



REVISTA INCLUSIONES

HOMENAJE A FRANCISCO JOSÉ
FRANCISCO CARRERA

Revista de Humanidades y Ciencias Sociales

Volumen 7 . Número 3

Julio / Septiembre

2020

ISSN 0719-4706

CUERPO DIRECTIVO

Directores

Dr. Juan Guillermo Mansilla Sepúlveda

Universidad Católica de Temuco, Chile

Dr. Francisco Ganga Contreras

Universidad de Tarapacá, Chile

Editor

Drdo. Juan Guillermo Estay Sepúlveda

Editorial Cuadernos de Sofía, Chile

Editor Científico

Dr. Luiz Alberto David Araujo

Pontificia Universidade Católica de Sao Paulo, Brasil

Editor Europa del Este

Dr. Aleksandar Ivanov Katrandzhiev

Universidad Suroeste "Neofit Rilski", Bulgaria

Cuerpo Asistente

Traductora: Inglés

Lic. Pauline Corthorn Escudero

Editorial Cuadernos de Sofía, Chile

Traductora: Portugués

Lic. Elaine Cristina Pereira Menegón

Editorial Cuadernos de Sofía, Chile

Portada

Lic. Graciela Pantigoso de Los Santos

Editorial Cuadernos de Sofía, Chile

COMITÉ EDITORIAL

Dra. Carolina Aroca Toloza

Universidad de Chile, Chile

Dr. Jaime Bassa Mercado

Universidad de Valparaíso, Chile

Dra. Heloísa Bellotto

Universidad de Sao Paulo, Brasil

Dra. Nidia Burgos

Universidad Nacional del Sur, Argentina

Mg. María Eugenia Campos

Universidad Nacional Autónoma de México, México

Dr. Francisco José Francisco Carrera

Universidad de Valladolid, España

Mg. Keri González

Universidad Autónoma de la Ciudad de México, México

Dr. Pablo Guadarrama González

Universidad Central de Las Villas, Cuba

Mg. Amelia Herrera Lavanchy

Universidad de La Serena, Chile

Mg. Cecilia Jofré Muñoz

Universidad San Sebastián, Chile

Mg. Mario Lagomarsino Montoya

Universidad Adventista de Chile, Chile

Dr. Claudio Llanos Reyes

Pontificia Universidad Católica de Valparaíso, Chile

Dr. Werner Mackenbach

Universidad de Potsdam, Alemania

Universidad de Costa Rica, Costa Rica

Mg. Rocío del Pilar Martínez Marín

Universidad de Santander, Colombia

Ph. D. Natalia Milanesio

Universidad de Houston, Estados Unidos

Dra. Patricia Virginia Moggia Münchmeyer

Pontificia Universidad Católica de Valparaíso, Chile

Ph. D. Maritza Montero

Universidad Central de Venezuela, Venezuela

Dra. Eleonora Pencheva

Universidad Suroeste Neofit Rilski, Bulgaria

Dra. Rosa María Regueiro Ferreira

Universidad de La Coruña, España

Mg. David Ruete Zúñiga

Universidad Nacional Andrés Bello, Chile

Dr. Andrés Saavedra Barahona

Universidad San Clemente de Ojrid de Sofía, Bulgaria

Dr. Efraín Sánchez Cabra
Academia Colombiana de Historia, Colombia

Dra. Mirka Seitz
Universidad del Salvador, Argentina

Ph. D. Stefan Todorov Kapralov
South West University, Bulgaria

COMITÉ CIENTÍFICO INTERNACIONAL

Comité Científico Internacional de Honor

Dr. Adolfo A. Abadía
Universidad ICESI, Colombia

Dr. Carlos Antonio Aguirre Rojas
Universidad Nacional Autónoma de México, México

Dr. Martino Contu
Universidad de Sassari, Italia

Dr. Luiz Alberto David Araujo
Pontificia Universidad Católica de Sao Paulo, Brasil

Dra. Patricia Brogna
Universidad Nacional Autónoma de México, México

Dr. Horacio Capel Sáez
Universidad de Barcelona, España

Dr. Javier Carreón Guillén
Universidad Nacional Autónoma de México, México

Dr. Lancelot Cowie
Universidad West Indies, Trinidad y Tobago

Dra. Isabel Cruz Ovalle de Amenabar
Universidad de Los Andes, Chile

Dr. Rodolfo Cruz Vadillo
Universidad Popular Autónoma del Estado de Puebla, México

Dr. Adolfo Omar Cueto
Universidad Nacional de Cuyo, Argentina

Dr. Miguel Ángel de Marco
Universidad de Buenos Aires, Argentina

Dra. Emma de Ramón Acevedo
Universidad de Chile, Chile

Dr. Gerardo Echeita Sarrionandia
Universidad Autónoma de Madrid, España

Dr. Antonio Hermosa Andújar
Universidad de Sevilla, España

Dra. Patricia Galeana
Universidad Nacional Autónoma de México, México

Dra. Manuela Garau
Centro Studi Sea, Italia

Dr. Carlo Ginzburg Ginzburg
Scuola Normale Superiore de Pisa, Italia
Universidad de California Los Ángeles, Estados Unidos

