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# Primary and secondary indicators for quality evaluation

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The Romanian Agency for Quality Assurance in Higher Education

ARACIS

# Primary and secondary indicators for quality evaluation

## *Foreword*

The Romanian Agency for Quality Assurance in Higher Education has been carrying out, as of 2009, the project ”Quality assurance in Romanian higher education in European context. Development of academic quality management at system and institutional level” – Contract POSDRU/2/1.2/S/1. The project is funded by the European Union through the European Social Fund, Sectoral Operational Programme for Human Resources Development 2007 – 2013, Priority axis 1 ”Education and training in support for economic growth and development of a knowledge based society”, Key area of intervention 1.2. ”Quality in higher education”.

The project’s general objective is to develop a quality culture based on competitive managerial capacity at European level.

At system level, this contributes to the efficient design and application of policies on academic quality, as well as to the improvement of methodologies, instruments, standards and techniques for the external evaluation of quality. At institutional level, it contributes to the improvement of the quality of academic activity, to assuring quality evaluators, the development of managing staff within universities, of decision makers and persons involved in policy-making. Moreover, the project aims at developing and strengthening a positive direction for the academic community with concern to the process of quality assurance in higher education (issues such as common understanding of basic concepts, of values, principles and mechanisms etc.), especially from the perspective of the European context which is extremely prolific in this field. The project also aims at developing practical aspects of the quality assurance process, providing higher education institutions with real support in the elaboration and implementation of efficient internal quality assurance systems, as well as stimulating the external framework for the fulfilment of a constant requirement – quality assurance at system level.

Within the project, one of the priorities is the improvement of the existing Methodology and Guidelines for the evaluation of quality of higher education institutions, at system level, in compliance with the „European Standards and Guidelines for Quality Assurance" developed by the European Network for Quality Assurance (ENQA). For this reason, a distinct activity of the project envisages ***the proposal of performance indicators in order to design a benchmarking process at the level of higher education institutions in Romania***. A panel of experts in higher education as well as other fields of research was formed. After the initial stages of document analysis and case studies (on other European systems), the panel made a proposal of general and instituion-specific indicators and also suggested a methodology to further calibrate the indicators according to variation intervals to be identified through a thorough research of the national higher education system.

This material, coordinated by Prof. Adrian Miroiu PhD, was published in order to give you the possibility to participate in a debate on the newly proposed primary and secondary indicators for quality evaluation, according to the research carried out during the first year of the project. The authors of the first two parts of the paper are Gabriel Hâncean PhD and, respectively, PhD candidate Bogdan Florian. The third part was also drawn up, except for the previously mentioned experts, by Liviu Andreescu PhD, Magdalena Balica PhD, Prof. Marian Preda PhD and Manuela Stănculescu PhD.

## *Chapter 1 – What is ”benchmarking”?*

According to a common definition, accepted in various fields of activity, benchmarking represents a learning process by means of which organisations or institutions try to improve their activities, strategies and products on the basis of the experiences of other similar organisations or institutions. Benchmarking appeared and developed at the level of methods and instruments for organisational evaluation as a result of the need of the organisation to accurately determine its position within its social and economic environment in relation to its competitors, to compare itself with them and to integrate and adapt good practice examples identified. Benchmarking comes from the economic sector in terms of its origin, methodology and tools, being used for the first time by the Xerox Corporation. Together with control and quality assurance systems, the benchmarking process represents a current practice within companies. By means of this process, data is periodically collected in order to allow the evaluation of the processes carried out inside the organisation. Furthermore, the benchmarking process involves the collection and continuous interpretation of data. In the absence of a longitudinal methodological perspective, its results would not be relevant.

The following table provides a concise image of the benchmarking process.

## Table no. 1. Defining elements for benchmarking[i]

| ***The usefulness of benchmarking for an organisation*** | ***Benchmarking helps the organisation answer questions such as*** | ***What benchmarking does not represent*** |
|---|---|---|
| **Helps organisations to objectively estimate the strengths and weaknesses of its own processes** | How do you know that you're achieving higher performance? | It is not another form of competition analysis |
| **Helps organisations seek for methods and ideas to stimulate groups' thinking within the organisation** | How do you know that your improvement plan will help you become a market leader? | It is not only copying |
| **Helps the organisation overcome internal reluctance towards the achievement of an appropriate change** | How do you know that your organisation has the best business processes? | It is not industrial espionage or theft |
| **Helps the organisation justify methods, operations and resource allocation** | | It is not easy and fast |
| | | It is not an independent activity |
| | | It is not industrial tourism |

During the development of the benchmarking process and its application beyond the economic sector, various types of benchmarking have appeared, different in terms of methodology, tools, investigation level or utility. A possible classification of the types of benchmarking currently used is represented below:

