

## THE IMPORTANCE OF RESEARCH UNIVERSITIES IN THE MODERN HIGHER EDUCATION SYSTEM

8. Buchborn, T., & Treb, J. (2023). Acting self-determinedly and critically in a post-digital future? A critical review on digitalisation in music education. *Culture, Education, and Future*, 1(1), pp. 66–82.

9. Park, Y.J. (2021). Online music education for sustainable development: Analysis of music learning videos in e-Hakseupteo. *International Journal of Music Education*, 40(3), pp. 340–351. DOI: <https://doi.org/10.1177/02557614211058800>

10. Mandanici, M., Spagnol, S., Andrea Ludovico, L., Barat, A. & Avanzini, F. (2023). Digital Music Learning Resources. From Research to Educational Practice. Springer Singapore. 98 p.

11. Özer, Z. & Demirbatır, R. E. (2023). Examination of STEAM-based Digital Learning Applications in Music Education. *European Journal of STEM Education*, 8(1). DOI: <https://doi.org/10.20897/ejsteme/12959>

12. Onderdijk, K., Bouckaert, L., Dyck, E. & Maes, P. (2023). Concert experiences in virtual reality environments. *Virtual Reality*, 27. 10.1007/s10055-023-00814-y.

13. Dobroskok, I., Nalyvaiko, O., Rybalko, L. & Zhernovnykova, O. (2020). Introduction of Digital Resources in

the Process of Training Musicians-Teachers in Educational Institutions of the People's Republic of China. *Professional Education: Methodology, Theory and Technologies*, 12, pp. 66–89. DOI: <https://doi.org/10.31470/2415-3729-2020-12-66-89>

14. Zheng, D. & Wang, Y. (2022). The Application of Computer-Aided System in the Digital Teaching of Music Skills. *Computer-Aided Design & Applications*, 19(S7), pp. 154–164.

15. Kdyrova, I.O., Shakula, K.O., Fedorenko, O.V. & Myroshnychenko, O.M. (2025). Innovatsiini pedahohichni praktyky u vykladanni estradnoho spivu: mizhdystyplinarnyi pidkhid [Innovative pedagogical practices in teaching pop singing: an interdisciplinary approach]. *Academic visions*, 48. DOI: <https://doi.org/10.5281/zenodo.17187494> [in Ukrainian].

Стаття надійшла до редакції: 26.02. 2026

Прийнято до друку: 16.04.2026

Опубліковано: 04.05.2026

UDC 378.4:001.89

DOI: <https://doi.org/10.24919/2308-4634.2026.357862>

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## THE IMPORTANCE OF RESEARCH UNIVERSITIES IN THE MODERN HIGHER EDUCATION SYSTEM

*Active scientific research activity of universities has a direct impact on the quality of training of future specialists engaged in scientific research and development and, accordingly, on the increase in the competitiveness of the educational institution. An important direction for increasing the efficiency of the higher education system is the formation of a new institutional form of organization of scientific and educational activity based on the implementation of development programs for national research universities. This direction is based on target programs aimed at strengthening research activity in universities. In the modern era, the process of scientific and technological progress necessitates the reform of the higher education system and the creation of research universities that can provide access to world science, conduct fundamental and applied research, and develop human capital. In particular, in the context of the development of the knowledge economy and the search for ways to obtain new knowledge, the relevance of the concept of a modern research university is increasing. The article examines some of the difficulties faced by such educational institutions, discusses the role and importance of research universities in the world of science.*

*According to the materials and methods section of the study, it can be noted that the analysis and synthesis method was applied throughout the study. A systematic approach and content analysis are important in terms of forming the results of the study.*

**Keywords:** higher education system; research university; research activities; education worldwide.

**Ref. 18.**

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## ВАЖЛИВІСТЬ ДОСЛІДНИЦЬКИХ УНІВЕРСИТЕТІВ У СУЧАСНІЙ СИСТЕМІ ВИЩОЇ ОСВІТИ

*Активна науково-дослідницька діяльність університетів безпосередньо впливає на якість підготовки майбутніх фахівців, які займаються науковими дослідженнями та розробками, а також, відповідно, на підвищення конкурентоспроможності освітнього закладу. Важливим напрямом підвищення ефективності системи вищої освіти є формування нової інституційної форми організації наукової та освітньої діяльності на основі реалізації програм розвитку національних дослідницьких університетів. Цей напрям ґрунтується на цільових програмах, спрямованих на посилення дослідницької діяльності в університетах.*

