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The concept of integration in the pedagogical process

The article discusses various approaches to the definition of integration in the Soviet and foreign pedagogical literature. It is emphasized that since it's a long history of development the concept of integration in the pedagogical process has been changed rapidly with various forms and content. Today, there is a certain system of views and approaches in defining integration in the pedagogical process, revealing different aspects of its content. In the article, integration occurs as a merger of training and upbringing, within a common approach and content well-organized process, which is resulted in students' knowledge and skills acquisition. The author gives examples from the views of pedagogical scholars on the concept of integration in training and upbringing that emerge at each stage in accordance with science and education development. At present, «Kazakh Language and Literature» subject is based on the updated the secondary education curriculum proves the idea of integrated learning.

Keywords: pedagogical process, integration, teaching and upbringing, interdisciplinary approach.

The idea of integrating into the pedagogical process was raised when the overwhelming stock of knowledge accumulated by philosophical science could not be stored within one branch of science. Further, it is resulted in the split of different branches of knowledge from philosophical science. The emergence of new scientific disciplines and scientific schools often arises from the merger of existing ones. As a consequence, the differentiation of sciences (the emergence of scientific disciplines and schools) is a way of integrating existing science disciplines and schools. For example, as a result of the synthesis and integration of biology and chemistry, biochemistry has emerged. The same phenomenon exists in geochemistry, i.e. integration of geology and chemistry; psycholinguistics – on the one hand psychology, on the other - synthesis of linguistic sciences. Correspondingly, the emergence of physical chemistry or chemical physics is the result of integration, the interconnection of the internal content of physics and chemistry. Biogeochemistry is the result of the interaction of three scientific disciplines, such as biology, geology, chemistry. Therefore, the differentiation of sciences has led to the transition to separate branches of science. From the history of pedagogy we can observe that the natural connection between disciplines and real life phenomena has become distorted between different knowledge.

John Amus Comenius, a philosopher-humanist, public figure, was among the first who made attempts who solve the problems of ancient pedagogy and tried to implement effective principle of teaching process. Comenius believed that true knowledge could be found in things as they existed in reality and when one came to understand how they came about. According to the theory of evolution, the scholar believes that there is no place for a sudden change in nature, including education and upbringing [1]. He pointed out the importance of the knowledge, which is aimed at shaping the universal image. Moreover, he highlighted that «areas of mutual interest must be taught in integration» [2].

The first scholar, who made an attempt to prove the necessity of integration in the pedagogical process, was J. Herbart. It covers four stages of training: transparency, association, system and methodology. The first two stages were proposed by Herbart to gain the knowledge, and the latter were aimed at establishing a «bridge for new knowledge acquisition» [3]. He admits that the «intellectual ability» represents human capacity to revive previous knowledge, which is relevant to the current one.

The didactic significance of the relationship between the subject and the phenomenon, which contribute to significant changes in the content of training and upbringing, K. Ushinsky gave a unique psychological and pedagogical proof. He separated the objective relationship between the subject and real-life phenomena from the various associative links in his book, «A person as a subject for upbringing». According to his theory, the idea of interdisciplinary approach has been reflected as a part of the problem of general education systematization. He paid special attention to the importance to consolidate the accumulated knowledge. The connection between the concepts and their development in the system of general disciplines contributes to the expansion and students' knowledge acquisition, at the end of the study, it becomes a full-fledged worldview [4].

Thus, in the XVII-XIX centuries pedagogical scientists have recognized integration as the need for education based on the desire to link the learning process with real life. He considered that the integration of the subjects and phenomena studied are in a unbroken chain which ensures the harmonious development of the individual.

For the first time in the UK, practical implementation of integrative learning initially launched in XX century. European scientists have begun the courses called «collaborative», aimed at integrating professional knowledge with practical activities. Later these courses became popular in many European universities and colleges in the United States. Foreign experts regarded collaborative learning as a special kind of integration. It has a positive impact on pedagogical processes as a whole, and has provided a new qualitative type of training that will allow the individual to have a comprehensive development and deeper learning [5].

Later in the 20th century, students were engaged in the learning process by connecting skills and knowledge from multiple sources and experiences; applying skills and practices in various settings. Problems of integrated studies approach in Soviet pedagogy were thoroughly studied by V. Stegin, N. Bunakov, V. Vodovozov, B. Ananyev and others. They argued that the integrated studies is the process of making connections within a major, between fields, between curriculum, cocurriculum, or between academic knowledge and practice, it involves bringing together traditionally separate subjects so that students can grasp a more authentic understanding. They also pointed out several priorities for integrated studies approach: a variety of knowledge application; a wide range of resources; shaping worldview [6].