## Table no. 2. Benchmarking approaches

| *No.* | *Approach* | *Approach description* |
|---|---|---|
| 1. | **Strategic benchmarking** | It is used when the organisation seeks to improve its general performance level, focusing on certain strategies or processes. |
| 2. | **Competitive or performance benchmarking** | The organisation uses performance measurements in order to compare itself with similar organisations. In higher education, universities compare against each other with concern to market quota, research performances or costs. This type of benchmarking may also be applied inside the organisation by comparing individual units' performances. |
| 3. | **Process benchmarking** | Focuses on specific operations and processes. For example, in higher education: management practices, enrolment for courses, or temporal planning of activities. |
| 4. | **Functional or generic benchmarking** | Involves partnership between organisations that come from different sectors and seek to improve certain specific activities or processes. |
| 5. | **External benchmarking** | Allows the comparison of the key processes and functions of organisations with those from organisations which are considered to have good practices. |
| 6. | **Internal good practice benchmarking** | May be carried out by establishing an organisation as good practice reference system and comparing internal activities or operations with those of the reference organisation. Thus, it is intended to identify the best internal operations or activities from the same class. |
| 7. | **International benchmarking** | The benchmarking process is carried out at international, not only national level. |

As for the use of benchmarking in higher education institutions, it represents a relatively recent practice, which is frequent especially in Anglo-Saxon countries. Great Britain, Australia or the United States of America are currently using multiple benchmarking systems, structured on different levels of analysis, covering various aspects of the higher education institutions' activity, from managing to carrying out academic and research processes. According to a 1998 document of the Commonwealth Education Management Service, entitled "**Benchmarking in Higher Education: An International Review**",[ii] "For most higher education institutions, the

wish to learn one from another and to share good practice examples is as old as the institution itself. Focusing on fellowship and recognition of the university's international role, this wish took various forms: academic as well as non-academic professional associations which gather in order to share their common interests; numerous visits of delegations from a higher education system to another in order to study its operation; professional organisations collaborating with other institutions in order to support academic activities and to mediate the standards; and where formalised accreditation or quality evaluation practice exists, their dependence on the universities' good will was proved by the provision, among its own members, of evaluation staff of other institutions."

Benchmarking brings as a novelty the formalisation of comparisons between institutions. The reasons that brought about the recent development of the benchmarking process among higher education institutions could be thus summarised: "the development of competition spirit at international level; development of interest in quality enhancement and development of quality 'movement'; rapid development of information technology that simplifies the process of data collection and management."[iii]

Benchmarking is a process complementary to quality assessment. It is firstly based on the collection of statistical data regarding higher education institutions; and then, in order to be able to produce analyses of specific aspects of their activity, on the collection of qualitative data. Benchmarking does not represent a classification technique, its main objective being to help an institution identify and implement the best processes, used by similar institutions, in order to carry out its activities.

# *Chapter 2 – Applying "benchmarking" within the higher education system*

## – Case studies –

### 1. Quality assurance standards and indicators measured at the level of higher education institutions in the United Kingdom

The higher education system in the UK has a data collection system, a system of measuring indicators and drawing up studies and analyses, to which several institutions contribute. The description below will offer an outline of this system, as well as of the type of indicators used. It is worthwhile to mention here the fact that these analyses' main objective is not the achievement of hierarchies and classifications, but the comparison, at institutional level, of educational service providers in the field of higher education in order to determine the causes and factors influencing the quality of the services provided.

Performance Indicators (PIs) provide comparative data regarding the performance registered in the following domains by higher education institutions in the United Kingdom (UK) funded from the public budget: widening participation, student retention, learning and teaching outcomes, research output and employment of graduates. **HESA** (Higher Education Statistics Agency) carries out the measurements for these indicators on behalf of 4 institutions: **HEFCE** (Higher Education Funding Council for England), **HEFCW** (Higher Education Funding Council for Wales), Scottish Funding Council and Department for Employment and Learning. HESA has been publishing the performance indicators data since 2002/03 (the task had been carried out by HEFCE until that date). As of 2002/03, HESA has been publishing annual reports on the measurements carried out at the level of PIs. According to HESA, PIs are not *league tables*[iv] and are not intended to compare higher education institutions against a certain "golden standard" or against each other. PIs represent statistical

indicators built to provide an objective measure of a state-funded higher education institution's performance.[v]

**PIs** cover the following domains: widening participation indicators; non-continuation rates; module completion rates; research output; employment of graduates.

**PIs'** aim is to provide objective and valid information with concern to the nature and performance of the higher education sector in the United Kingdom; to allow comparisons between similar higher education institutions, where possible;[vi] to allow higher education institutions to translate their performance into a benchmark;[vii] to influence the development of public policies in the higher education sector; to contribute to the accountability of higher education.

**(i) Widening participation indicators**[viii] provide information on the participation of under-represented groups at the level of the higher education sector, taking the entire population as a reference. The results produced by these indicators are distributed according to several categories – *mature students*, *young students*,[ix] *full-time students*,[x] and *part-time students*. These groups have different characteristics. Additionally, there are indicators which measure the percentage of students who received from the institution the disabled-student status (Disabled Students' Allowance) – table T7.

**(ii) Non-continuation rates indicators**. Non-continuation rates are measured in two ways. The first consists of the analysis of student numbers from one year to the next[xi] (in other words, the method seeks to show if freshmen are still in higher education one year later) – tables T3 and T4. The second way consists of carrying out estimates of the number of students who are expected to obtain a degree at the end of the study cycle – table T5.