*У сучасну епоху процес науково-технічного прогресу зумовлює необхідність реформування системи вищої освіти та створення дослідницьких університетів, які можуть забезпечити доступ до світової науки, проводити фундаментальні й прикладні дослідження та сприяти розвитку людського капіталу. Зокрема, в умовах розвитку економіки знань і пошуку шляхів отримання нових знань актуальність концепції сучасного дослідницького університету постійно зростає. У статті розглядаються деякі труднощі, з якими стикаються такі освітні установи, а також обговорюється роль і значення дослідницьких університетів у світі науки.*

*Згідно з розділом матеріалів і методів дослідження, протягом усього дослідження застосовувалися методи аналізу та синтезу. Системний підхід і контент-аналіз мають важливе значення для формування результатів дослідження.*

**Ключові слова:** система вищої освіти; дослідницький університет; науково-дослідна діяльність; освіта у світі.

**I**ntroduction In the modern era, the study and development of innovation capabilities is of strategic importance for the economic development of each country. In this regard, the role of higher education institutions, which act as direct participants in the development of the human capital base in science, technology, innovation and other areas, in achieving this goal is expanding. In the current stage of the knowledge-based global economy of the globalization era, higher education is considered the main driving force of economic competitiveness. This approach has resulted in the fact that quality higher education has become even more relevant compared to previous periods. Thus, in the modern era, there is a need to increase high-level employment skills, form a globally competitive research base and ensure the dissemination of knowledge for the benefit of society.

Research universities are educational institutions that provide students with knowledge, skills and abilities, and are also a kind of scientific testing ground whose main task is to conduct research, especially in technological fields. In the course of education, two interrelated processes play a huge role: the transfer of fundamental theoretical knowledge and its testing in practice; both are of priority importance in the development of educational programs of national research universities.

At the same time, in an era of rapidly developing digital technologies, mass networking and digital connections, it has become necessary to reconsider the methods and mechanisms of knowledge transfer. At the same time, when looking at the characteristics of the COVID-19 pandemic period, it becomes clear that, against the background of the wide possibilities of information and communication technologies, skills such as the correct assessment of mass data in order to be better prepared for new risks and uncertainties related to the future, as well as the effective use of the benefits of the digital economy in the rapidly changing labor market, will always be relevant. Thus, in the current period, effective management of information and knowledge is among the main priorities for both individuals and society. Thus, the main issues attracting attention in the sphere of higher education, where the aforementioned skills are formed, include the changing concept of literacy in the 21st century, conducting and managing research in a more open innovation

environment, and preparing people for citizenship and democracy in the global and digital world.

It is evident that the importance of quality higher education is greater than ever before, and the potential contribution of the higher education sector to social and economic development should be reconsidered. The higher education sector contributes to social and economic development in four main areas: the formation of human capital (through education); the creation of knowledge bases (through research and knowledge development); the dissemination and use of knowledge (through interaction with knowledge users); and knowledge retention (the intergenerational preservation and transfer of knowledge, or inheritance). Thus, the research component is considered an important component of this sector both in terms of the development of human capital and the achievement of disciplinary innovations, as well as the effective management of higher education. In this regard, issues such as the implementation of research in higher education institutions, its effective management, as well as the use of research results for the benefit of society are of particular importance.

**History and types of research universities.** The research university, a model originally created by Humboldt, is an organizational innovation that arose rather randomly and strangely two hundred years ago. The emergence of this model could not have been predicted or foreseen – it is the same historical anomaly as ancient philosophy or Western capitalism. At the end of the 18th century, everything was moving towards the fact that the university as such, as an institution inherited by Europe from the Middle Ages, would be liquidated altogether, and higher education itself was exclusively pragmatic and utilitarian. The main reforms that were carried out at that time, primarily in France, were aimed at liquidating this institution – the existence of such an autonomous structure with functions that were not entirely transparent to the strengthening centralized state seemed inappropriate. Humboldt's model took place despite historical circumstances, and only after proving its worth, it was then replicated in other countries (Zapp, 2022).

The 19th century is the century of German science, and not least thanks to this institution. When we talk about a research university in the second half of the 20th century, we associate this concept with the

American system. However, in its essence, in its operating principle, this structure has not undergone any significant transformations.