At this stage, the attitude of leading teachers to integration has been reflected in the development of curriculum. It was called an «integrative approach». It is targeted at establishing relationships between school and real life. It has been distinguished by the following three major notions: knowledge, skills and capacities. Despite the fact that these components were not indoctrinated with the internal logic of separate subjects, they did not establish a link between them, despite the fact that they tried to direct the content to a single system of education. The integrated curriculums have been criticized by a great number of teachers because they strongly believed that «excessive integration can lead to the disappearance of disciplines as a separate branch of science». However, the necessity to apply a comprehensive approach has had a positive impact on the development of curriculum and programs as well. Scientists often point out that the comprehensive approach gave the opportunity to combine knowledge, skills and capacities around the main idea of education. The way to implement this approach is crucial [7].

In the 1930's of XX century the introduction of new curriculum was realized. It was assumed that its structure would be based on the subject matter. In this regard, there was a task to build a bridge for setting different knowledge into one system. That is the main problem of integrative learning which still remains controversial. Due to practical difficulties the provision was implemented only in the middle of the 50s.

In the 50s the integrated studies approach in pedagogical process was under systematical discussion. Under the notion of regularity, scientists became more aware of establishing relationship between the various phenomena from physiological and psychological angles. Based on this conception, B. Ananyev discovered that «human grasps the reality through senses and there is an integration in material world» [8]. Under his supervision «a coordination table» was designed, which outlines the stages of development of initial scientific concepts in curricula; so that teachers and learners could use the data from one subject in another.

Thus, the scholars showed a shift in a content of learning process. They determined that knowledge depends on the content, the structure of the learning material, and the structure of the lesson. They tried to change the existing educational standards and build new curriculum.

At the end of XX century pedagogical scientists greatly contributed to the development of ideas and concepts of integrative learning that revealed the essence of the concept. Since the integrative learning implies the combination of general knowledge two separate subjects. This kind of merger involves the coordination of the content of various academic disciplines and it is determined by the purpose of general education and the objectives of training and upbringing.

Today, integration in pedagogical process has been studied from a variety of perspectives, such as general theoretical and pedagogical aspects of integration, problem of integration and differentiation of scientific knowledge, problem of practical accumulation, as well as stream of integration processes in vocational training.

V. Bezrukova, G. Dobrov, V. Maksimova, O. Sichivica, I. Yakovlev, and et al. Carefully studied pedagogical aspects of integrative learning. Yakovlev once pointed out the importance of integrative approach in society as a leading trend in science and education, and determined the conditions that contribute to the successful integration and «need to be analyzed from the theoretical point of view» [9]. Dobrov, in his

turn, emphasizes that the science is filled with a new knowledge-based education - the adoption of an effective controlling threshold that ensures a complete knowledge acquisition. Among such provisions is the introduction of scientific and theoretical issues in the learning process, including applied tasks; use of cybernetical machines in the learning process. It is said that the use of modern techniques that help develop skills and acquire knowledge is essential at all stages of the learning process [10].

In order to reveal the nature of integrated studies approach, it is vital to explore the content of comprehensive education through interaction of different science branches. N.Chernyshevsky noted down, «It is impossible to ensure cognitive and physical abilities development of students until a teacher provide information from various resources» [11]. The problem of integration of scientific knowledge B.Kedrov, M.Chepikov, G.Dobrov, and other scientists regarded integration as an integral part of the scientific knowledge differentiation. In the development of scientific knowledge, Kedrov has distinguished two notions as differentiation and integration. Differentiation is the inverse of integration. It is a framework for effective teaching that involves providing different students with different avenues to learning in terms of: acquiring content; processing, constructing, or making sense of ideas; and developing teaching materials and assessment measures so that all students within a classroom can learn effectively, regardless of differences in ability. Integration involves the combining of two or more academic disciplines into one activity [12]. Kedrov defines integration as the framework that ensures creating something new by thinking across boundaries. Chepikov, in his turn, describes the integration process as «the most favorable conditions for disclosing the major secrets of the material world as a result of the synthesis of different sciences and scientific knowledge» [13].