**(iii) Research output indicators** (table R1) provide information on the quantity of research output in relation to the resources used. There are four indicators concerning research output: (a) proportion of PhDs awarded per proportion of academic staff costs; (b) proportion of PhDs awarded per proportion of public budget funding allocated for research; (c) proportion of research grants and contracts obtained per proportion of academic staff costs; (d) proportion of research grants and contracts obtained per proportion of public budget funding allocated for research. A value of 1 for each indicator shows that the institution is producing the same as the rest of the sector average, a value below 1 shows it is producing less than the sector average, and a value greater than 1 shows that the institution is producing more than the sector average. The indicators' values are relative to the inputs specific to each higher education institution.

**(IV) The employment indicator** is based on a sociological survey called "Destinations of Leavers in Higher Education" – *DLHE survey*. The DLHE survey is carried out on graduates 6 months after graduation. The employment indicator is presented by HESA in table E1 and represents the percent of graduates who are employed or continue their studies (or both).

## 2. Models of quality assurance standards and general indicators measured at the level of higher education institutions in Europe

The literature on quality assurance and evaluation in higher education distinguishes between at least two sets of indicators with applicability in the Romanian higher education system.

The first of these is proposed by **François Tavenas (2004)**.[xii] By adapting the list of standards and indicators drawn up by this author, we can identify standards and indicators that may be adequate to the specific context of the Romanian higher education system. Their list is given below:

**STANDARD: Quality of students on admission**

Ind1: Grades on admission. The indicator's measurement should take into consideration the population of students who come from the same education system and sub-populations of students who come from different education systems (when it is necessary to use a standardised marking system).

Ind2: Social origin of students. The values of this indicator may be associated with the success rate (rate of graduation of a university study programme) or with the average duration of studies. Moreover, the values offer the possibility to build a profile of the social diversity of a programme / institution.

Ind3: The proportion of students from outside the usual recruitment area. The values of the indicator / sub-indicators must take into account the following distinction: students enrolled full-time and students taking part in programmes as a result of mobility. This indicator's values represent a gauge of the "attractiveness" of the institution / study programme.

Ind4: Admission rates – the ratio of the number of students admitted to the study programme to the total number of candidates. The number of those who are declared admitted may vary according to the type of admission procedures: the number of those declared admitted is either variable or imposed (numerus clausus). This indicator's values measure the institution's / study programme's quality and attractiveness.

**STANDARD: Student performance**

Ind5: The retention rate registered at the end of the first year.

Ind6: Measures for the integration and supervision of new students (enrolled in the first year of the study programme). The indicator measures the importance attached by the institution to the fundamental task of preparing students, in terms of the facilities it provides in order to keep them within the study programmes.

Ind7: The average time necessary for a student to graduate from an educational programme.

Ind8: Graduation rate / success rate – the number of students completing a study programme as a percentage of the number of students enrolled in the first year of the study programme.

Ind9: Employment rate after graduation.

**STANDARD: Level of research activity**

Ind10: Percentage of academic staff actively engaged in research. The variation of indicator / indicators is influenced by the way of defining the staff engaged in research (academics with a teaching position, persons associated with units that carry out research activities etc.).

Ind11: The doctoral student/professor ratio.

Ind12: The research funding/professor ratio. The variation of this indicator is directly dependent on national research funding mechanisms. It is especially relevant in cases where research is funded on the basis of competitive grants obtained by individual researchers or by research teams.

Ind13: Number or proportion of full-time researchers at the teaching body level. The variation of the indicator expresses the intensity of research at institutional level. The indicator is distorted by the academic field and by the country where it is measured.

Ind14: The average number of research grants per professor.

**STANDARD: Productivity of research activity**

Ind15: The doctoral student / professor ratio.

Ind16: The publications / professor ratio. This indicator measures research output and strongly depends on the way the "publication" is defined (e.g. scientific articles in certain journals, monographs, articles published with certain publishing houses).

Ind17: Citation index. The indicator refers to the impact of publications measured by ISI.

Ind18: The number of patents / professor ratio. The indicator is clearly relevant only to fields of research whose findings and inventions can be patented.

Ind19: Prizes and honours. The indicator measures the acknowledged quality of researchers. The indicator is disputable because of the fact that some institutions have been accused of lobbying in order to obtain relevant prizes and honours for research.

**STANDARD: The level of resources allocated for teaching and research**

Ind20: The student / professor ratio. The indicator needs a rigorous definition of the terms: full-time students or enrolled students; the status of the professors concerned; the breakdown of time spent by academic staff in carrying out different parts of their basic assignment – teaching in different study programmes and at different levels, research, community service; student-professor relationship.

Ind21: The student / auxiliary teaching staff ratio.

Ind22: The technical and auxiliary staff / professor ratio.

Ind23: The operating budget / student ratio. The variation of this indicator defines the relative efficiency of institutions. Nevertheless, this indicator depends on the national funding system and only applies to the public educational sector.

Ind24: The material resources / student ratio.

**STANDARD: Practices relating to governance and academic management**

Ind25: The make-up of decision-making bodies.

Ind26: Mechanisms for the recognition of student participation in structures regulating university life.

Ind27: Selective mechanisms for allocating budgetary resources (criteria for allocating budgetary resources at the level of various units of the institution).