The crisis phenomena that are discussed today in relation to the research university have arisen as a result of many factors, but they are most closely connected with the dominance of neoliberal strategies for optimizing the education sphere. Today we are witnessing a very powerful intrusion of the market, of market logic, into the university. In some cases this is not bad, but it must be understood that the dominant way of thinking is reductionist: it is “blind” to some external aspects of the functioning of one of the key institutions of modern culture. Two other factors that are creating structural difficulties for the university today and urging it to move and restructure are the massification of university education and the bureaucratization of this organization. Historically, massification has been carried out in waves, with each new wave then responding with powerful social, cultural, and political changes. The Humboldtian model is initially oriented toward the Socratic ideal of a leisurely dialogue between a teacher and a small group of students – it does not tolerate mass character. Nor does it presuppose a heterogeneous research setup of managerial pragmatics, with its flat criteria of efficiency, etc. However, both of these factors only lead to the Humboldtian model being localized in separate niches of the modern university system – within the framework of postgraduate or master’s programs, cutting off the mass flows of bachelors, in local research environments and groups capable of building long-term research strategies, and so on.

Where it is possible to implement in one way or another two main principles of the research model. Firstly, the principle of autonomy: when you yourself determine what you do, what you consider necessary to teach. A university is a very large corporation, moreover, a global corporation: the university community and communication are essentially transnational. Steve Fuller wittily compares a modern university in its functionality with a state – it is such a powerful structure. I will cite as a metaphor the old university town of Marburg, where the first Protestant university was organized at the beginning of the 16th century. By the way, Lomonosov studied there. The city stands on a hill, and at the top of the hill there is a castle. This space, once occupied by the prince, is today the space of the university – there is a university museum, some university colleges are located there, etc. That is, over the past almost five hundred years, the university, a weak organization located at the foot of a hill, on the top of which was the center of undivided power, has gradually risen higher and higher, and now it occupies it undividedly (Zapp, 2022).

The second principle is the combination of teaching and research. This is about correcting the long-standing disease of education, where the idea of a research

university has historically been extremely difficult to implement – both for political reasons and due to the organizational separation of teaching and research. In this sense, the institutional policy of universities allows us to look to the future with some optimism.

There are three models of the university that emerged in the 19th century, modified forms of which can easily be found today. First, there is the government-controlled French model, to which Russian universities have always been closer. Second, the Humboldtian model of the research university. Third, the chamber British model, the prototype of which is more reminiscent of a monastery or an abbey. It turned out to be very suitable for performing the social function of educating the elite in modern society. All three of these models can be found today, partly in a mixed, partly differentiated form. In the USA, where the academic system is very diverse, the boundaries between them are clearer. There are pure research universities. There are less ambitious mass universities, controlled by the state government, which do not claim the status of research universities. And there are closed, expensive elitist universities, whose main function is to educate the elite. National boundaries are generally very dubious. But the American system was created by the students and followers of the famous British physicist and philosopher of science John Bernal, who was a convinced Marxist and sympathized with the USSR. In fact, the entire American system is a modified Soviet scientometric system.

The university today is the main producer of scientific and technological innovations. Other external results of its activity are less obvious, they are not so easy to record and measure. In addition to everything else, the university is a producer of a certain type of social capital, which is absolutely necessary for modern society. The university is not just a production of knowledge, it is also a nursery for growing people with a certain horizon of both national and international orientation. There is simply no alternative to the university in this capacity. And in this regard, the university is so tightly integrated into modern society that removing it from there means simply curtailing the project of modernity, and such a tendency, despite all the talk, is not observed (Henard, 2010).

And there is another non-obvious, but already political effect of the research university. John Dewey once said that the future of democracy is connected with the future of science. In this sense, the fate of democracy is connected with the fate of such an institution as a research university. Democracy requires a certain type of civic rational culture – people who are able to think freely, weigh words and promises rationally and skeptically, take responsibility for their decisions, and be open to new things. And the university makes a significant contribution to the emergence of such people and their increasing numbers.

**The importance of research universities.** In a number of countries, the importance of research in higher education has led to the creation of “research universities”. In general, a research university is a higher education institution that strongly emphasizes, supports, and encourages the research mission to provide high-quality education, and has internal systems and management for this purpose (Owen, 2018). In these universities, research is approached systematically (along with providing high-quality education), and research outcomes are reflected in high-quality, comprehensive doctoral programs and research results. In addition, a research university acts as one of the important components of global communication and cooperation, ensuring the training of a new generation of personnel necessary for technological and intellectual leadership and the development of knowledge necessary for modern science.

