

Problems and prospects for the implementation of integrative training of specialists in russian universities

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ABSTRACT

The article is devoted to the problems and prospects of introducing an integrative model of student learning in Russian universities. The purpose of the article is to identify and analyze problems that impede the effective implementation of not only a holistic model of integrative learning, but even its individual elements in the existing Russian higher education system. The objectives of the article are: 1) to consider foreign experience in introducing an integrative approach to learning in the higher education system; 2) to identify the advantages of an integrative learning model in comparison with the classical academic model used in Russia; 3) to consider the main problems that impede the integrative model introduction into Russian higher education system. The research materials are statistics from official Russian institutions, regulations and expert opinions, as well as rating statistics from foreign sources. The study uses the method of statistical analysis and content analysis. The author of the article structures the problems of integrative model introducing in Russian universities on organizational and personnel. As a result of the problem field analysis, the author also offers recommendations for partial or full leveling of the problems identified in the course of the study in modern Russian higher education.

Keywords: integrative model, student learning, Russian higher education, integrative teaching methods, modernization of higher education in Russia.

RESUMEN

El artículo está dedicado a los problemas y las perspectivas de introducir un modelo integrador de aprendizaje estudiantil en las universidades rusas. El propósito del artículo es identificar y analizar problemas que impiden la implementación efectiva no solo de un modelo holístico de aprendizaje integrador, sino incluso de sus elementos individuales en el sistema de educación superior ruso existente. Los objetivos del artículo son: 1) considerar la experiencia extranjera en la introducción de un enfoque integrador para el aprendizaje en el sistema de educación superior; 2) identificar las ventajas de un modelo de aprendizaje integrador en comparación con el modelo académico clásico utilizado en Rusia; 3) considerar los principales problemas que impiden la introducción del modelo integrador en el sistema de educación superior ruso. Los materiales de investigación son estadísticas de instituciones oficiales rusas, regulaciones y opiniones de expertos, así como estadísticas de calificación de fuentes extranjeras. El estudio utiliza el método de análisis estadístico y análisis de contenido. El autor del artículo estructura los problemas de introducción del modelo integrador en las universidades rusas sobre organización y personal. Como resultado del análisis del campo de problemas, el autor también ofrece recomendaciones para la nivelación parcial o total de los problemas identificados en el curso del estudio en la educación superior rusa moderna.

Palabras clave: modelo integrador, aprendizaje estudiantil, educación superior rusa, métodos de enseñanza integradores, modernización de la educación superior en Rusia.

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Introduction

The article discusses the problems and prospects of integrative education model introducing in Russian higher educational institutions in the context of increasing the competitiveness of graduates from Russian universities in their professional activities.

By integration in the pedagogical process, researchers understand one of the sides of the development process associated with the unification of previously disparate parts. This process can take place both within the framework of an existing system, and within the framework of a new system. The essence of the integration process is the qualitative transformations within each element included in the system. The problems of integration in pedagogy are considered in various aspects in the writings of many researchers. Based on the selected methodological provisions, scientists identify a number of concepts: the integration process, the integration principle, integrative processes, integrative approach (Gadzhieva, 2018).

The principle of integration involves the interconnection of all components of the learning process, all system elements, the relationship between systems. Nowadays this approach is a leader in the development of goal-setting, determining the content of training, its forms and methods. An integrative approach means the implementation of the integration principle in any component of the pedagogical process, ensures the integrity and consistency of the pedagogical process.

Integrative processes are processes of qualitative transformation of individual elements of the system or the entire system. Many studies in domestic didactics and in the theory of education rely on the above points when developing concrete ways to improve the educational process.

Currently, Russian higher education is undergoing a number of significant transformations: the classical academic approach is being rethought from the perspective of introducing new teaching methods for future specialists. The integrative learning model is an effective alternative to classical academic education. The practice of a number of foreign countries shows the high efficiency of the integrative learning model. In particular, this model has been successfully used in Switzerland over the past years. At the same time, the strength of the Swiss higher education system is precisely the practical orientation achieved within the framework of the integrative education model. Graduates of Swiss universities take first place in the world in such specialties as banking, hospitality and law. Switzerland is named the best country in the world in the ranking of “2018 Best Countries report by US News & World Report. Y & R’s BAV Consulting, and the Wharton School of the University of Pennsylvania ” (Goffman, 1974).