Ind28: The diversity of sources of financing measured by taking into consideration: public grant allocations; student tuition fees; research funding obtained by competition; public and private research contracts; donations. The indicator measures the degree of the institution's real autonomy.

Ind29: Institutional planning mechanisms (strategic policies).

Ind30: Rate of academic staff turnover.

Ind31: Mechanisms for the development of inter-disciplinary research programmes.

Ind32: The quality of teaching and evaluation policy.

Ind33: The degree of institutional adaptability.

Ind34: The openness of universities to their surrounding environment.

Ind35: The openness of universities at international level.

A second model, belonging to D. Van Damme,[xiii] divides indicators into various categories according to the positioning of the measured phenomenon vis-a-vis the evaluated institution. In other words, these indicators measure the phenomena in relation to the Context where an institution is operating, to the resources allocated to the institution (Input), to the specific activities that are developed within the institution (Process), to the outcomes obtained (Output) and also to the response received by the institution from the socio-economic environment where it operates (Feedback) – in brief CIPOF.[xiv] The complete list of categories and standards is given below.

| *Categories* | *Standards* | *Indicators* |
|---|---|---|
| **Context** | The material / physical and human infrastructure | Adequate resources and facilities |
| **Input** | Student selection and intake | Staff quality and quantity |
| | | Admission requirements |
| | | Student intake / enrolment and access |
| **Process** | Mission and objectives | Clearly defined strategic mission and objectives |
| | | Correspondence of educational objectives to qualification level descriptors |
| | Effective learning processes | The relation of curricula, discipline contents and teaching approaches, on the one hand, to study programme objectives, on the other hand |
| | | Study duration, study load and student support |
| | | The characteristics of student assessment |
| **Output** | The achievement of objectives | Correspondence of learning outcomes to qualification level descriptors |
| | | Impact on labour market and society |
| | Efficiency | Efficient use of input resources to realize output |
| **Feedback** | Effective internal quality management | Effective internal quality procedures |
| | | Effective quality management and innovation arrangements |
| | Strategic planning | Capacity for strategic change and improvement processes |
| | | Effective organisational strategies to improve quality and student participation |

## *Chapter 3 – Changes in the list of indicators used by ARACIS and in the "visit record"*

In the particular case of the Romanian higher education system, the quality evaluation system used by ARACIS, as part of the general procedure of quality assurance and accreditation, needed adjustments to allow the development of instruments and analyses that should enable a more objective and transparent evaluation of higher education institutions.

The methodology currently used by ARACIS is organised into "Quality assurance domains", the domains are operationalized in criteria, whose correspondents are standards, which are operationalized as indicators. In analysing the current methodology from the theoretical perspective briefly mentioned above, certain shortcomings were noticed, making the implementation of an institutional benchmarking process impossible. Thus, the indicators used by ARACIS so far cannot be objectively measured. Most of the time, as also confirmed by the analysis of evaluation reports from the ARACIS archive, the evaluation of an institution remains at the discretion of evaluators whose assessments are to a great extent subjective and cannot be sustained or invalidated because of the lack of concrete data. Moreover, some criteria or standards are insufficiently operationalized in indicators.

On the other hand, by applying a theoretical framework adapted to the CIPOF model described above, we notice that most of the indicators used by ARACIS focus on the area of activities, processes that are being carried out within higher education institutions, as well as on input resources, on inputs in the system. Therefore, proposals have been made to introduce indicators to measure the outputs as well as the outcomes, namely the results and products of the higher education system.

A distinction is necessary in this context. The term “output” refers to the result of an activity, to its product. The term “outcome” refers to the effect of the respective “product”, the result of an activity. In the case of a higher education institution, we can consider that the number of graduates of an educational programme represents an output, while the share of graduates who find employment in the field in which they were trained within a year since completion of studies represents an outcome.

For the purpose of improving the quality evaluation process and of diversifying the instruments used, a new set of indicators and a new format of the visit record were drawn up, discussed and proposed. The new indicators, as one can notice from perusing the list attached to this guide, actually represent brief modifications brought to the old standards and criteria. The latter were operationalized so as to allow an objective measurement of indicators with the support of simple variables. Variables are either numerical or nominal (dichotomous), so as to facilitate self-evaluation by higher education institutions.

The elaboration of the new indicators was based on the following principles: the creation of a *unique, coherent, easy-to-use* evaluation system based on data collection by means of the visit record; *facilitating* the creation of a unique database which should contain clear and objective information on higher education institutions in Romania; *facilitating* the process of institutional and programme evaluation carried out by ARACIS in compliance with the legislation in force; collection of *transparent* and *comparable* data to allow an *objective* evaluation of Romanian higher education institutions and a substantiation of ARACIS’ accreditation/authorization decisions; *facilitating* and *simplifying* the evaluating experts’ activity by using a tool that streamlines on-site data collection from higher education institutions.