The concept of a research university includes both teaching and research components. Thus, the research potential of a higher education institution has one of the main roles in the constant renewal of education and its adjustment to the requirements of the labor market. The dynamism of the knowledge base of the educational program and the active processing of this knowledge by the student-teacher joint work constitute the main idea of research-based education. The main goal of research-based education is to integrate theoretical aspects with practice and current requirements during education. The main quality indicators of research universities include the unity of teaching and research, the existence of a synergistic relationship between them. The creation of research universities based on this approach was first initiated in Europe and the United States, and in the last two decades, a number of other countries (in particular, China) have also taken steps in this direction (<https://www.timeshighereducation.com/world-university-rankings>).

It should be noted that universities (since their inception in Europe in the Middle Ages) were initially concerned not with the creation of new knowledge, but with its transmission, preservation and interpretation. The concept of research was first added to the university context at the beginning of the 19th century by Wilhelm von Humboldt (Altbach, 2007). According to Wilhelm von Humboldt’s approach, the university was to directly contribute to the national and scientific development of Germany. Humboldt’s revolutionary concept greatly contributed to the formation of Germany as a modern country by strongly stimulating the implementation of various types of research and the training of scientists in the new German universities (as well as other universities adapted to the new model) (Altbach, 2007). After 1862, the USA, and a few decades later Japan, applied several criteria of the German model to apply a university model that suited local needs (Altbach, 2007). In general, variations of

the research university concept in Germany, Japan and the USA characterize modern research universities. In India, the importance of research in improving the quality of higher education (also due to its role in the country’s economic development) is particularly emphasized, and special attention is paid to the research component (Pankaj, 2021).

As can be seen, various steps are being taken to improve the quality of existing research universities in different countries of the world in order to maintain the standards or achieve research university status.

### **Characteristics of research universities**

According to Professor John Taylor, the following main characteristics are inherent of successful research universities:

- conducting basic and applied research;
- research-based teaching;
- breadth of academic disciplines;
- high proportion of master’s and doctoral research programmes;
- high level of external funding;
- an international outlook (Taylor, 2006).

The above characteristics provide a useful basis for creating a clear image of the activities of research universities. However, the presence of these factors cannot be considered a condition for obtaining the status of a research university. In order to deeply understand the main essence of a research university, it is necessary to reveal the characteristics that distinguish it from other universities. For this purpose, it is considered appropriate to take into account the main characteristics attributed to research universities by Professor Philip Altbach. According to Philip Altbach, the factors that determine successful research universities are:

- research university is at the highest level of the academic hierarchy in the higher education system and benefits from appropriate support;
- serves the interests of the state;
- receives more financial support than other universities to attract the best staff and students and support research infrastructure;
- has the potential to generate income from intellectual property;
- has autonomous status;
- enjoys academic freedom (Altbach, 2013).

The main characteristics of research universities are as follows:

- high share of science in the university budget;
- a wide range of fundamental and applied research;
- the presence of world-class foreign professors (30–60 %);
- attracting foreign students (at least 18 %);
- the predominance of postgraduate students over undergraduates;
- the ratio of students to teachers should be 6:1 (in “regular” universities – 12:1);

- postgraduate system of retraining and advanced training;
- the presence of a developed campus and innovative infrastructure.

Thus, a research university is an educational institution with a complex structure, a unique mission and strategic importance. Each of the mentioned features should be deeply investigated and justified separately in terms of their relevance to national realities.

The global rankings that attract the attention of the world's universities in the current century also have their own evaluation criteria to consider. For example, the most cited "Times Higher Education" ranking compiles a table by evaluating 1,600 higher education institutions from 99 countries in 4 main areas (teaching, research, knowledge transfer and international outlook). Another ranking with a wide audience, the "Shanghai Ranking", evaluates 1,800 higher education institutions annually according to specific criteria (the number of graduates and employees who have won the Nobel Prize or Fields Medal, the number of highly cited researchers selected by "Clarivate Analytics", the number of articles published in journals in the field of science and nature, the number of articles indexed in the "Science Citation Index" and the university's per capita performance indicators), and finally 1,000 universities are selected and ranked (<https://www.shanghairanking.com/methodology/arwu/2021>). Since these rankings are mainly based on research power and research results, they lead to an increase in the attention of various institutions, organizations and subjects to research. It should be noted that although global university rankings do not only include research universities, the fact that research universities are mainly at the top of the ranking table, which expresses the results of the assessment, demonstrates the importance and strength of research potential.

**The importance of research universities in world practice.** When examining the characteristics of research universities, it may be appropriate to consider the experiences of different countries. A research university or any academic institution, while taking into account national realities, must necessarily reflect the experience of the best universities on a global scale in the basic model of higher education institutions of this type.