An integrative model of training specialists of higher educational institutions allows taking into account the peculiarities of the national domestic labor market of the country in which students are studying. For example, in Japan, the integrative approach is widely used in specialists the training in such fields as computer technology, medicine, public administration and top management. The main idea implemented in these programs is the integration of vocational education and training of personal development, the procedural approach, the formation of personal qualities. The basic philosophy of teaching is the integration of approaches based on the implementation of the path (“Dao”), close to traditional eastern schools, and modern Western approaches. The core learning technology can be briefly described as a model of learning through state transfer (MOS).

Moreover, in both cases, the subject of training appears rather as a “profession” or “a set of professional skills”, but as a way and way of living life. An important feature of the above programs is the formation of the optimal process not only during the training itself (seminar), but also in the subsequent period of improvement, personal and professional growth. (Anisimov, 2010: 26-27).

In British universities programs, the integrative approach has also received quite a strong development: the methods of integrating several subject areas in the study of each discipline make it possible to train qualified specialists in the field of public administration, a number of technical specialties of the mining industry, etc. (Grundy, 1999). Moreover, it’s obvious that the integrative model of training university specialists requires special training of teaching staff. Thus, foreign practice shows that the integrative model of training specialists in higher educational institutions allows, firstly, to create conditions for student’s professional self-realization, and secondly, to take into account the characteristics of the labor market and the socio-economic needs in a particular country, and also allows graduates to link firmly the received theoretical knowledge with professional practice.

In this context, it is necessary to identify the main problems and prospects of integrative education model introducing in the Russian higher education system, since Russian specialists are known worldwide for their fundamental theoretical training, but in Russian conditions 60% of knowledge is not used by graduates: there is an imbalance between the wide theoretical training of a specialist in universities and the practical application possibilities for theoretical knowledge in subsequent professional activities (Gazdar, 1974). This problem requires

special study, because without a revision of the whole concept of higher education and its orientation towards practical professional activity, the significant competitiveness of Russian specialists in most practical areas becomes impossible.

Goal and tasks

The study aim is to identify problems that impede the introduction of an integrative model of student learning in Russian universities.

To achieve this goal, the following tasks are implemented in the study:

- 1) the foreign experience of introducing the integrative approach to learning in higher education is considered;
- 2) the advantages of an integrative learning model are identified in comparison with the classical academic model used in Russia;
- 3) the main problems that impede the introduction of integrative education model in the system of Russian higher education are considered;
- 4) recommendations are formulated to overcome the problems of introducing an integrative model of training specialists in Russian universities.

Materials and methods

The problem of introducing an integrative model of training specialists from Russian universities was studied by us using the database statistical analysis of the Education Ministry of the Russian Federation, the Labor Ministry of Russian Federation, the Federal Service for Statistics of the Russian Federation, as well as a number of rating agencies: Forbs, Y & R's BAV Consulting.

The study also used a content analysis of the Federal State Standards of Higher Professional Education in Russia, regulatory documents and expert assessments. The priorities of the Russian education system can be found in the Federal State Educational Standards of Higher Professional Education and defined as training personnel adequate to the level of social development (Davis, p.16-17).

These standards are based on an approach for students to master a number of key professional competencies. However, an analysis of Russian studies shows that in the classical academic model of education such an approach cannot be effectively implemented (Puzankov, 2004 p.4). The integrative learning model is needed for students to successfully master professional competencies at a practical level.

An analysis of the federal state standards in the areas of undergraduate and graduate studies allows us to conclude that their main feature is a significant expansion of the academic freedoms in higher education institutions for the development of basic educational programs that are consistent with the current needs of employers: new generation standards establish only requirements for the structure of basic educational programs and the results of their development. However, in most Russian universities, integrative education in the curricula framework is absent. The quality of education, compared with foreign universities, is significantly reduced. And while within the country, Russian higher education institutions achieve quite high rating points (see: Figure 1), then in the world ratings, the most successful Russian universities are far from the positions of the first 100 universities.