In this respect, the ”Visit Record” represents an additional document to the previously proposed ”List of evaluation indicators”. Thus, the ”Visit record” cannot be analysed and modified without operating similar changes in the ”List of evaluation

indicators". This represents in fact an *electronic data collection tool*, built in tabular format, which is similar to a closed-question questionnaire. Furthermore, we must take into account that the list of evaluation indicators below, as well as the "visit record" associated to them and available on request at the ARACIS headquarters, only refer to institutional evaluation and comprise primary and secondary indicators. The visit record is accompanied by a "List of tertiary indicators" – specific to each subject area which are being developed by panels of experts in each academic study field separately.

Let us return to the list of indicators that can be consulted at the end of this guide. The indicators were drafted by a panel of experts in the field of education, teaching staff from higher education institutions, persons with managing responsibilities at the level of higher education institutions, specialists in the field of social science research, as well as young PhD's and PhD students. Subsequently, the proposals made by this expert panel were studied, analysed and modified by ARACIS evaluators, as well as by members of the ARACIS Council and of specialization commissions, in order to cover as much as possible all the actors involved in the educational system. You will notice that, in the table below, the name of each indicator is marked with bold letters, while the variables contributing to the calculation of each of them is marked with an asterisk (*). Moreover, the column entitled „Type of indicator" indicates the category to which the indicator corresponds, according to the previously described classification.

# *Full list of indicators measured by ARACIS*

## A. Quality assurance domain INSTITUTIONAL CAPACITY

| *Code (acc. to ARACIS methodology)* | *Indicator* | *Type of indicator* |
|---|---|---|
| **A1.1.1** | **Mission and objectives (The institution is established and functions according to the law)**<br>* Bylaws (YES/NO)<br>* Articles of Incorporation (YES/NO)<br>* University Charter (YES/NO) | Input |
| **A1.1.2** | **Academic integrity (Code of ethics, practices and mechanisms for enforcing the code)**<br>* The institution has a Code of ethics approved by the Senate according to the legal provisions in force (YES/NO)<br>* Frequency of the meetings of the ethics commission (numerical)<br>* Number and types of cases discussed by the ethics commission (scale) | <br>Input<br><br>Output<br>Output |
| **P_CINST 1** | **Combating "intellectual fraud" (a. Among professors; b. Among students)**<br>* Are specialised software tools used in order to identify "intellectual fraud" (YES/NO)<br>* Are there provisions concerning "intellectual fraud" in the institution's relevant documents (YES/NO)<br>* Number of doctoral/Bachelor/Master degree papers where plagiarism was identified, in the previous academic year<br>* Is there an institutional concern for the development of a culture opposing "intellectual fraud" among students and professors? (training programmes organized, registers created etc.) | <br>Input<br>Input<br>Output<br><br>Process |
| **A1.1.3** | **Public responsibility and accountability (internal audit procedures)**<br>* Internal quality audit report (YES/NO)<br>* External quality audit report (YES/NO)<br>* Financial-accounting audit report (YES/NO)<br>* Institutional structures for auditing (nominal) (YES/NO)<br>* The institution has a Quality Assurance Department established according to the legal provisions in force (YES/NO) | <br>Process<br>Process<br>Process<br>Input<br>Input |

| | | |
|---|---|---|
| **A1.2.1** | **Management system, election mechanisms**<br>* Presence of representatives of students, alumni or social-economic stakeholders in the administrative structures, senate or research/studies commissions (for each category) (YES/NO)<br>* The system of selecting the students' representatives is based on the vote expressed by the students (YES/NO) | Input<br>Process |
| **A1.2.2** | **Strategic management**<br>* The institution has a strategic operational plan approved by the university Senate (YES/NO)<br>* Does the institution have annual activity reports? (YES/NO)<br>* The term envisaged by the strategic plan (years....) | Input |
| **A1.2.3** | **Effective/efficient administration**<br>* Systems for monitoring students, graduates and human resources (updated databases) (YES/NO)<br>* The higher education institution uses a specialised academic management software system (YES/NO)<br>* The academic staff/administrative staff ratio<br>* The administrative staff/student ratio<br>* The institution has up-to-date records on the number and position of the employees and may declare these data according to the visit record categories<br>* The institution has up-to-date records on student numbers and enrolment for levels of study and may declare these data according to the visit record categories | Input |
| **A2.1.1** | **Spaces for education, research and other activities (Spaces for teaching laboratories endowed according to the study programme. Research laboratories are equipped to meet at least the minimum requirements)**<br>* The ratio of the number (or area) of educational spaces owned by the higher education institution to the number (or area) of educational spaces which are rented or owned by other institutions<br>* Is there an investment plan for educational and research spaces (YES/NO)<br>* Share of expenses for investment in material resources<br>* Share of expenses for investment in learning tools and materials<br>* The number of tenured professors who have their own working space within the university (an office, a computer)<br>* The number of full-time PhD students who have their own working space within the university (an office, a computer)<br>* The ratio of the number of students to teaching space area (or number of spaces)<br>* The ratio of the number of students to research/laboratories area | Input<br>Process<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input |