The particular importance of research universities in the field of education in the United States is noteworthy. These universities support the development of knowledge that significantly contributes to the health and social well-being of modern US society and citizens of the world (Owen, 2018). Although most efforts to explain the value of university research focus on publications or patenting, licensing, a number of scholars in the United States prefer to emphasize the work of researchers and research networks. Thus, it has been observed that research conducted on university

campuses creates diverse and complex networks of collaborations or develops existing relationships. These networks play the role of both a social basis for new knowledge and continuous training, and a major force that allows universities to be a source of knowledge and skills.

The importance given to research universities in public policies of developed countries becomes even clearer when considering financial issues. For example, in the United States, most of the basic research funded by the government is conceptualized and conducted on university campuses (Owen, 2018). Here, public investments, such as federal grants and state budget allocations, create the basis for conducting research for various purposes on the university campus.

To assess the activities of a research university, the effectiveness of scientific research, the success of educational activities, the development of the university's human resources potential, and to enhance international and national recognition, it is advisable to take into account the following indicators:

- the volume of expenditure on science in the total budget of the university;
- the volume of extra-budgetary funding for scientific research, reduced to a unit of faculty;
- the average age of the faculty;
- the number of teachers who have completed internships at foreign universities;
- the number of invited scientists;
- the presence of special programs to support young specialists;
- the use of modern educational technologies;
- the opening of new in-demand areas of training;
- the level of postgraduate and doctoral studies;
- characteristics of publication activity: participation in international conferences;
- publication of monographs, educational and educational-methodical literature;
- the presence of formalized rights to the results of scientific activity;
- availability of international accredited programs;
- availability of English-language courses to attract foreign students;
- proportion of foreign students;
- employer feedback.

**The place of research universities in the academic system.** It should be noted that the higher education systems of advanced countries include a wide range of higher education institution models that train a workforce in various fields required by the labor market (not only research universities, but also polytechnic institutes, colleges, technical institutes, multidisciplinary universities, etc.) (World Bank, 2002). Higher education institutions included in the higher education system of developed countries are divided into several categories. For example, in the United States, according to the "California" model, which includes such a

classified education system and is considered successful, there are 3 types of higher education institutions:

- vocational colleges;
- multi-purpose state universities;
- research universities (Geiger, 2004).

Each of the mentioned higher education institutions has a different mission, unique financing and support mechanisms. Similar experience can be followed in other countries. Thus, since the 1970s in the UK, universities that occupy the highest positions (Oxford, Cambridge, etc.) have been allocated more financial resources in order to stimulate and expand research (Altbach, 2007).

Thus, in order to support the development of research universities, it is considered appropriate to distinguish them from other types of higher education institutions, provide them with a higher level of funding, and support the idea that these educational institutions have a decisive role in society. Although there are currently not many research universities, they are considered the most prestigious universities. Salaries in these educational institutions are usually higher, teaching staff responsibilities are lower, and library and laboratory facilities are above the national average. It should also be noted that due to the limited available resources and the high costs associated with a research university, only one or two research universities operate in a number of countries. However, research universities and higher education institutions with high research potential are of particular importance in a globalized world. Universities with high research potential, by ensuring their competitiveness, promote both socio-economic development and contribute to the global knowledge network, increasing the country's reputation. In this regard, it is considered appropriate to increase investments in the research infrastructure of the higher education sector at the national level in developing countries and to form an appropriate human capital base for this purpose. Therefore, universities that want to earn the title of research university must participate in the international scientific network and have the opportunity to compete on a global scale (Altbach, 2009).

It is believed that in order to appropriate and participate in cutting-edge scientific developments, every country needs academic institutions connected to the global scientific and academic research network (Altbach, 2007). At the same time, despite the great differences between the capabilities of academic institutions in developing countries and universities in industrialized countries (such as Oxford or Harvard), it is essential for most countries to have at least one relevant university to conduct research in support of national development.

**National research university as an element of the higher education system.** Today, the intellectual potential of a person is the most important component

of modern education, knowledge and education carry opportunities for advancement in society, more successful construction of future options.

National research universities are higher education institutions in which the main emphasis is on scientific research of teachers and graduate students. The main task of a research university is to create new research, and for this it must provide the best equipment for its students and teachers. This is a big plus for students focused on the exact sciences, since large research universities, as a rule, have access to the latest technology.

Research universities produce the bulk of original research, both fundamental and applied, in most countries and receive the largest funding for their research. The academic culture of these universities is focused on research. Research ranks first in the hierarchy of academic values, but teaching is also an important component. A large part of the academic community, including students, often has the opportunity to participate in research and is exposed to the research culture. Because of their unique academic mission, research universities require ongoing funding and favorable working conditions. The budgets of these universities are significantly higher than those of other universities. Financial stability is essential for the effectiveness and efficiency of universities, which is ensured by open funding sources.