Dr. Francisco Luis Girardo Gutiérrez
Instituto Tecnológico Metropolitano, Colombia

José Manuel González Freire
Universidad de Colima, México

Dra. Antonia Heredia Herrera
Universidad Internacional de Andalucía, España

Dr. Eduardo Gomes Onofre
Universidade Estadual da Paraíba, Brasil

Dr. Miguel León-Portilla
Universidad Nacional Autónoma de México, México

Dr. Miguel Ángel Mateo Saura
Instituto de Estudios Albacetenses "Don Juan Manuel", España

Dr. Carlos Tulio da Silva Medeiros
Diálogos em MERCOSUR, Brasil

+ Dr. Álvaro Márquez-Fernández
Universidad del Zulia, Venezuela

Dr. Oscar Ortega Arango
Universidad Autónoma de Yucatán, México

Dr. Antonio-Carlos Pereira Menaut
Universidad Santiago de Compostela, España

Dr. José Sergio Puig Espinosa
Dilemas Contemporáneos, México

Dra. Francesca Randazzo
Universidad Nacional Autónoma de Honduras, Honduras

Dra. Yolando Ricardo

Universidad de La Habana, Cuba

Dr. Manuel Alves da Rocha

Universidade Católica de Angola Angola

Mg. Arnaldo Rodríguez Espinoza

Universidad Estatal a Distancia, Costa Rica

Dr. Miguel Rojas Mix

*Coordinador la Cumbre de Rectores Universidades
Estatales América Latina y el Caribe*

Dr. Luis Alberto Romero

CONICET / Universidad de Buenos Aires, Argentina

Dra. Maura de la Caridad Salabarría Roig

Dilemas Contemporáneos, México

Dr. Adalberto Santana Hernández

Universidad Nacional Autónoma de México, México

Dr. Juan Antonio Seda

Universidad de Buenos Aires, Argentina

Dr. Saulo Cesar Paulino e Silva

Universidad de Sao Paulo, Brasil

Dr. Miguel Ángel Verdugo Alonso

Universidad de Salamanca, España

Dr. Josep Vives Rego

Universidad de Barcelona, España

Dr. Eugenio Raúl Zaffaroni

Universidad de Buenos Aires, Argentina

Dra. Blanca Estela Zardel Jacobo

Universidad Nacional Autónoma de México, México

Comité Científico Internacional

Mg. Paola Aceituno

Universidad Tecnológica Metropolitana, Chile

Ph. D. María José Aguilar Idañez

Universidad Castilla-La Mancha, España

Dra. Elian Araujo

Universidad de Mackenzie, Brasil

Mg. Rumyana Atanasova Popova

Universidad Suroeste Neofit Rilski, Bulgaria

Dra. Ana Bénard da Costa

Instituto Universitario de Lisboa, Portugal

Centro de Estudos Africanos, Portugal

Dra. Alina Bestard Revilla

*Universidad de Ciencias de la Cultura Física y el
Deporte, Cuba*

Dra. Noemí Brenta

Universidad de Buenos Aires, Argentina

Ph. D. Juan R. Coca

Universidad de Valladolid, España

Dr. Antonio Colomer Vialdel

Universidad Politécnica de Valencia, España

Dr. Christian Daniel Cwik

Universidad de Colonia, Alemania

Dr. Eric de Léséulec

INS HEA, Francia

Dr. Andrés Di Masso Tarditti

Universidad de Barcelona, España

Ph. D. Mauricio Dimant

Universidad Hebrea de Jerusalén, Israel

Dr. Jorge Enrique Elías Caro

Universidad de Magdalena, Colombia

Dra. Claudia Lorena Fonseca

Universidad Federal de Pelotas, Brasil

Dra. Ada Gallegos Ruiz Conejo

Universidad Nacional Mayor de San Marcos, Perú

Dra. Carmen González y González de Mesa

Universidad de Oviedo, España

Ph. D. Valentin Kitanov

Universidad Suroeste Neofit Rilski, Bulgaria

Mg. Luis Oporto Ordóñez

Universidad Mayor San Andrés, Bolivia

Dr. Patricio Quiroga

Universidad de Valparaíso, Chile

Dr. Gino Ríos Patio

Universidad de San Martín de Porres, Perú

**REVISTA
INCLUSIONES**
REVISTA DE HUMANIDADES
Y CIENCIAS SOCIALES

Dr. Carlos Manuel Rodríguez Arrechavaleta
Universidad Iberoamericana Ciudad de México, México