| | | |
|---|---|---|
| **A2.1.2** | **Equipment (Teaching/seminar rooms are endowed with teaching, learning and communication equipment facilitating professors' activities and students' receptiveness)**<br>* Share of rooms endowed with technical equipment used in specific activities (e.g., projectors, computer connected to the internet, smart boards, other equipment) of total rooms<br>* Number of licences for the software used in the educational process (each programme's name shall be mentioned together with the number of related licences, except for the Windows operation systems) as a percentage of the number of computers used in the university<br>* Number of computers/total number of students | Input |
| **A2.1.3.** | **Financial resources**<br>* Is there a strategy to attract financial resources besides those from the public budget? (only for higher education institutions that receive basic funding fro0m the public budget)<br>* Total income from public budget sources as basic funding and state budget allocations with special destination (in RON), in the last financial year for which the balance sheet was completed<br>* Income from fees and other activities (in RON), in the last financial year for which the balance sheet was completed<br>* Income obtained from student tuition (in RON), in the last financial year for which the balance sheet was completed<br>* Income from nationally-funded research programmes and projects (in the last financial year for which the balance sheet was completed) (in RON)<br>* Income from internationally-funded research programmes and projects (in the last financial year for which the balance sheet was completed) (in RON)<br>* Income from sponsorships and donations (in the last financial year for which the balance sheet was completed) (in RON)<br>* Income from contract-based services provided by the institution (in the last financial year for which the balance sheet was completed) (in RON)<br>* Income allocated to scholarships (in RON), in the last financial year for which the balance sheet was completed<br>* Total expenses for scientific research, design, consultancy and expertise activities (in the last financial year for which the balance sheet was completed) (in RON)<br>* Total cash and in-kind wage expenses (in the last financial year for which the balance sheet was completed) (in RON)<br>* The value of the budgetary execution (total income and total expenditure) (in RON) | Process<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input<br>Input |

| | | |
|---|---|---|
| **A2.1.4** | **Scholarships and other material support for students (Regulations for granting scholarships and other types of material support)**<br>* Number and types of scholarships granted by the higher education institution for each cycle of study (Bachelor's degree/Master's degree)<br>* Share of the institution's resources in the scholarship fund, for each faculties | Input |
| **P_CINST2** | **Transparency (either dichotomous or nominal, according to the public information used: printed brochures/Internet page/notice board/on demand at secretariat etc.)**<br>* The University Charter is available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* The Strategic Development Plan is available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* The activity evaluation reports on faculties/departments are available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* The institutional audit reports are available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* Student selection and enrolment procedures and criteria are available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* Human resources selection and employment procedures and criteria are available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* The ethics commission's reports are available: (a. At the library; b. On the website; c. Other types of public information (which.....))<br>* Other types of procedures and results of the implementation of quality evaluation tools are available: (a. At the library; b. On the website; c. Other types of public information (which.....)) | Process |
| **P_CINST3** | **Staff participation in professional training programmes**<br>* The higher education institution has a continuous professional training strategy/policy/plan/ programme for employers (dichotomous)<br>* Rate of staff participation in training programmes (on programme types, employer categories)<br>* Share of expenses for the employers' continuous professional training in the total budget | Input<br>Output<br>Input |

| | | |
|---|---|---|
| **C4.1.1** | **Teaching staff / student ratio**<br>* The ratio between the number of tenured professors and the number of enrolled students, function of the programme's objectives<br>* Fulfilment of the legal requirements for occupying teaching positions<br>* Strategy for selection and hiring of teaching and research staff (dichotomous)<br>* Criteria of selecting and hiring teaching and research staff (nominal)<br>* Distribution of the teaching body according to academic degree and gender (junior lecturer, senior lecturer, associate professor, professor, PhD-advising professor)<br>* The average number of legally established teaching loads per professor<br>* The ratio between the number of legally established teaching loads and the number of students<br>* The average number of legally established teaching loads per professor, per academic degree (junior lecturer, senior lecturer, associate professor, professor, PhD-advising professor)<br>* Competitive hiring practices (average number of candidates per position, differentiated according to education/research and administrative field)<br>* Number of professors who hold more than one position at a Romanian university (previous academic year)<br>* Number of professors who carried out teaching or research activities at a higher education and/or research institution abroad (course/project's title shall be mentioned, as well as the institution's name)<br>* Share of teaching staff holding an academic title in the study field they work in<br>* Ratio between PhD students and PhD-advising professors in the institution<br>* Distribution of the student body on years, level of studies and gender<br>* Distribution of the student body on types of study | Input |

## B. Quality assurance domain EDUCATIONAL EFFECTIVENESS

| *Code (acc. to ARACIS methodology)* | *Indicator* | *Type of indicator* |
|---|---|---|
| **B1.1.1** | **Principles of the policy of admission to study programmes**<br>* Distribution of average grades obtained at the admission exam (under 5, 5-8, over 8)<br>* Structure of the student group according to studies completed before enrolling, for each cycle (for the Bachelor's degree, the high school profile; for the Master's degree – the BA specialisation; for doctorate – the BA and MA specialization)<br>* Admission rate for each cycle (Bachelor's degree / Master's degree /doctorate) | Input |
| **B1.1.2** | **Admission practices. Widening access to higher education:**<br>* Percentage of mature students (over 30) of the total<br>* Percentage of students enrolled in limited attendance programs<br>* Percentage of disabled students<br>* Percentage of students from disadvantaged groups (orphans, rural environment, low income families, disadvantaged ethnic groups [Roma])<br>* Structure of the student body according to gender and level of studies | Input |
| **B1.2.1** | **Study programme structure**<br>* The study plans clearly state the programmes' general and specific objectives (YES/NO)<br>* Study programmes have course descriptions and syllabi for each course and laboratory (YES/NO)<br>* The syllabi / course descriptions clearly specify the teaching-learning strategies (YES/NO) | <br>Process<br>Process<br>Process |