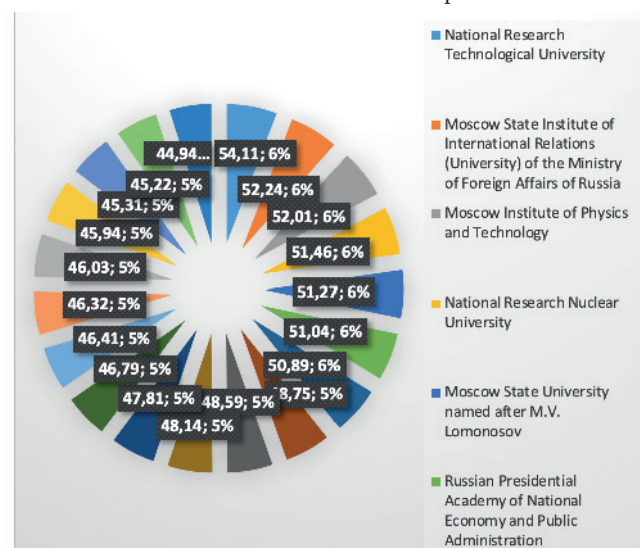


Figure 1. Top 20 Russian universities according to Forbes 2018 ranking (Grice, 1968).

In 2018, Forbes compiled a rating of higher education institutions to assess not only the Russian education quality, but also to find out which universities in Russia graduate from competitive specialists who will later become part of the world or Russian elite. According to the rating for 2018, the first and second places were taken by two Russian universities: Russian Economic School and RANEPa. The Top-20 included three more universities of economic specialization: Higher School of Economics, the Financial University under the Government of the Russian Federation and the Russian University of Economics G.V. Plekhanov.

From our research point of view, it should be noted that in the Forbes ranking, the largest group is the group of universities of a technical and natural-scientific profile. These are exactly the higher educational institutions in which at least one of the integrative model elements is applied: the project method. The remaining elements of the integrative model of education in Russian universities, even in the most reputable ones, are not applied.

Moreover, the rating statistics provided by Forbes reveal one of the negative trends in Russian education: humanitarian universities were not included in the Top-20 either in 2018 or in previous years. This suggests that in the humanities field Russian universities don't apply integrative learning oriented to practice. In humanitarian universities the classical explanatory and informative model of teaching in the format of lectures and seminars is preserved. Moreover, seminars are used as a current knowledge control measure, but not for the integrative methods introduction. This situation can't allow students from humanitarian universities to adequately compete with specialists of the same scientific profile in other countries of the world. This state explanation affair is offered by some researchers working on the problem of modernizing Russian education.

In particular, L.I. Almazova notes that many humanities “are difficult to synthesize with natural sciences, and therefore not all methods of integrative learning are fully applicable” (Akmajain, 1995: p.4).

In our opinion, this formulation of the problem is erroneous, since the integrative approach has been successfully applied in developed countries of the world not only in the natural sciences, but also in the humanitarian sphere. At the same time, the basis of interdisciplinary synthesis is not only a humanitarian, but also a natural-scientific profile.

In our opinion, the lack of integrative teaching methods in most humanitarian universities is explained mostly by the fact that humanities teachers are not able to master related natural sciences that can be successfully combined in an integrative learning model.

For example, teaching English at a university on the basis of an integrative learning model involves the study of one object from the standpoint of several disciplines, including natural sciences (Akmajain, 1995: p.7). The teaching staff of Russian universities is not ready for such global changes in teaching their subject areas.

This thesis is confirmed by the statistics of Labor Ministry of the Russian Federation for the first quarter of 2019 on the graduate's employment of Russian universities: of the humanitarian specialists, only 30% of the specialists work in their specialty (Gazdar, 1974). At the same time, the indicator of professional self-actualization — namely, employment in a specialty — has not been growing since 2012, as a comparison of statistics from the Federal State Statistics Service (10) and “Rostrud” statistics for 2017 shows (Elam, 1980).

In 2017, about 67% of respondents chose their future profession on their own, 19% - on the advice of relatives and friends, and only 2.5% - based on the results of professionally oriented events. Only 27% of all respondents reported that their current work is fully consistent with their education specialty (see Figure 2).