Dra. Vivian Romeu
Universidad Iberoamericana Ciudad de México, México

Dra. María Laura Salinas
Universidad Nacional del Nordeste, Argentina

Dr. Stefano Santasilia
Universidad della Calabria, Italia

Mg. Silvia Laura Vargas López
Universidad Autónoma del Estado de Morelos, México

**CUADERNOS DE SOFÍA
EDITORIAL**

Dra. Jaqueline Vassallo
Universidad Nacional de Córdoba, Argentina

Dr. Evandro Viera Ouriques
Universidad Federal de Río de Janeiro, Brasil

Dra. María Luisa Zagalaz Sánchez
Universidad de Jaén, España

Dra. Maja Zawierzeniec
Universidad Wszechnica Polska, Polonia

Editorial Cuadernos de Sofía
Santiago – Chile
Representante Legal
Juan Guillermo Estay Sepúlveda Editorial

Indización, Repositorios y Bases de Datos Académicas

Revista Inclusiones, se encuentra indizada en:





REX



UNIVERSITY OF SASKATCHEWAN



Universidad de Concepción

BIBLIOTECA UNIVERSIDAD DE CONCEPCIÓN



**MONITORING OF SCIENTIFIC ACTIVITY OF THE UNIVERSITY CHAIR AS A CONDITION FOR
IMPLEMENTING EDUCATIONAL PROGRAMS**

Dr. Roman Evgenievich Bulat

Saint-Petersburg University of State Fire Service of Emercom of Russia, Russia
ORCID ID: 0000-0002-2652-6380
bulatrem@mail.ru

Dr. Hafiza Srafilievna Baychorova

Military Academy of Logistics, Russia
ORCID ID: 0000-0002-1079-0419
baj-hafizka@mail.ru

Dr. Lyudmila Vladimirovna Medvedeva

Saint-Petersburg University of State Fire Service of Emercom of Russia, Russia
ORCID ID: 0000-0001-8891-0620
lulmed@mail.ru

Dr. Vladimir Nikolaevich Lukin

Saint-Petersburg University of State Fire Service of Emercom of Russia, Russia
ORCID ID: 0000-0002-2480-2353
lvn5555@mail.ru

Dr. Tamara Viktorovna Musienko

St. Petersburg State University of Aerospace Instrumentation, Russia
Saint-Petersburg University of State Fire Service of Emercom of Russia, Russia
ORCID ID: 0000-0001-9658-1169
tvm77777@mail.ru

Fecha de Recepción: 13 de enero de 2020 – **Fecha Revisión:** 22 de febrero de 2020

Fecha de Aceptación: 18 de mayo de 2020 – **Fecha de Publicación:** 01 de julio de 2020

Abstract

In the context of integration and globalization of the world economy, the strategic goal of the higher vocational school is to ensure the advanced development of the scientific and technological potential of society. However, there is a lack of understanding of the role of scientific activities of the university in the implementation of educational programs. The purpose of the present article is to identify the essence of the scientific work of the chair as an integrative component of the scientific activity of the university and to justify the method of its objective assessment.

Keywords

Scientific work of the university chair – Objective assessment principles Assessment criteria

Monitoring of scientific activity of the university chair as a condition for implementing educational programs pág. 45

Para Citar este Artículo:

Bulat, Roman Evgenievich; Baychorova, Hafiza Srafilievna; medvedeva, Lyudmila Vladimirovna; Lukin, Vladimir Nikolaevich y Musienko, Tamara Viktorovna. Monitoring of scientific activity of the university chair as a condition for implementing educational programs. Revista Inclusiones Vol: 7 num 3 (2020): 44-56.

Licencia Creative Commons Attribution Non-Comercial 3.0 Unported
(CC BY-NC 3.0)

Licencia Internacional



Introduction

Currently, in the educational research community, there is no common understanding of the essence of scientific activity of the university chair, and, therefore, the factors and appropriate quality improvement mechanisms. Besides, quality management of research activities at the university is not determined. This is confirmed by the fact that among the publications dealing with the quality of education, there are only single articles that are focused on certain aspects of the problem concerning the quality of scientific activities of universities¹.

According to the organization theory, the effectiveness of any system is related to the ordering and ensuring the effective functioning of its structural components. From this perspective, the definition and objective assessment of the functioning of the structural components of the university chair's scientific work is an urgent problem of the university regardless of its profile, and, consequently, an urgent scientific and practical problem of higher vocational education. The authors believe that the development of an experimental method for objective assessment of the scientific work of the university chair is one of the possible solutions to the urgent scientific and practical problem of improving the quality of the educational practice of a contemporary university.

Literature review

Discussions about the nature and role of scientific activity in the pedagogical community are dominated by the following provisions:

1. Scientific activity has selective character, rather than mandatory character, and is one of the activity types of individual academic staff (AS) members and university chairs.
2. The scientific activity of the university chair is not related to the educational process of the university, while the quality of education at the university is largely determined by the scientific potential of the chairs and the scientific activity of the AS.