| | | |
|---|---|---|
| **B1.2.2** | **Differentiation in the elaboration of study programmes. Relevance of study programmes**<br>* Study plans specify the qualification descriptors appropriate for the field of study (YES/NO)<br>* The ratio between the number of compulsory and optional courses, on years of study and study cycles (as indicated by the domain-specific, tertiary indicators for each subject area)<br>* Number of specialisations a student may choose during the study cycles<br>* The institution has an ECTS-recognition procedure (YES/NO)<br>* Number of students who appealed to the ECTS-recognition procedure<br>* The institution has collegial review mechanisms for its study programmes, and such mechanisms involve students, graduates, and employers' representatives (YES/NO)<br>* Percentage of courses revised / abandoned /newly introduced within a study programme, for each study cycle (Bachelor's degree / Master's degree / doctorate) | Input<br>Input<br>Input<br>Input<br>Process<br>Input<br>Output |
| **B2.1.1** | **Employment on the labour market (% employed graduates)**<br>* Percentage of graduates who are employed according to the qualification obtained within the first 6 months after graduation<br>* Percentage of graduates who are employed within the first 6 months after graduation, regardless of the qualification obtained | Outcome<br>Outcome |
| **B2.1.2** | **Continuation of academic studies (% graduates who continue studying)**<br>* Transition rate from the Bachelor's degree to the Master's degree<br>* Transition rate from the Master's degree to the doctoral degree | Outcome<br>Outcome |
| **C2.1.2** | **Correspondence between diplomas and qualifications**<br>* Correspondence between the competences mentioned in the diploma supplement and the relevant qualification descriptors | Input |
| **B2.1.3** | **Level of student satisfaction regarding the learning/development environment** | |
| **B2.1.4** | **Focus of learning methods on students**<br>* Number of professors who have and e-mail/personal web page for the subjects of the courses taught<br>* Average number of counselling hours with students per professor<br>* The institution centralizes the results of course evaluations by students (YES/NO)<br>* Number of recommendations for course improvement that were transmitted to the university chairs after analysing the evaluations carried out by students | Input<br>Process<br>Input<br>Output |

| | | |
|---|---|---|
| **B2.1.5** | **Student career guidance**<br>* Ratio between the number of supervisors or tutors and the number of students<br>* Number of experts employed by the HEI who hold specific competences in the field of career guidance (scale)<br>* Number of counselling hours per academic year provided to students for career guidance (scale)<br>* Percentage of students who benefitted from advisory services within the previous academic year | <br>Input<br>Input<br><br>Output<br>Output |
| **B3.1.1** | **Research planning**<br>* The institution has a medium and long-term strategy (minimum 4 years) concerning research/ innovation activities<br>* The strategy's objectives are formulated with reference to: a. National Strategy/Framework; b. European Strategy/Framework; c. Both | <br>Input<br><br>Input |
| **B.3.1.2** | **Research activities**<br>* Number of institutional research contracts<br>* Total amount allocated for research contracts/projects (for the previous academic year) in relations to the number of legally established teaching and research loads<br>* Ratio of the funding obtained from competitive research grants and contracts to the public funding allocated for research<br>* Ratio between legally established research and teaching loads<br>* Number of legally established teaching loads involved in research programmes<br>* Total number of research loads paid from research contracts<br>* Number of PhD students who received travel funding (participation in conferences, workshops, summer schools etc.) from the higher education institution's budget | Outcome |
| **B.3.1.3** | **Research valorisation**<br>* Number of research/counselling centres and number of research reports on research centres<br>* Number of articles (titles) published in CNCSIS B and B+ accredited journals per number of legally established teaching loads<br>* Number of articles (titles) published in international databases (indicating the ISSN) per number of legally established teaching loads<br>* Number of books (titles) published by ISBN publishing houses per number of legally established teaching loads<br>* Number of papers (titles) in the publications of national conferences (ISBN or ISSN) per number of legally established teaching loads<br>* Number of papers (titles) in the publications of international conferences (ISBN or ISSN) per number of legally established teaching loads<br>* The type and number of academic/scientific prizes and honours received within the past year | Output |

| | | |
|---|---|---|
| **P_EDU1** | **Educational process efficiency**<br>* Student retention rate, for cohorts (Bachelor's degree, Master's degree, doctorate level)<br>* Average time to graduation from a programme (Bachelor's degree, Master's degree, doctorate level)<br>* Ratio between the number of students who pass the Bachelor's degree, Master's degree, and doctoral degree examinations, respectively, and the number of students enrolled in the last year of the respective programme<br>* Distribution of Bachelor's and Master's grade averages, respectively, at the end of study (% under 5; 5-8; over 8) | Output<br>Process<br>Output<br>Output |
| **P_EDU2** | **Mobility**<br>* Percentage of students involved in study programmes abroad (for each level of studies)<br>* Percentage of foreign students involved in the institution's study programmes (for each level of studies)<br>* Institutional arrangements necessary to support student mobility (YES/NO)<br>* Number of programmes provided in cooperation with foreign institutions leading to the granting of doubly acknowledged awards<br>* Average duration of teaching staff mobilities (in months) per legally established teaching load<br>* Average duration of student mobilities (in months) per student | Output<br>Output<br>Input<br>Output<br>Process<br>Process |
| **P_EDU3** | **Contribution to adult education**<br>* Number of accredited/non-accredited professional lifelong learning programmes offered (previous calendar year)<br>* Number of graduates from accredited professional lifelong learning programmes (previous calendar year) | Output<br>Output |