The problem of practical integration in pedagogical process is reflected in many scientific papers (S.Arephyeva, S.Burilova, V.Guzeyev, V.Klenikova, V.Panfilova, V.Synnikov, S.Strashnyuk and et al.). Practical integration refers to the usage of different approaches and teaching methods. For this purpose, first of all, the course and its components must be in integration. By introducing the various ways of integrative approach in pedagogical process, the authors emphasize the positive impact in training and upbringing, and has highlighted several advantages: a wide range of knowledge; the ability to rely on previous knowledge when students learn new material; shape worldview, give the basics of scientific knowledge and ensure skills acquisition, as a result of academic interests.

Today, much attention is paid to the use of integrative learning at secondary and higher education institutions. Different studies (I.Bogatova, V.Ivanov, O.Kozlova, E.Strojevskaia and others) show that interconnection of academic disciplines in general, polytechnic and vocational education. Vocational training focuses on determining the successful integration processes and the impact of «teacher training». The integrative approach in education guarantees improving the personal and professional aspirations of the students, to boost their self-esteem and to provide the quality training.

In this regard, we can take as example an updated model curriculum on the «Kazakh Language and Literature» subject for 5-9th grades of basic secondary education, which is implemented in non-Kazakh schools since 2017. Previously, «Literature» was taught as a separate subject, and its content was rather complicated with intensive reading of fictions. Therefore, this led to non-effective learning process. Similar and many other problems have proven the necessity to provide a reliable, future-oriented curriculum that will not aggravate the problem of «Kazakh Language Teaching» (see Table).

T a b l e

Topics covered Integrated curriculum for Kazakh Language and Kazakh Literature (5th grade)

Kazakh Language	Kazakh Literature
1	2
Family traditions and holidays	M.Makatayev. «Tokta, balam, atan keledy artynda!» (Hold one, my kid, your grandpa is behind you)
School life. Well-bread one is the one with good manners	B. Sokpayev. «My name is Kozha» an extract from the novel
Animals and plants in Kazakhstan	Fairy tales and riddles about animals
The culture of ancient normads	The legend about Tumar Queen
Water is a life source	A.Tazhibayev «Syrdaria»
World biggest libraries	A.Kunanbayev «Don't be a boaster till u get no knowledge» poem

Table continuation

1	2
Health is above wealth	«The most precious wealth» fairy tale
My independent Kazakhstan	K. Saryn «Independence» poem
The secrets of the sky	Fairy tales and legends about stars
Computer accuracy	I. Altynsarin «True knowledge and art exist» poem
The friendship of nations living in the country	M. Magauin «Siblings» (extract)
Nature beauty	K. Myrzaliyev «Nature is a key to the universe» poem
Prominent people	G.Musirepov «Kazakh soldier» novel (extract)

The most effective way to integrate Kazakh Language and Kazakh Literature is to involve students to work with specialized discourses, including fiction or non-fiction. As a teacher sees the progress of students learning objectives gradually become more complicated by the communicative skills acquisition with help of different stylistic expressive means, and analyzing the characters of the story read in a target language (table 1). Thus, such a merger certainly may improve language skills [14].

Summing up the ideas and examples mentioned above, today we can assume that the integrated studies approach depends on various aspects of its content. A better comprehension of the essence, goals and objectives of integrative approach in training and upbringing process makes the implementation much easier. It can be resulted in comprehensive knowledge and skills acquisition, the enthusiasm for personal development, gaining the ability to think systematically, to analyze one's behavior reasonably, and obtain new knowledge and skills. All these things prove the significance and positive influence of integrative learning in the pedagogical process.