¹ B. Bedny; E. Kozlov; G. Maksimov y A. Khokhlov, "Diagnostika potenciala podgotovki nauchnyh kadrov vuza", Higher Education in Russia Vol: 4 (2003): 3-16; I. P. Danilov y R. V. Syurov, "Razrabotka sistemy kachestva nauchnyh issledovanij v vuze", Quality. Innovations. Education Vol: 4 (2003); V. P. Zasyupkin, "Nauchno-issledovatel'skaya deyatel'nost' kafedry pedagogicheskogo vuza: kachestvo, upravlenie, ocenka", University Management: Practice and Analysis Vol: 1 (2016); M. V. Kolominova, "Voprosy organizacii nauchno-issledovatel'skoj deyatel'nosti studentov na kafedrah v tekhnicheskome vuze", Theory and Practice of Contemporary Vocational Education Vol: 2 (2014): 54-58; L. N. Lesokhina, *Obrazovanie v strukture chelovecheskoj deyatel'nosti*. Higher Doctorate Thesis in pedagogical sciences (St. Petersburg: USSR Academy of Pedagogical Sciences, Research Institute of continuous education for adults, 1991); G. V. Milovanova, "Opredelenie znachimyh umenij samostoyatel'noj raboty dlya uspeshnogo obucheniya v vuze", Integration of Education Vol: 2 num 2 (2017): 218-229; N. I. Naumkin, "Osobennosti proektirovaniya metodiki formirovaniya innovacionnoj kompetentnosti na osnove ispol'zovaniya vstraivaemogo modulya", Integration of Education Vol: 20 num 4 (2016): 493-506; B. D. Pashtaev; L. N. Kharchenko y Z. A. Isaev, "Metodika ocenki ef-fektivnosti innovacionno-kommercheskoj deyatel'nosti vuzovskoj kafedry", Humanities, Socio-Economic, and Social Sciences Vol: 6-7 (2016): 212-215 y G. A. Reznik y M. A. Kurdova, "Funkcii rossijskogo universiteta v usloviyah formirovaniya innovacionno-orientirovannoj ekonomiki", Integration of Education Vol: 21 num 3 (2017): 441-458.

In the current context of social development, the first statement reflects the real danger of narrowing the functions of science by turning science into an appendage of the political, financial, and economic establishment. According to the authors, in order for scientific and educational activities to continue performing their socially significant functions, they must be free from the overwhelming influence of business².

The second stereotypical opinion is largely due to the fact that it can be considered that the requirements of the State Educational Standard of Higher Professional Education for the development level of university science include only general requirements for personnel support of the educational process and publication activity.

According to the authors, the domination of the publication activity criterion in the assessment of the scientific qualifications of the AS is a reflection of the process of creating an artificial connection between market mechanisms of labor regulation and the contents of educational activities. At that, universities experience a shortage of highly qualified scientific and pedagogical specialists, while modern production faces a shortage of professionals with innovative thinking³.

At the same time, in the current context of global risks and rapid growth of the technology development pace, there is the objective need of society in specialists, who have professional literacy in the *broad sense*, according to which professional competence is measured not only by the professional literacy of a specialist at the level of possession of normative set competencies but also by his competent behavior⁴.

Competent behavior of a specialist is manifested in his ability to use moral ideals and universal values as regulatory norms for both assessing the results achieved in solving employment-related problems and assessing the means used in the course of solving them.

A specialist with competent behavior "... does not just interact with nature, but gradually incorporates it into the structure of his material and spiritual culture"⁵.

Professional competence and competent behavior according to the requirements of the methodological principle of complementarity are forms of manifestation and detection of the essence of professional activity, whose integrity is found in the dialectical unity of its structural components: professional and special competencies (knowledge, abilities, and skills), experience of value relations, and experience of creative activity.

According to the requirements of the epistemological reflection principle, the content of educational and cognitive activity that was carried out by the student at the university should be reflected in his professional activity at a qualitatively new level of development. Therefore, the acquisition of competencies (knowledge, abilities, and skills),

² T. V. Musienko, "Sovremennaya kul'tura: evolyuciya teorii", Credo New, International theoretical journal Vol: 2 (2015) y T. V. Musienko, "Sovremennyj VUZ i problemy formirovaniya cennostnyh orientacij studentov", Credo New, International theoretical journal Vol: 1 (2015): 229.

³ Yu. A. Sharanov y V. N. Ustyuzhanin, "Problemy razvitiya sistemy podgotovki kadrov vysshej kvalifikacii: strukturno-logicheskij i cennostno-smyslovoj aspekty", Bulletin of St. Petersburg University of Russian Ministry of Internal Affairs Vol: 4 num 72 (2016): 204-2011.

⁴ L. N. Lesokhina. Obrazovanie v structure...

⁵ L. N. Lesokhina. Obrazovanie v structure...

the experience of creative activity, and experience of value relations should be system components of the educational and cognitive activity of the student in the course of his professional training at the university. At that, different development stages of knowledge subject's socialization provide continuity of activity types⁶.

Based on the above as well as the results of a comparative analysis of the educational practice status of various profile universities, the following conclusions can be drawn:

1. The educational process at a university of any profile is an open developing system with a subject-object character, whose one of the main conditions for improving and increasing the effectiveness is strengthening the positive effect of science⁷.

2. To ensure the continuity of activity types of students and specialists when studying each discipline, it is necessary to create conditions for the creative activity of learners, through which they acquire experience of creative activity and value relations⁸.