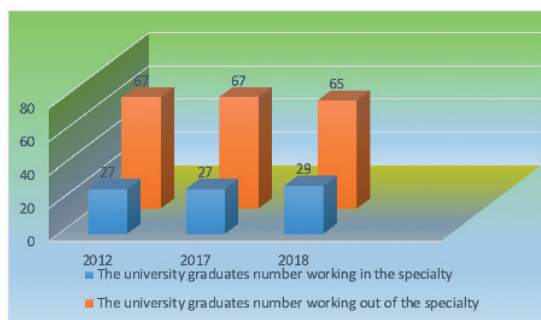


Figure 2. The university graduates number working out of the specialty

The data presented show that the education of graduates of Russian universities does not allow applying the knowledge gained in practice to a sufficient extent for professional success. At the same time, the Federal State Standards of Higher Professional Education states that “training a professional involves the integration of

educational resources on completely different methodological grounds. First of all, this is a competency-based approach, a modular technology for building the educational process, the use of credit and credit units as a measure of accounting for educational results.”

In our opinion, such an understanding of the integrative approach to learning is significantly outdated: in foreign studies, the integrative learning model is interpreted much more broadly and includes: interdisciplinary synthesis in teaching each scientific discipline; teacher training in a wide range of related disciplines; introduction of game, design, synthetic approaches, communicative trainings and master classes into the educational process (Hymes, 1961)(Verschueren, 1999).

The analysis of scientific works and normative documents on the introduction of an integrative model of training for students of Russian universities showed that professional competence cannot be formed within the framework and means of the traditional explanatory illustrative model of training (Zimnay, 2018), focused on transferring academic samples of knowledge, skills (Puzankov, 2004). The increase in the rate of obsolescence of information requires a complete revision of the paradigm of a simple transfer of knowledge: training should accompany a person throughout life. At the same time, at the level of the practice of teaching undergraduate and graduate students in Russian universities, only one project method is used, which is directly related to the integrative learning model. The remaining methods of the integrative model in Russian universities are not used due to inconsistencies with academic curricula (Zakharchenko).

In the curricula of most Russian universities, master's programs are focused primarily on research and scientific-pedagogical activity, on the development of personality traits and professional competencies that will not only allow you to adapt to changing conditions, but also actively participate in the process of sustainable development of the state. Nevertheless, the effectiveness of these programs is still low, since the implementation of these programs is carried out using classical explanatory teaching methods. The low effectiveness of this approach is evidenced by the rating of Russian specialists abroad (see Figure 3).

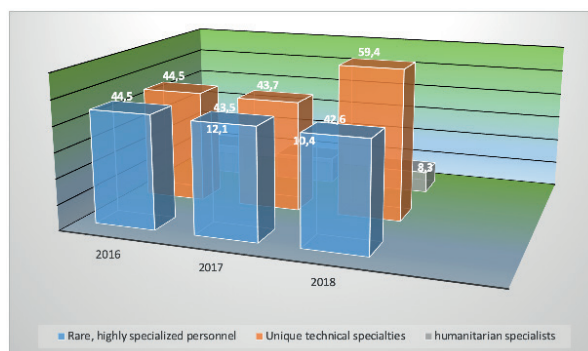


Figure 3. Rating of Russians by specialties (demand abroad)

An analysis of regulatory documents at the federal level also shows that in Russia an adequate understanding of the components and methodology of the integrative education model hasn't been formed yet. This is evidenced by the following fact: in the “Concept of long-term socio-economic development of the Russian Federation until 2020” it is stated that “the principles of project activity ... such as openness of education to external requests, application of design methods should be the basis for the education system development, competitive identification and support of leaders who successfully implement new approaches in practice, targeting of resource support tools and the integrated nature of decisions”(Cole, 1981 p. 33).

However, the integrative model of specialist training is not limited by the use of only one design method. The federal document doesn't even mention the problem of training for teaching staff of the university, which can further implement integrative learning. As a result, integrative education in Russian universities remains largely “on paper” and is not implemented in practice.