The effective development of the national innovation system directly depends on the strengthening of national research activities of national research universities, which, in turn, are considered an important component in which the necessary conditions are created for activating the involvement of teachers, postgraduates and students in participation in scientific research and development, increasing the quality of training specialists, and commercializing scientific research.

Research universities, being a modification of traditional universities, pursue the implementation of their main goal – the unity of teaching and research. Thus, scientific work within the framework of education has advantages over traditional teaching. It is worth noting the direct participation of master's students, postgraduate students and applicants in various studies conducted under the guidance of leading specialists of the university. Students most interested in the research activities of the university can also take part in developments and prove themselves in scientific research.

For more effective functioning of the national innovation system, it is necessary to form a new institutional form of organization of scientific and educational activities, which is based on the implementation of programs for the development of national research universities. This direction consists of the implementation of target programs that are aimed at increasing research activities in universities. The concept of long-term socio-economic development of

the Republic of Azerbaijan for the period up to 2030 notes the need to intensify the involvement of students and university teachers in research activities. The formation and development of national research universities in Azerbaijan is based on the personnel and scientific support of the national innovation system, as a result of high-quality modernization of scientific and educational activities, meeting the needs of the high-tech sector of the Azerbaijan economy, increasing the competitiveness of the Azerbaijan education system, bringing national universities to the world level.

National research universities developed in the United States at the end of the 20th century, the first “academic” revolution took place in American universities based on the integration of research and teaching. Today, the second academic revolution is taking place in the leading universities of the United States, as a result of which there is a transition from a paradigm based on the vision of knowledge as a public good to the regime of “academic capitalism”, which is characterized by the commercialization of scientific research and its results, the integration of the entrepreneurial and academic segments, the emergence of so-called entrepreneurial universities, and the growth of market relations within universities (Geiger, 2004).

It is also necessary to note some aspects of research activities within the framework of the universities under consideration, which determine the efficiency of activities, development of the university’s potential, and the competitiveness of the university in the world arena. These include: the volume of expenses on research activities in the total budget of the university, the volume of extra-budgetary funding for research per unit of faculty, the average age of the faculty, the number of teachers who have completed internships in foreign universities, the number of invited researchers, the development and implementation of individual programs to support young specialists, the use and availability of modern educational technologies, the opening of new popular areas of training, the level of postgraduate and doctoral studies, characteristics of publication activity: participation in international conferences, publication of monographs, educational and educational-methodical literature.

Research universities are currently a hot topic for study, and their role in the economy is considered by scientists and practitioners in developed foreign countries and in countries with developing economies. Thus, it is worth noting that the most important factor in economic growth is the contribution of universities to the development of regions and the country as a whole, the growth and implementation of innovations and the exchange of knowledge.

National research universities are considered by governments in various countries to be a way of supporting national and regional economies by developing and nurturing new ideas and conducting

research that leads to the creation of new goods and services.

The presence of universities in a region increases the investment rating of this region, since universities are considered a guarantor of the formation of the regional economy and have a beneficial effect on attracting investments. In turn, an increase in the level of education of citizens and the development of the country’s innovative potential contribute to the adaptation of the regional economy to new economic conditions.

National research universities contribute to the competitiveness of the region to the same extent that the qualitative and quantitative level of education of the country’s population determines its competitiveness in the international market. It should be noted that at present this level in Azerbaijan is quite low, and therefore a vigorous push is needed to increase it (Geiger, 2004).

Although national research universities are a central part of the knowledge economy, they are also an institution that must provide space for reflection and criticism, as well as for the consideration of culture, religion, society and values. A research university, particularly one that aspires to the highest global standards, is a special institution based on a unique set of ideas and principles. Without a clear and unwavering commitment to its own spirit, a research university cannot exist.

Regardless of the problems and challenges facing higher education today, the research university will remain the central element of any higher education system and a requirement of most countries.

**Realities related to the establishment of research universities in Azerbaijan.** The importance of the international competitiveness of higher education institutions in terms of quality in the process of developing human capital in the Republic of Azerbaijan was specifically emphasized in the document “Azerbaijan 2030: National Priorities for Socio-Economic Development” approved in 2021 (<https://president.az>). Thus, ensuring the international competitiveness of higher education institutions in Azerbaijan and adapting them to the requirements of the 21st century is considered a strategically important priority issue.