3. In the current context of global risks, effective organization of scientific work of each university chair and its ordering in the system of scientific activity of the university becomes an objective requirement and condition for achieving pedagogical results of educational programs of professional qualifications.

It should be noted that the state standards of higher education do not regulate the scientific activity of students as subjects of knowledge. The authors proceed from the subject-subject paradigm of contemporary education. In this context, it is believed that the continuous interaction of the teacher and the learner as *active doers*, who show a

⁶ K. M. Ohanyan, *Chelovek i ego potrebnosti* (St. Petersburg: SPb TIS, 1997).

⁷ Yu. G. Baskin, "Puti sovershenstvovaniya obrazovatel'nogo processa v uchebnyh zavedeniyah MCHS Rossii", *The technology of Technosphere Safety, Scientific Internet-Journal* Vol: 1 num 63 (2016): 1-7; G. A. Reznik y M. A. Kurdova, "Funkcii rossijskogo universiteta v usloviyah formirovaniya innovacionno-orientirovannoj ekonomiki", *Integration of Education* Vol: 21 num 3 (2017): 441-458; O. E. Hatlevik, "Examining the relationship between teachers' self-efficacy, their digital competence, strategies to evaluate information, and use of ICT at school", *Scandinavian Journal of Educational Research* Vol: 61 num 5 (2017): 555-567; M. Lafuente, "Getting looped into the web: Characterizing learning processes and educational responses", *Interactive Learning Environments* Vol: 25 num 1 (2017): 72-84 y A. Šorgo; T. Bartol; D. Dolničar y B. Boh Podgornik, "Attributes of digital natives as predictors of information literacy in higher education", *British Journal of Educational Technology* Vol: 48 num 3 (2017): 749-767.

⁸ T. V. Musienko, "Sovremennaya kul'tura: evolyuciya teorii", *Credo New, International theoretical journal* Vol: 2 (2015); T. V. Musienko, "Sovremennyj VUZ i problemy formirovaniya cennostnyh orientacij studentov", *New, International theoretical journal* Vol: 1 (2015); G. V. Milovanova, "Opredelenie znachimyh umenij samostoyatel'noj raboty dlya uspeshnogo obucheniya v vuze", *Integration of Education* Vol: 21 num 2 (2017): 218-229; N. I. Naumkin; "Osobnosti proektirovaniya metodiki formirovaniya innovacionnoj kompetentnosti na osnove ispol'zovaniya vstraivaemogo modulya", *Integration of Education* Vol: 20 num 4 (2016): 493-506; S. D. Reznik y O. A. Sazykina, "Kafedra rossijskogo vuza: vyzovy vremeni", *Sociological Research* Vol: 8 num 388 (2016): 133-137; S. D. Reznik y O. A. Sazykina, "Upravlenie funkcional'nymi processami na vuzovskoj kafedre: rezul'taty sociologicheskogo monitoringa zaveduyushchih kafedrami rossijskih vuzov", *Russian Journal of Management* Vol: 3 num 4 (2015): 407-418 y N. V. Solovyova y S. N. Yashkin., "Bazovye principy nauchno-issledovatel'skoj raboty kafedry", *Bulletin of the Samara State University* Vol: 11 num 133 (2015): 207-214.

subjective position in the course of learning and research activities, is an objective prerequisite for improving the quality of scientific work at the university chair.

In this case, the educational goal of acquiring creative experience in a specially organized process of scientific research is to develop methodological culture, which is manifested in the ability to see integrity in the harmonious unity of its parts, in independent thinking, tolerance, reflection, and critical analysis of familiar patterns of activity.

From the perspectives of above, it follows that the scientific work of each university chair performs a methodological role in the implementation of educational programs of vocational training, while a necessary condition for the methodological role of the scientific work of the university chair is its effective organization and systematic objective monitoring. For an objective assessment of the quality of research activities of the university chair, the authors proposed an experimental method that was successfully tested.

Materials and methods

The experimental method of objective assessment of the university chair's research activities includes the following procedures: determining the objective assessment principles; selecting assessment criteria; determining the own levels of expressiveness of each criterion, processing and analyzing the assessment results. The following interrelated regulatory principles are defined as the objective assessment principles of the chair's research activities quality⁹:

1) mandatory compliance with the requirements governing the scientific, methodological, and educational work of the university, as well as departmental and federal regulations and laws;

2) definition of the assessment criteria must be clear, while the conceptual framework must strictly comply with the norms and rules set out in regulatory documents;

3) based on the invariant expressiveness of the assessment criterion, three levels must be assigned to each assessment criterion: high, medium, and low;

4) definition of the characteristics corresponding to each degree of expressiveness of the assessment criterion;

5) assignment of a certain score to each degree of expressiveness of the criterion (for example, in descending order of expressiveness: high-3; medium-2; and low-1);

6) the head of the chair should be necessarily involved in assessing the procedure of scientific work of the chair;

⁹ I. P. Danilov y R. V. Syurov, "Razrabotka sistemy kachestva nauchnyh issledovanij v vuze", Quality. Innovations. Education Vol: 4 (2003); M. V. Kolominova, "Voprosy organizacii nauchno-issledovatel'skoj deyatelnosti studentov na kafedrah v tekhnicheskome vuze", Theory and Practice of Contemporary Vocational Education Vol: 2 (2014): 54-58 y L. V. Medvedeva, "Kak «izmerit'» nauchno-issledovatel'skuyu deyatelnost' kafedry?", Psychological and Pedagogical Issues of Human and Social Security Vol: 2 num 31 (2016): 5-13.