Results

As an analysis result of the statistical data, content analysis of regulatory documents on Russian higher education system, a number of problems associated with the introduction of new teaching technologies can be identified. Among the problems, two levels can be distinguished: organizational and personnel. In particular, an integrative approach to teaching undergraduate and graduate students requires the necessary organizational and methodological conditions for training.

From the organizational support point of view, the integrative learning model, only 4 of the Top-20 Russian universities partially implement the new curriculum, which involves the introduction of integrative learning

elements- the design method. At the same time, a greater part of students' independent work is assigned to the project method than to classroom format.

The personnel problem of integrative learning model introducing is also very acute for Russian universities. The specificity of the integrative approach to the training of specialists in various specialties lies in the great information load on the teacher, who needs to be competent not only in narrow subject field. Training programs for university teachers to implement an integrative model of education don't exist today, which significantly complicates the implementation of Russian educational modernization. To solve these problems, we can recommend necessary measures:

- a) to study the practical models of the university teachers activities, in which in different proportions the research, scientific and reproducing, educational and methodological components are combined;
- b) to identify the motivational structure of the professional activities of professors, associate professors, and above all, role-playing (normative) professional patterns of activity that have conventionally developed among Russian university teachers;
- c) as part of the motivational structure study, investigate the external conditions for the implementation of professional activities, in particular the financial situation of Russian universities (8 Gilmeeva, 2013: p.13).

The analysis allows us to present the problems of integrative approach introducing to teaching students of Russian universities as follows (see Figure 4)

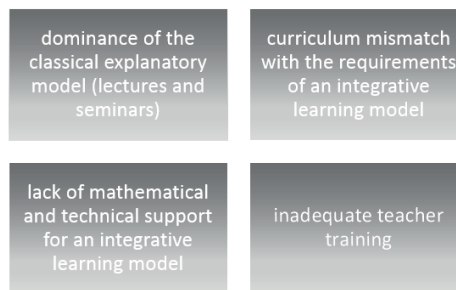


Figure 4. The main problems of integrating education into higher education system in Russia.

Prospects for introducing an integrative model of teaching students of Russian universities depend on the solution of these problems. The following measures can be proposed as possible solutions (see Figure 5).

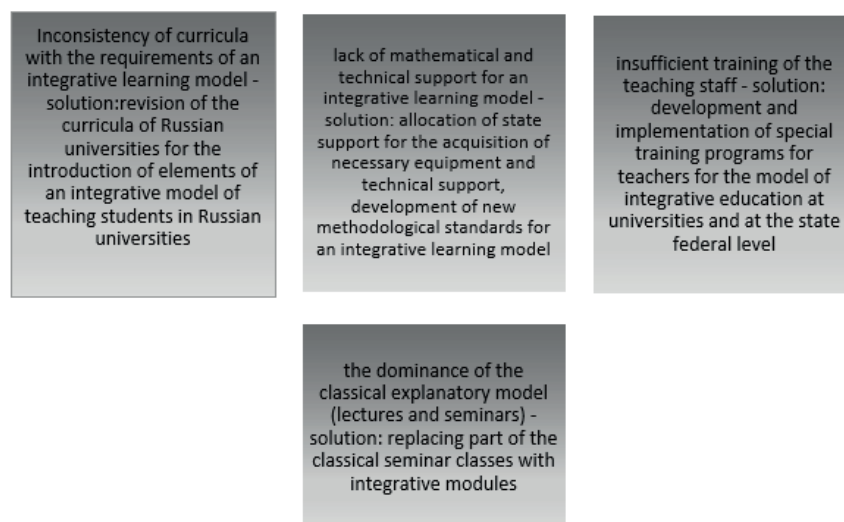


Figure 5. Recommendations for solving the problems of introducing an integrative learning model in Russian universities

Discussion

Integrative learning is one of the modern concepts of teaching in higher education, aimed at the formation of a highly professional and competent young specialist with an objective and comprehensive vision of the world, a holistic worldview interested in gaining knowledge by understanding their importance for future work.

The use of integrative tasks in the educational process of the university will help the teacher to reveal the intellectual and cognitive students' potential, create conditions for future self-development and self-realization, to form students' communication skills, ability to cooperate and team work.