Despite the approval of the “Requirements for Granting the Status of “Research University” to Higher Education Institutions” by Resolution No. 610 of the Cabinet of Ministers of the Republic of Azerbaijan in 2017, no changes have been made to the status of any higher education institution (<https://e-qanun.az/framework/37540>). At the same time, the weak position of Azerbaijani universities in global rankings or the absence of a number of universities in the ranking table at all necessitates the implementation of serious reforms in this area and a thorough examination of the opportunities and ways to strengthen research potential.

It should be noted that the establishment of a research university primarily requires strengthening the research potential of the university. In this regard, measuring, current status and analysis of the research potential of Azerbaijani universities is of particular importance. According to the World Bank report reflecting the results of the research conducted in 2017–2018, the division between education and science remains strong in Azerbaijan (World Bank, 2018). Thus, following the traditions of the Soviet era, universities have mainly specialized in providing higher education, while the main powers for organizing and conducting research belong to the Azerbaijan National Academy of Sciences (ANAS). Although the efforts of ANAS to bring education and research together are considered signs of a positive trend, they are not enough to achieve closer cooperation with higher education institutions. As noted in the report, research funding, which is one of the main factors determining the increase in the research potential of universities, is one of the main problems faced by higher education institutions. In this regard, the report recommends effective financing, as well as the proper establishment of assessment and quality assurance mechanisms, as well as more active participation in international research programs and networks, and strengthening university-industry relations (World Bank, 2018). According to the report presented by UNESCO in 2021, no serious revival has been observed in the non-oil sector in Azerbaijan, including insufficient measures to shift to the economy based on technology and innovation (UNESCO, 2021). In order to overcome the mentioned problems, increasing the number of places for doctoral education in Azerbaijani universities and significantly expanding scientific outputs is considered a priority. Thus, it is considered appropriate to conduct substantive research in this area in order to contribute to the socio-economic situation by promoting the creation of new knowledge.

**Material and method.** The primary objective of this study is to underscore the significance of research universities within the contemporary higher education framework. The research predominantly employed a theoretical and analytical methodology. The study's material foundation consisted of worldwide scientific sources, government papers, normative documents pertaining to higher education policy, and scientific literature that encapsulates the experiences of diverse countries. The analysis was based on reports from international groups like the OECD, UNESCO, and the World Bank. Additionally, the scientific methodologies of international scholars concerning the advancement of research universities were employed.

The study employed comparative analysis, a systematic approach, and content analysis as methodological frameworks. The comparative analysis method was used to look at the organizational features of research

universities in different nations. This method helped figure out where research universities fit within the higher education system. The systematic approach method was employed to examine the interrelationships among higher education, science, and innovation. This strategy was used to look at how research universities can make people smarter, make scientific discoveries, and help the economy grow. The content analysis method was utilized in the examination of extant scientific publications and strategy papers. This strategy has helped us figure out what research universities are like, what they do, and what challenges they have with growth.

**Conclusion.** As can be seen, various steps are being taken in different countries of the world to maintain the standards of existing research universities or to increase their quality in order to achieve the status of a research university. As in other countries, ensuring the international competitiveness of higher education institutions in Azerbaijan and adapting them to the requirements of the 21st century is considered a strategically important priority. Therefore, effective financing, assessment and quality assurance mechanisms should be correctly determined in the higher education system of the Republic of Azerbaijan, more intensive participation in international research programs should be achieved, fundamental research should be continued in order to join research networks and strengthen university-industry relations.

#### REFERENCES

1. Altbach, Ph.G. (2007). *Peripheries and Centres: Research Universities in Developing Countries*. Higher Education Management and Policy, Vol 19/2.
2. Altbach, Ph.G. (2013). "Advancing the national and global knowledge economy". *Studies in Higher Education*, 38 (3): 316–330.
3. Altbach Ph.G. (2009). *The giants awake: the present and future of higher education systems in China and India // Higher Education to 2030*. Vol. 2. Globalisation. P.: OECD, pp. 179–204.
4. Azərbaycan Respublikası Nazirlər Kabinetinin "Ali təhsil müəssisələrinə "Tədgigat universiteti" statusu verilməsi üçün Teleblər" in təsdiq edilməsi haqqında gerarı. Available at: <https://e-qanun.az/framework/37540>
5. Azərbaycan 2030: sosial-igtişadi inkışafa dair Milli Prioritetlər. Available at: <https://president.az>
6. Geiger, R. (2004). *Research and Relevant Knowledge: American Research Universities Since World War II*.
7. Henard, F. (2010). *Learning our lesson: review of quality teaching in higher education*. Paris, OECD. <http://site.ebrary.com/id/10381416>
8. OECD. (2022). *Trends Shaping Education 2022*, OECD Publishing, Paris, DOI: <https://doi.org/10.1787/6ae8771a-en>
9. Owen, S.J. (2018). *Research Universities and the Public Good*. Stanford University Press.
10. Osburn Ch.B. (2018). *One purpose: the research university and its library // American Library Association*. 19 Apr. Available at: <http://www.ala.org/acrl/publications/book-sanddigitalresources/book-smonographs/pil/pi149/osburn>