7) AS of the chair, whose scientific work is being assessed, should know the content of the assessment criteria, the levels of expressiveness of the assessment criteria, and their scores;

8) each member of the chair's AS should have the right to get acquainted with the results of the assessment of the scientific work of the chair and is obliged to take part in their discussion.

It should be noted that the contents of the assessment criteria is determined based on the requirements of regulatory documents and instructions, and can be specified within prescribed limits.

Results

During the research, four subsystems (groups) of assessment criteria were included in the assessment criteria system reflecting the scientific work of the university chair.

The first group of criteria to assess the qualification level and scientific mobility of the AS of the university chair includes a general score (in percentage) to assess: scientific potential, scientific activity and involvement of the AS in the research activities of the chair (university).

This group evaluates the characteristics of the level of the scientific potential of the chair, whose indicators are included in the group of general indicators of state accreditation of the university (citation and indicators of scientific activity of the university (monographs, scientific articles (refereed in Russian Science Citation Index (RSCI), State Commission for Academic Degrees and Titles (VAK), Scopus, WOS, etc.).

Table 1 shows the assessment criteria and their own levels of expressiveness in the first group of criteria.

The second group of criteria to assess the characteristics of the chair's research work (characteristics of R&D) includes general assessment of the following activities:

- publishing activity of the AS and the introduction of published monographs, training manuals, and deposited reports in the scientific and educational practice of the university chair;
- participation of AS in scientific conferences (international, all-Russian, regional, intra-university) with the publication of abstracts and articles in conference proceedings refereed in the RSCI database.

The competitiveness in R&D is manifested in the participation of AS in scientific and grant competitions, obtaining patents for utility models, inventions, and state registration of software products.

Table 2 shows the assessment criteria and their own levels of expressiveness in the second group of criteria.

The third group of assessment criteria includes the overall assessment of the following activities:

- supporting scientific work of students (cadets and students);
- organizing the work of student scientific circles (SSC); competitiveness of scientific works of students participating in scientific competitions and Olympiads;
- ensuring succession when developing course projects (CP) and graduation thesis (GT).

Table 3 shows the assessment criteria and their own levels of expressiveness in the third group of criteria.

The fourth group of assessment criteria includes indicators that link the structural components of the scientific work at the university chair and allow specifying their assessment criteria.

This group reflects the presence of scientific schools and laboratories (subject-oriented class) which provide additional technical conditions for performing R&D and scientific research activities together with students.

It is from these grounds that a laboratory or subject-oriented class can become a development center (growth center) of scientific work of the AS and the initiation of inter-chair interactions.

Table 4 shows the assessment criteria and their own levels of expressiveness in the fourth group of criteria.

Thus, the system of criteria reflecting the scientific work of the university chair includes eleven assessment criteria, which constitute a group of system-forming criteria.

The criteria which form the certain invariant core of the scientific work of the university chair regardless of its profile (general scientific chair, single-discipline chair, etc.) are proposed to be considered as system-forming criteria.

From this perspective, seven criteria are included in the group of system-forming criteria:

- 1) Scientific potential (academic degrees, academic titles, honorary titles);
- 2) Scientific activity of the AS (monographs, articles in refereed journals (VAK, RSCI, Scopus, etc.);
- 3) Participation of AS in R&D work (involvement in scientific work);
- 4) Implementation of R&D results in the educational process in the disciplines taught by the chair AS;

5) Competitiveness of the R&D carried out at the chair (participation in inter-university competitions, receiving grants, obtaining patents for utility models and inventions);

6) Supporting scientific activities of students (organization of scientific circles);

7) Competitiveness of research projects carried out by students under the guidance of the AS (participation in Olympiads, research work competitions, grants, etc.)

The first three assessment criteria are included in the first group, the fourth and fifth criteria are from the second group, while the sixth and seventh criteria are included in the third group of assessment criteria.

The assessment criteria of the fourth group are essentially the main linking criteria since they allow assessing the systemacy of the scientific work conducted at the university chair.

In the course of the monitoring of scientific work with regard to the levels of expressiveness of eleven objective assessment criteria, the chair can get scores within the range from 11 (minimum score) to 33 (maximum score).

It is proposed to consider the organizational level of scientific work of the chair as average if the chair has received 14 scores based on the results of assessment using system-forming criteria (for example, the levels of expressiveness of each of the seven criteria were assessed by two points). If the number of scores is equal to or greater than 14, then the scientific work of the chair can be regarded as satisfactory, while if the number of scores is less than 14 than the scientific work of the chair is considered unsatisfactory.

