education, etc.);
- Integration of all participants interested in the educational process and learning outcomes in a single educational context (teachers, learners' parents, social order consumers, researchers, social, economic and cultural groups, special socio-cultural groups (disabled, migrants), etc.) ;
- Integration of national education in accordance with a single global process.

After a thorough analysis of the classifications given for integration, we recognized that integration in education is manifested mainly as two concepts, namely, the integration of the education system and the integration of educational content.

Emphasizing the inevitability of deep integration processes in modern education, IE Kashekova said: “The modern world is built on an integrative basis, which requires multifaceted knowledge, competence, the ability to correctly select and use the flow of information. From this point of view, we must conclude that education should be built on an integrated basis, to acquaint people with the world and help them to master it ”[13].

The issue of integration of education, science and industry in Uzbekistan is not a new phenomenon. Although there is a theoretical basis for this in the education system, practical results are also sufficient. First of all, the National Training Program sets tasks to "ensure the effective integration of education, science and industry, the development of state requirements for the quantity and quality of trained personnel, as well as the formation of orders of non-governmental organizations, enterprises and organizations" [14].

As in any field, the "human factor", ie the knowledge of a history teacher, plays a crucial role in increasing the effectiveness of teaching history, as well as becoming a mature specialist in his field. Experience shows that in the work of the teacher is often based on specific historical

facts, concepts, "space", "time", historical archival documents, drawings, diagrams, statistics, local lore materials, especially in the organization of local lore of the independence period. distance from the methodology not only negatively affects the effectiveness of the lesson, but also threatens to cause the student sitting in the classroom to lose interest in the subject being taught for a lifetime [15].

The national model of training states that "Continuing education is the basis of the system of training, a priority area that ensures the socio-economic development of the Republic of Uzbekistan, meeting the economic, social, scientific, technical and cultural needs of the individual, society and state." This definition reflects the integration of continuing education with science and industry. The economic needs of the individual, society and the state are met by production, and the scientific and technical needs are met by science.

But at the same time, the presence of the following problems in increasing the efficiency of education and strengthening its impact on the national economy demonstrates the need to further improve the integration system in education, especially in the field of pedagogy:

• weak links between the education system and the labor market;
• Insufficient connection between "education-science-production";
• the need to further strengthen the material and technical base of educational institutions;
• Improving the quality of teaching staff on the basis of improving the scientific and pedagogical basis of training;
• increase the efficiency of the market of educational services with the need to create private entities, etc.

The integration of science is the basis for changing the content of education, and in the modern education system we must take into account that the development of the individual as a core value of the family, school, society and state is related to education. Integration is a complex scientific, pedagogical and social factor that determines the timely implementation of the development of our education system for this purpose.

From the given definitions and descriptions, it is understood that the concepts of integration, continuity and coherence form interdependence and integrity. Substantiating the natural interdependence of these concepts from a scientific point of view will undoubtedly further accelerate the integration processes between them, serving for the effectiveness of all three. This means that the development of any industry or sector depends, first of all, on three factors: the interaction, rounding and integration of education, science and production processes. The mutual integration of this trio will lead not only the industries, but also the subjects of this system to turn to innovative processes.

We would like to explain the growing importance and necessity of the integration of education, science and industry for the following reasons:

- The growing impact of globalization on education, science and industry;
- a sharp reduction in the timing of scientific development and implementation of results;
- Increased competition in the field of scientific research;
- growing competition in the manufacturing sector;
- The growing dependence of human resources on the basis of efficiency in science and industry;
- Immediate loss of relevance of scientific developments, research results;
- equal interest of all three entities in integration.

The importance of the education system in the integration of education, science and industry depends on the knowledge and skills of production staff, and this shows that the education system also needs to be constantly changed and improved. The end result of these changes will be reflected in the skills and knowledge of the staff.

It is known that production always needs an innovative and scientific approach, which also applies to different levels of production, the correctness of which no one doubts. Because production is no longer limited to its narrow field. Scientific methods and highly qualified personnel expand the possibilities of production. Science today cannot exist in isolation from production. The era of "pure" scientific experiments has passed, "for science" is a dead formula, and now it has been proved in practice that high results can be achieved only through science and production.