## РОЛЬ САМОРЕФЛЕКСІЇ У ПРОФЕСІЙНОМУ РОЗВИТКУ ДИРИГЕНТА УЧНІВСЬКОГО ОРКЕСТРУ

11. Pankaj, J. (2021). Building Research Universities in India (SAGE Studies in Higher Education). SAGE Publications, 2021, 415 pp., ISBN: 9789353885021.

12. Taylor, J. (2006). "Managing the Unmanageable: The Management of Research in Research-Intensive Universities". Higher Education Management and Policy. OECD. 18 (2).

13. UNESCO (2021) UNESCO Science Report: the ace Against Time for Smarter Development. S. Schneegans, T. Straza and J. Lewis (eds). UNESCO Publishing: Paris.

14. World Bank. (2002). Constructing Knowledge Societies: New Challenges for Tertiary Education. Washington DC: The World Bank.

15. World Bank. (2018). Azerbaijan: The Role of Higher Education in Innovation. © World Bank.

16. Zapp, M. (2022). Revisiting the Global Knowledge Economy: The Worldwide Expansion of Research and Development Personnel, 1980–2015. Minerva. DOI: <https://doi.org/10.1007/s11024-021-09455-4>

17. Available at: <https://www.shanghairanking.com/methodology/arwu/2021>

18. Available at: <https://www.timeshighereducation.com/world-university-rankings>

Стаття надійшла до редакції: 06.03.2026

Прийнято до друку: 16.04.2026

Опубліковано: 04.05.2026

УДК 378.091.3:785.8 (043.2)

DOI: <https://doi.org/10.24919/2308-4634.2026.353374>

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## РОЛЬ САМОРЕФЛЕКСІЇ У ПРОФЕСІЙНОМУ РОЗВИТКУ ДИРИГЕНТА УЧНІВСЬКОГО ОРКЕСТРУ

У статті розглянуто феномен саморефлексії як важливий компонент професійного розвитку диригента учнівського оркестру. Особливу увагу приділено аналізу ціннісних орієнтирів, переконань і педагогічних стратегій, які впливають на ефективність взаємодії з учнівським оркестром. Окреслено структурні етапи процесу саморефлексії: усвідомлення проблемної ситуації, аналіз власних дій і рішень, оцінка результатів, визначення напрямів удосконалення професійної діяльності та планування подальших кроків. Кожен із цих етапів представлено як необхідну складову безперервного процесу професійного зростання, що базується на критичному осмисленні попереднього досвіду та педагогічної практики.

**Ключові слова:** саморефлексія; диригент; учнівський оркестр; педагогіка; професійний розвиток.

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## THE ROLE OF SELF-REFLECTION IN THE PROFESSIONAL DEVELOPMENT OF A STUDENT ORCHESTRA CONDUCTOR

The article examines the phenomenon of self-reflection as an essential component of the professional development of a student orchestra conductor. Self-reflection is defined as a key mechanism of self-knowledge, self-correction, and the formation of professional identity, which contributes to a deeper understanding of one's own conducting and pedagogical activities. Particular attention is paid to the analysis of value orientations, beliefs, and pedagogical strategies that influence the effectiveness of interaction with the student orchestra.

The structural stages of the self-reflection process are outlined: awareness of a problematic situation, analysis of one's own actions and decisions, evaluation of results, identification of areas for professional improvement, and planning of further steps. Each of these stages is presented as an essential component of the continuous process of professional growth, based on the critical rethinking of prior experience and pedagogical practice.

The importance of external factors influencing the development of self-reflection is emphasized, particularly mentorship support, professional exchange, participation in training sessions, and master classes. Examples are provided to illustrate the application of self-reflection in typical pedagogical situations related to rehearsal work, individualized approaches to students, and the pursuit of ways to improve conducting skills.

It is concluded that self-reflection is an effective tool for shaping the professional competence of a conductor, ensuring not only a high level of musical and technical training, but also the development of pedagogical flexibility, emotional maturity, and