No	Assessment criteria	Levels of expressiveness of the criterion	Number of scores
Characterization of the level of the scientific potential of the chair's AS			
1.	Scientific potential (academic degrees, academic titles, honorary titles)	More than 60%	3
		60 %	2
		Less than 60 %	1
2.	Scientific activity of the AS (monographs, articles in refereed journals (VAK, RSCI, Scopus, etc.)	More than 60%	3
		60 %	2
		Less than 60 %	1
3.	Participation of AS in R&D (involvement in scientific work)	100 %	3
		70 %	2
		Less than 70 %	1

Table 1
Criteria to assess the level of the scientific potential of the chair

No	Assessment criteria	Levels of expressiveness of the criterion	Number of scores
Characterization of the chair's research activity			
4.	Implementation of research results in the educational process according to the disciplines taught at the chair	Development of textbooks approved by teaching association, teaching aids, deposited reports, software for the educational process; obtaining certificates of their state registration	3
		Development and publication of teaching mediums and study guides	2
		Development of recourse materials	1
5.	Participation of the AS in scientific conferences	Participation of the AS of the chair in international, all-Russian, regional and intra-university scientific conferences, the publication of abstracts, and articles in conference proceedings (refereed by RSCI)	3
		Participation of AS of the chair in regional and intra-university conferences	2
		Occasional nonsystemic participation of the AS of the university chair in conferences	1
6.	Competitiveness	Participation of research projects of the chair in inter-university competitions, receiving grants for research projects, and patents for utility models and inventions	3
		Participation of the chair in various competitions	2
		The occasional character of the activities in the above area	1

Table 2
Criteria to assess the results of the research work of the chair

No	Assessment criteria	Levels of expressiveness of the criterion	Number of scores
Characterization of scientific research work of students (SRWS)			
7.	Supporting scientific activities of students	The chair operates SRWS, which includes students and cadets, whose scientific works are associated with R&D of the chair	3
		Only cadets are involved in the R&D of the chair, while chair operates SRWS	2
		There are no task groups at the chair, while SRWS is operated formally	1
8.	Competitiveness	Cadets and students successfully participate in scientific competitions and Olympiads (both external and internal)	3
		Only students (or only cadets) successfully participate in scientific competitions and Olympiads (external and internal)	2
		Work in this direction is carried out occasionally	1
9.	Relationship between CP and GT in the course of their preparation	The topics of the CP and GT are genetically successive, students have the opportunity to be involved in the development of scientific topics of the chair	3
		The supervision during execution of the CP and GT is carried out within the framework of problem thematic groups, the connection with the research activities of the chair is occasional	2

	The successiveness of the CP and GT topics is rather occasional	1
--	---	---

Table 3

Criteria to assess the level of interaction between teaching and learning in the course of scientific work of students

No	Assessment criteria	Levels of expressiveness of the criterion	Number of scores
The main linking assessment criteria			
10.	Availability of scientific schools (scientific personnel training system)	Training of adjuncts, postgraduate students, and doctoral students is carried out in the framework of scientific schools available at the chair	3
		Training of adjuncts, and postgraduate students is conducted on an occasional basis, no research schools have been formed	2
		Training of scientific personnel is not carried out	1
11.	The presence of the laboratory, or subject-oriented class	The laboratory (subject-oriented class) operates in accordance with the research activity plan of the chair	3
		The laboratory (subject-oriented class) has been established but not used for conducting research work systematically	2
		A laboratory (subject-oriented class) exists but is not used for research activities	1

Table 4

The main criteria to assess the systemacity of the scientific work of the chair (the main linking assessment criteria)

Conclusion

The experimental method of objective assessment of the scientific work of the university chair proposed by the authors is not the only possible methodological solution to the problem of successful implementation of educational programs at the university. From the epistemological standpoint, it is very important to conclude that the effective organization of scientific activities of the university chair is extremely important for the successful implementation of educational programs, which ensures the successive character of the knowledge subject's activity types in the educational process of the university as well as in the field of professional activity.

Educational, cognitive, and professional activities acquire integrity in the dialectical unity of invariant structural components, one of which is the experience of creative activity.

Systematic mastering of methods of scientific knowledge in creative activity determines the ability of the individual to adequate worldview interpretations of the whole world, to comprehend the social significance of personal work and personal responsibility for its results.

To solve this fundamental problem of education, it is necessary to create conditions for the continuous formation of a methodological culture, whose personal acquisition contributes to the formation of the scientific image of a person in the integrative unity of "all its definitions", where "the cosmic, biological, social, and spiritual beginnings ... are taken simultaneously" (V. I. Solovyov).

References

Baskin, Yu. G. “Puti sovershenstvovaniya obrazovatel'nogo processa v uchebnyh zavedeniyah MCHS Rossii”. The technology of Technosphere Safety, Scientific Internet-Journal Vol: 1 num 63 (2016): 1-7.

Bedny, B.; Kozlov, E.; Maksimov, G. and Khokhlov, A. “Diagnostika potenciala podgotovki nauchnyh kadrov vuza”. Higher Education in Russia Vol: 4 (2003): 3-16.