At the heart of integration is the law of synergy (Greek "synergos" - "coordinated", "mutual partner"). Under the law of synergy, no entity can combine all the aspects that serve to ensure the effectiveness of its activities. Any subject always feels the need to cooperate with other subjects. The combination of these aspects in different subjects serves to increase efficiency.

According to the classifications given in the literature, we can see that the types of integration are classified as follows:

1. In terms of development: horizontal, vertical, diagonal integration.
2. According to the level of integration: mutual cooperation, cooperation and full integration.
3. By areas of activity: production, research, education, marketing, investment and innovation integration.
4. According to the legal basis: share and joint integration [18,23].

Based on the above classifications, it is expedient to define the integration of education, science and industry as a vertical in the direction of development, interaction according to the degree of integration, production, scientific and educational integration in the direction of activity. In general, the above classification refers to the mutual integration of more economic sectors and business entities. Given the general goals and laws of integration, it can be said that it also applies to the integration of education, science and industry.

In modern theory, it is possible to observe different approaches to the integration of science and education. In one such perspective, the process is seen as an internal and inter-network integration. Internal network integration refers to the integration of science and education within one area of public administration. The meaning of intersectoral integration is much broader, ie it covers several areas of public administration and is interpreted as the convergence of education, science and industry [19].

Pedagogical potential, innovative environment, innovative education and school-laboratories are important for the effective integration of education, science and industry. These components reflect the role of scientific and pedagogical potential in training, the principles of development, modernity, innovation, modeling, the combination of theory and practice, as well as important aspects of the integration process.

In the process of integration, these areas should be in the sequence of education, science and industry and should be considered as a matter of course. The advancement of science from education, production from science or education shows that there is no natural relationship and integration process between these fields. This approach shows that science is based on the principle of "Science for Science", which is separate from development and life, and in education there is no harmony of theory and practice, and production is based on life experiences rather than scientific achievements. There is a certain development in this relationship of the industries, but we can not call it a modern, competitive production relations. In order to ensure integration, it is in line with scientific logic that production should be in education and science, and education, in turn, in the consumer relationship to science. This determines the level of the component of scientific and pedagogical potential in the integrated approach - the superiority of scientific potential in the field of science and education over the representatives of the production sector. We argued that the direct and targeted integration of education with science, industry and the economy in the context of

society is a factor that increases the effectiveness of education and is the most effective cooperation in boosting the country's economy.

Integration between types of education is reflected in the creation of innovative models aimed at improving the quality of teaching subjects by attaching professors and teachers of higher education institutions to secondary schools, academic lyceums and colleges. By applying the theoretical knowledge acquired in practical processes, the student believes that human-technical, human-society, science-nature relations are a comprehensive process, and important competencies are formed between his inner world and society. The competencies acquired by the learner as a result of the integration between the types of education help to be prepared for different areas of the profession, overcoming the problems that he / she may face in his / her post-training activities.

In recent years, one of the urgent tasks is to introduce innovations in the field of education and to apply the tested methods and tools in a creative way to ensure the integration between the types of education in many countries, their composition, principles and mechanisms.

In order to achieve these goals, in recent years in many countries around the world, the introduction of a cluster approach in education has become one of the most important conditions for increasing the speed and efficiency of the integration of education, science and industry. In clustering education, it is important to take into account, first of all, the wide-ranging relationships between the elements integrated into one whole [20].

The development of integrated education is associated with the correct, pedagogical basis of the form and content of education, which requires an in-depth analysis of educational, pedagogical, developmental goals. Interdisciplinary integration can take place in a pedagogical community where there is a healthy environment, mutual respect and creative collaboration.

We predict the success of the educational process on the basis of an integrated approach as follows:

- in the learning process in an integrated approach, the learner imagines the nature as a whole;
- The student's opportunities increase and he learns nature according to his abilities. In this way, he thinks logically and makes independent observations on existing events, causes and their solutions, as a result of which his communication, comparison, comparison, generalization and inference skills, non-standard level of thinking develop.
- In such educational processes the level of creativity, professional competence of the teacher increases.

Thus, the organization of lessons in an integrated form guarantees not only the quality of the lesson, but also the comprehensive development of students' worldview. In conducting integrated learning processes, it is advisable to provide the student with interdisciplinary, interdisciplinary connections, otherwise the student may experience misunderstandings during the integration, become abstract, and give incorrect conclusions at the end of the process.