References

- 1 Коменский А.Я. Избранные сочинения / А.Я. Коменский. [Электронный ресурс]. — Режим доступа: http://www.studmed.ru/komenskiy-ya-izbrannye-pedagogicheskie-sochineniya-tom-1-tom-2_206232a9605.html.
- 2 Джуринский А.Н. История педагогики: учеб. пособие для студентов педвузов / А.Н. Джуринский. — М.: ВЛАДОС, 2000. — 74 с.
- 3 Болдырева Н.Ф. Биографические повествования / Н.Ф. Болдырева. — Челябинск: Урал, 1997. — 315 с.
- 4 Яковлев И.П. Интеграция высшей школы с наукой и производством / И.П. Яковлев. — Л.: Изд-во ЛГУ, 1987. — 28 с.
- 5 Васильева З.И. История образования и педагогической мысли за рубежом и в России: учеб. пособие для студ. высш. пед. учеб. заведений / З.И. Васильева. — М.: Академия, 2006. — 255 с.
- 6 Савельева Л.В. Междисциплинарные связи в средних техпрофучилищах строительного профиля / Л.В. Савельева. [Электронный ресурс]. — Режим доступа: <http://cyberleninka.ru/article/n/formirovanie-issledovatel'skoy-kompetentsii-v-sisteme-professionalnogo-obrazovaniya.pdf>.
- 7 Зверев Д.И. Взаимная связь учебных предметов / Д.И. Зверев. [Электронный ресурс]. — Режим доступа: <http://cyberleninka.ru/article/n/formirovanie-issledovatel'skoy-kompetentsii-v-sisteme-professionalnogo-obrazovaniya.pdf>.
- 8 Ананьев Б.Г. Теория ощущений / Б.Г. Ананьев. — Л.: Изд-во ЛГУ, 1961. — 122 с.
- 9 Хохлов Н.Г. Интегрированная система обучения в высшей школе за рубежом / Н.Г. Хохлов. — М.: МАСИ, 1990. — 43 с.
- 10 Кавуненко Л.Ф. Г.М. Добров и вопросы преемственности в науковедении / Л.Ф. Кавуненко, Т.В. Гончарова // Наука та наукознавство. — 2009. — № 1. — С. 13–15.
- 11 Чернышевский Н.Г. Избранные педагогические сочинения / Н.Г. Чернышевский. [Электронный ресурс]. — Режим доступа: <http://padaread.com/?book=183082>.
- 12 Кедров В.М. Классификация наук / В.М. Кедров. — М.: Мысль, 1985. — 187 с.
- 13 Чепиков М.Г. Интеграция науки / М.Г. Чепиков. — М.: Мысль, 1988. — 135 с.
- 14 Негізгі орта білім беру деңгейінің 5-9 сыныптары үшін «Қазақ тілі мен әдебиеті» пәні бойынша үлгілік оқу бағдарламасы. [Электронный ресурс]. — Режим доступа: <http://nao.kz/loader/fromorg/2/25?lang=kz>.

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Педагогикалық үрдістегі интеграция ұғымы

Мақалада кеңес және шетелдік педагогикалық әдебиеттердегі интеграция ұғымын анықтау түрлі қырынан қарастырылды. Педагогикалық үрдістегі интеграция ұғымы туралы алғаш сөз қозғалған

сәттен бастап оның бүгінгі күнге дейін түрлі форма мен мазмұнға ие бола отырып, қарқынды түрде дамығандығы айрықша көрсетілді. Бүгінгі таңда педагогикалық үдерістегі интеграция ұғымын анықтауда оның мазмұнының түрлі аспектілерін тереңдей аша түсетін белгілі бір көзқарастар жүйесі мен тәсілдер жеткілікті қалыптасқан. Мақалада интеграция – оқыту мен тәрбиелеу үдерісін бір мақсат, бір ұстаным мен мазмұнның төңірегінде ұйымдастырудың көрінісі, сонымен қатар оның қызмет көрсету нәтижесі оқушылардың бойында толыққанды жаңа білім мен дағдылардың қалыптасуы болып табылатындығы жайлы айтылды. Авторлар ғылым мен білімнің дамуына сәйкес әр кезеңде туындаған оқыту мен тәрбиелеудегі интеграция ұғымына қатысты педагог-ғалымдардың көзқарастарынан мысалдар келтірді. Қазіргі таңда орта білім беру үдерісінде интеграцияны қолдану мәселесіне дәлел ретінде авторлар жаңартылған «Қазақ тілі мен әдебиеті» пәні бойынша кіріктірілген оқу бағдарламасын негізге алды.

Кілт сөздер: педагогикалық үдеріс, интеграция, оқыту және тәрбиелеу, пәнаралық тәсіл, оқу бағдарламасы.