Most often, in high school, strictly individual projects are practiced, when each student is given an individual design assignment, which he single-handedly performs during the semester of study. This form of work helps students develop professional and personal creative qualities, but do not contribute to the development of communication and interaction with their classmates. We recommend implementing coursework integrative projects, connecting a group of students to the implementation of one design task, this form of work contributes to the development of business qualities of each student and their sociability. Work in creative groups will allow you to reach a higher professional level of such projects, make them more interesting, complex, high-quality, with a large amount of material worked out.

The problems of teacher training can be solved with the help of special programs within universities, as well as special programs at the federal level.

Issues of organizational and methodological support can be solved with the help of a radical revision of the curricula of higher educational institutions: a reduction in the forms of lecture classes and an increase in the curriculum of such types of educational activities as teamwork, modeling, design, game teaching technologies, and a method for simulating a professional environment.

Without a clear understanding of the tasks and methods of an integrative learning model by teachers themselves, the implementation of an integrative approach is impossible. Therefore, when introducing new methodological tasks into the organizational learning process, a separate work is necessary with the teaching staff of the university in order to achieve a clear understanding of how to implement the educational tasks established in the Federal State Standards.

The most understandable and uncomplicated is the method of project training, so most universities use it as part of integrative learning (Zimnay, 2009: p.33). However, the application of this method is not always relevant for a number of humanitarian and technical disciplines. As a result, a methodological eclecticism is manifested in the student training system, associated with the use of individual methods of the integrative model within the framework of the classical academic approach (Anisimov, 2010: p.5).

Without the measures listed above, the implementation of the tasks set in the Federal educational standards is impossible in the near strategic future.

Findings:

The construction of the educational process in modern Russian universities requires a significant expansion of the method range of the integrative learning model: in particular, applying the achievements of neuro-didactics, researching the cognitive styles of university students to develop the most appropriate curricula; development and implementation of a federal program for the retraining of teachers who will be able to continue to teach students using the integrative approach.

The ways we proposed to solve the problems of introducing an integrative model of training specialists from Russian universities also require an understanding of the integrative approach essence at the level of not only the leadership of higher educational institutions, but also at the level of state policy in the field of education. Integrative teaching methods should be implemented taking into account not only the psychological characteristics of students, the professional level of teachers, but also taking into account the specifics of the studied disciplines themselves.

Interdisciplinary integration, proclaimed in normative documents as a priority direction in the organization of the educational process at a university, presupposes a deliberate strengthening of interdisciplinary ties that allow applying knowledge of each studied or studied discipline outside the discipline itself, in new conditions. However, most teachers remain in the position of "my discipline is the main subject", since teaching in the integrative model requires a different quality level of training for the teacher himself: the university teacher must have cross-subject knowledge in various fields, and not only understand his own discipline, taught from year to year students with no changes in the format of lectures and seminars. The problem of teacher motivation in this context plays a key role.

Interdisciplinary relations within the framework of an integrative model for teaching students of Russian universities should be considered not only as a means of applying the new Federal state standards in the field of education, but as an effective mechanism for implementing practical tasks of training future specialists in all subject areas of higher education. At the same time, the participation of state structures should be maximized as a support to the transition of the entire classical education system to an integrative model of education.

Moreover, the introduction of an integrative model of teaching students in Russian universities cannot mean a complete rejection of the fundamental Russian science achievements at the level of classical academic knowledge. The introduction of integrative education, therefore, at the level of higher education institutions should compensate for the shortcomings of the academic explanatory model, but not destroy the undoubted advantages of the classical model used in Russian universities.

Nevertheless, it is necessary to take into account not only the organizational points of introducing an integrative model of teaching students of Russian universities, but also to more deeply examine the psychological characteristics of the introduction of such a model. We consider this area of research to be the most promising in terms of the effectiveness and efficiency of integrative learning methods. Moreover, within the framework of the classical academic model of higher education existing in Russia, it is necessary to develop a deeper approach to the study of learning outcomes in the framework of the integrative model of education.

Thus, the prospects for introducing an integrative model of teaching Russian students the challenge depend on solving the problems we have identified.

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