The study predicted that the integration of the educational process on the basis of a cluster approach in the development and implementation of interdisciplinary competence requirements will give good results, and the practical experience of the next chapter proved to improve teachers 'knowledge, identify and develop students' abilities.

Today, especially in Tashkent region, a number of scientific, methodological, organizational and practical work on the cluster reform of the education system is being carried out, scientific research is being conducted. As a result, a number of positive results have been achieved in the formation of a harmoniously developed generation in education and improving the quality of education, based on the requirements of a market economy. In particular, our study provides a set of experiments that integrate "kindergarten-school-

university". -laboratory ”innovative experimental platforms, in which groups of methodological and practical assistance in identifying and developing children's talents.
The integration process in the education system we provide allows each subject to achieve the following goals:
- further enhance their position in the development and implementation of new innovative approaches to education, using the opportunities of all interested partners;
- to be able to effectively use the available resources of partners to achieve their specific goals, based on common goals.
In this way, each of the subjects unites around a separate and common goal, and is interested not only in increasing their efficiency, but also in achieving high efficiency of other subjects.
In short, in a market economy, the economic and social significance of the development of science and education and the strengthening of the effectiveness of education, which has a positive impact on it, is reflected in the following:
• The acquisition of knowledge by a person involved in the production process, the formation of human capital, its development is carried out by the educational complex;
• The level of education of members of society is an important factor in determining the socio-economic development of the state and the well-being of the population;
• The development of the economy of society occurs as a result of the strong influence of human knowledge, which has become a key factor in increasing the efficiency of production;
• Transformation of information into leading knowledge in various systems of education and expanding its importance
• The growing importance of the national education system in the division of labor in the country, etc.
Here are the following activities of integration at different levels and directions, which are a priority factor of educational effectiveness:
- Integration of the country's science with world science;
- integration of education, science and industry;
- integration at the state, regional and institutional levels;
- Interaction of educational institutions in various fields;
- integration of all types of education in the field of education into a single system of continuing education (preschool education, general secondary education, secondary special education, higher education, postgraduate education, special and additional education, etc.);
- membership at different stages of education (from the point of view of general education, primary education, secondary education, high school);
- integration of knowledge in various fields (science, culture, art, economics, etc.);
- Integration of professional knowledge with scientific research (theoretical and practical study of professional knowledge based on the theory of competition);
- Interdisciplinary integrated education (integration of disciplines in general education curricula);
- Integration of interdisciplinary and intra-topic knowledge (continuity and coherence of topics based on a particular discipline);
- integration of teaching methods, technologies, forms of organization;
- integration of different participants in the educational process in a single educational space (teachers, students' parents, special socio-cultural groups (people with disabilities, migrants), etc.);
- integration of education and culture of all participants of education (leader, employee, teacher, learner, parent, applicant for social order), etc.
The process of integrating the education system was carried out on a cluster basis, and a number of scientific, methodological, organizational and practical work was carried out to

reform it. As a result of these efforts, positive results have been achieved in forming a harmoniously developed generation and improving the quality of education in line with the requirements of a market economy.

Therefore, we believe that improving the quality of education in the process of integration is reflected in:

1. Ensuring the integrity of knowledge, working methods, skills, abilities and qualities of future professionals, as well as vocational guidance, the combined acquisition of pedagogical and technical knowledge by students in preparation for professional activity is effective in providing society with a mature, competitive specialist.
2. All the competencies of the teacher in the management of the quality of education in an integrated environment, the integration of the selected methods and tools to achieve the desired result in the planning, design, technology of the learning process to improve and achieve high results.
3. The deepening and improvement of knowledge, skills and abilities of students on the basis of interdisciplinary, interdisciplinary individualized and differentiated education is a guarantee of its future success.
4. The educational form and methods, together with the conditions that effectively organize it and the methods and technologies used, help to ensure quality education in an integrated environment.
5. In the process of integration, the student's talent is developed and a quality graduate is ensured through individual work to develop students' thinking, creativity, motivation, focus on independent learning, self-development, control, interaction of components of person-centered education such as assessment.

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