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Понятие интеграции в педагогическом процессе

В статье рассмотрены различные подходы к определению понятия интеграции в советской и зарубежной педагогической литературе. Подчеркнуто, что с момента первого упоминания до сегодняшнего дня понятие «интеграция» в педагогическом процессе динамично развивалось, принимая различные формы и содержание. На сегодняшний день сложилась определенная система взглядов и подходов в определении понятия, раскрывающая различные аспекты его содержания. Отмечено, что интеграция является выражением единства целей, принципов и содержания организации процесса обучения и воспитания, результат функционирования которых — формирование у обучаемых качественно новой целостной системы знаний и умений. Взгляд на понятие интеграции в процессе обучения и воспитания в разные периоды развития образования и науки автор раскрывает с точки зрения различных педагогов-ученых. Процесс интеграции в современном среднем образовании представлен на основе обновленной учебной программы по предмету «Казахский язык и литература».

Ключевые слова: педагогический процесс, интеграция, преподавание и воспитание, междисциплинарный подход.

References

- 1 Komenskii, A.Ja. Izbrannye sochineniia [Selected works]. www.studmed.ru. Retrieved from http://www.studmed.ru/komenskiy-yaa-izbrannye-pedagogicheskie-sochineniya-tom-1-tom-2_206232a9605.html [in Russian].
- 2 Dzhurinskij, A.N. (2000). *Istoriia pedahohiki [Pedagogy of History]*. Moscow: VLADOS [in Russian].
- 3 Boldyreva, N.F. (1997). *Biograficheskie povestvovaniia [Biographical narrations]*. Chelyabinsk: Ural [in Russian].
- 4 Jakovlev, I.P. (1987). *Intehratsiia vysshei shkoly s naukoj i proizvodstvom [Integration of high school with science and practice]*. Leningrad: Izdatelstvo LHU [in Russian].
- 5 Vasil'eva, Z.I. (2006). *Istoriia obrazovaniia i pedahohicheskoi mysli za rubezhom i v Rossii [History of Education and Pedagogical Education in Russia and abroad]*. Moscow: Akademiia [in Russian].
- 6 Save'eva, L.V. (1984). Mezhpredmetnye sviazi v srednikh tekhnprofuchilishchakh stroitel'nogo profilia [Interdisciplinary approach in colleges for technical specialties]. [cyberleninka.ru](http://cyberleninka.ru/article/n/formirovanie-issledovatel'skoy-kompetentsii-v-sisteme-professionalnogo-obrazovaniya.pdf). Retrieved from <http://cyberleninka.ru/article/n/formirovanie-issledovatel'skoy-kompetentsii-v-sisteme-professionalnogo-obrazovaniya.pdf> [in Russian].
- 7 Zverev, D.I. (1977). Vzaimnaia sviaz uchebnykh predmetov [The Reciprocal relationship of school subjects]. cyberleninka.ru. Retrieved from <http://cyberleninka.ru/article/n/formirovanie-issledovatel'skoy-kompetentsii-v-sisteme-professionalnogo-obrazovaniya.pdf> [in Russian].
- 8 Anan'ev, B.G. (1961). *Teoriia oshchushchenii [The theory of feelings]*. Leningrad: Izdatelstvo LHU [in Russian].
- 9 Hohlov, N.G. (1990). *Integrirrovannaiia sistema obucheniia v vysshei shkole za rubezhom [Integrated system of study in higher education abroad]*. Moscow: MASI [in Russian].
- 10 Kavunenko, L.F. & Goncharova, T.V. (2009). G.M. Dobrov i voprosy preemstvennosti v naukovedenii [The integrated system of learning in higher education abroad]. *Nauka ta naukoznastvo – Science and science of science, 1*, 13–15 [in Russian].
- 11 Chernyshevskij, N.G. Izbrannye pedahohicheskie sochineniia [Selected pedagogical works, e-resource]. [padaread.com](http://padaread.com/?book=183082). Retrieved from <http://padaread.com/?book=183082> [in Russian].
- 12 Kedrov, V.M. (1985). *Klassifikatsiia nauk [Classification of Sciences]*. Moscow: Mysl [in Russian].
- 13 Chepikov, M.G. (1988). *Intehratsiia nauki [The integration of science]*. Moscow: Mysl [in Russian].
- 14 Nehizhi orta bilim beru denheiniin 5-9 synyptary yshin «Kazak tili men adebiyeti» pani boynsha ulhilik oku bahdarlamasy [Model curriculum for the subject «Kazakh language and literature» (5-9 grades of basic secondary education)]. nao.kz. Retrieved from <http://nao.kz/loader/fromorg/2/25?lang=kz> [in Russian].