Danilov, I. P. and Syurov, R. V. “Razrabotka sistemy kachestva nauchnyh issledovanij v vuze”. Quality. Innovations. Education Vol: 4 (2003).

Hatlevik, O. E. “Examining the relationship between teachers’ self-efficacy, their digital competence, strategies to evaluate information, and use of ICT at school”. Scandinavian Journal of Educational Research Vol: 61 num 5 (2017): 555-567.

Kolominova, M. V. “Voprosy organizacii nauchno-issledovatel'skoj deyatel'nosti studentov na kafedrah v tekhnicheskom vuze”. Theory and Practice of Contemporary Vocational Education Vol: 2 (2014): 54-58.

Lafuente, M. “Getting looped into the web: Characterizing learning processes and educational responses”. Interactive Learning Environments Vol: 25 num 1 (2017): 72-84.

Lesokhina, L. N. Obrazovanie v strukture chelovecheskoj deyatel'nosti. Higher Doctorate Thesis in pedagogical sciences. St. Petersburg: USSR Academy of Pedagogical Sciences. Research Institute of continuous education for adults. 1991.

Medvedeva, L. V. “Kak «izmerit'» nauchno-issledovatel'skuyu deyatel'nost' kafedry?”. Psychological and Pedagogical Issues of Human and Social Security Vol: 2 num 31 (2016): 5-13.

Milovanova, G. V. “Opredelenie znachimyh umenij samostoyatel'noj raboty dlya uspeshnogo obucheniya v vuze”. Integration of Education Vol: 21 num 2 (2017): 218-229.

Musienko, T. V. “Sovremennaya kul'tura: evolyuciya teorii”. Credo New, International theoretical journal Vol: 2 (2015): 7.

Musienko, T. V. “Sovremennyj VUZ i problemy formirovaniya cennostnyh orientacij studentov”. Credo New, International theoretical journal Vol: 1 (2015): 229.

Naumkin, N. I. „Osobennosti proektirovaniya metodiki formirovaniya innovacionnoj kompetentnosti na osnove ispol'zovaniya vstraivaemogo modulya”. Integration of Education Vol: 20 num 4 (2016): 493-506.

Ohanyan, K. M. Chelovek i ego potrebnosti. St. Petersburg: SPb TIS. 1997.

Pashtaev, B. D.; Kharchenko, L. N. y Isaev, Z. A. “Metodika ocenki ef-fektivnosti innovacionno-kommercheskoj deyatel'nosti vuzovskoj kafedry”. Humanities, Socio-Economic, and Social Sciences Vol: 6-7 (2016): 212-215.

Reznik, G. A. and Kurdova, M. A. “Funkcii rossijskogo universiteta v usloviyah formirovaniya innovacionno-orientirovannoj ekonomiki”. Integration of Education Vol: 21 num 3 (2017): 441-458.

Reznik, S. D. and Sazykina, O. A. “Kafedra rossijskogo vuza: vyzovy vremeni”. Sociological Research Vol: 8 num 388 (2016): 133-137.

Reznik, S. D. and Sazykina, O. A. “Upravlenie funkcional'nymi processami na vuzovskoj kafedre: rezul'taty sociologicheskogo monitoringa zaveduyushchih kafedrami rossijskih vuzov”. Russian Journal of Management Vol: 3 num 4 (2015): 407-418.

Sharanov, Yu. A. and Ustyuzhanin, V. N. “Problemy razvitiya sistemy podgotovki kadrov vysshej kvalifikacii: strukturno-logicheskij i cennostno-smyslovoj aspekt”. Bulletin of St. Petersburg University of Russian Ministry of Internal Affairs Vol: 4 num 72 (2016): 204-2011.

Solovyova, N. V. y Yashkin, S. N. “Bazovye principy nauchno-issledovatel'skoj raboty kafedry”. Bulletin of the Samara State University Vol: 11 num 133 (2015): 207-214.

Šorgo, A.; Bartol, T.; Dolničar, D. and Boh Podgornik, B. “Attributes of digital natives as predictors of information literacy in higher education”. British Journal of Educational Technology Vol: 48 num 3 (2017): 749-767.

Zasyppin, V. P. “Nauchno-issledovatel'skaya deyatel'nost' kafedry pedagogicheskogo vuza: kachestvo, upravlenie, ocenka”. University Management: Practice and Analysis Vol: 1 (2016).

CUADERNOS DE SOFÍA EDITORIAL

Las opiniones, análisis y conclusiones del autor son de su responsabilidad y no necesariamente reflejan el pensamiento de **Revista Inclusiones**.

La reproducción parcial y/o total de este artículo debe hacerse con permiso de **Revista Inclusiones**.

DR. ROMAN EVGENIEVICH BULAT / PH. D. HAFIZA SRAFILIEVNA BAYCHOROVA
DR. LYUDMILA VLADIMIROVNA MEDVEDEVA / DR. VLADIMIR NIKOLAEVICH LUKIN
DR. TAMARA VIKTOROVNA MUSIENKO