## C. Quality assurance domain MANAGEMENT OF QUALITY

| *Code (acc. to ARACIS methodology)* | *Indicator* | *Type of indicator* |
|---|---|---|
| **C1.1.1** | **Central quality assurance commission** (YES/NO)<br>**Programme-specific quality assurance commission** (YES/NO) | Input<br>Input |
| **C1.1.2** | **Quality assurance policies and strategies** (YES/NO) | Input |
| **C2.1.1** | **Regulations on the initiation, approval and periodic evaluation of study programmes** (YES/NO)<br>* The institution has in place a system for the monitoring of study programmes on the basis of collected data (YES/NO) | Input<br>Input |
| **C3.1.1** | **Regulations on student evaluation and grading** (YES/NO)**. Specific evaluation and examination procedures**<br>* The regulations are available on the higher education institution's website (YES/NO)<br>* The regulations comprise clearly specified evaluation and examination procedures (YES/NO) | <br><br>Process<br>Input |
| **C3.6.1** | **Computer-based collection, processing and analysis of data on quality evaluation and assurance**<br>* Number of persons trained in the field of data collection/processing and analysis whose job descriptions comprise responsibilities of collection/processing and analysis of data concerning quality evaluation and assurance<br>* The internal quality evaluation report of the higher education institution includes comparative analyses with other universities inside the country or abroad (YES/NO) | <br><br>Input<br><br>Output |
| **C3.7.1** | **Qualitative and quantitative, correct and actual information and data on qualifications, programmes, teaching staff, research facilities** (YES/NO) | |
| **C4.1.2** | **Periodical peer review**<br>* The institution publishes periodic peer review reports (YES/NO)<br>* The evaluation reports comprise recommendations for the improvement of teaching staff activities (YES/NO) | <br>Outcome<br>Outcome |

| | | |
|---|---|---|
| **C4.1.4** | **Evaluation by university management**<br>* The institution has a methodology of teaching staff evaluation on a multi-criterial basis (YES/NO)<br>* The institution has in place teaching staff evaluation tools (YES/NO)<br>* The methodology, criteria and tools for teaching staff evaluation were submitted for debate within the academic community and are available for public consultation (YES/NO) | <br>Input<br>Output<br>Output |
| **C5.1.1** | **Free learning resources, in libraries or research centres, for each study programme**<br>* Number of book titles in the library (out of which available for loans...)<br>* Number of titles lent/consulted by the students within the previous academic year<br>* Number of recent titles (newer than 5 years) in the library<br>* Number of students who have a valid permit at the higher education institution's library (previous academic year)<br>* Number of seats in the reading room per total number of students<br>* Total amount of acquisitions (books and academic journals) for the libraries, in the previous academic year<br>* The institution ensures free access of students and teaching staff to international databases (online) of academic magazines | <br>Input<br>Outcome<br>Input<br>Outcome<br>Input<br>Input<br>Input |
| **C5.1.2** | **Updated teaching strategies, meeting the requisite criteria for each course, students' characteristics, type of education, and quality standards** | |
| **C5.1.3** | **Programmes to stimulate high-performance students and recovery programmes for students with disabilities**<br>* Facilities for disabled persons within the higher education institution (access facilities: elevators, platforms etc.) (YES/NO)<br>* Learning facilities (sound equipment, projectors for visually impaired persons, software programmes facilitating access to information, assistance and counselling programmes, others)<br>* The higher education institution grants scholarships or other rewards for high-performance students (YES/NO)<br>* Total amount spent by the higher education institution for such scholarships or rewards per number of beneficiaries<br>* Ratio between the number of tutors ensuring specific services for disabled persons and the number of beneficiaries<br>* Number of learning programmes adapted to the needs of disabled students<br>* Number of learning programmes adapted to the needs of high-performance students | <br>Input<br>Input<br>Input<br>Outcome<br>Outcome<br>Outcome<br>Outcome |

| | | |
|---|---|---|
| **C5.1.4** | **Social, cultural and sports services for students (accommodation spaces, sports centres, counselling services, workshops etc.)**<br>* Number and types of assistance/services programmes addressed to the students admitted to the institution, including disadvantaged groups and persons with disabilities<br>* Number of students using the assistance services/programmes provided by the institution<br>* Number of higher education institution employees with specific competences in social/educational assistance who carry out specific counselling/assistance activities for students<br>* Average time allocated weekly to assistance services per number of specialised employees and, respectively, per number of students using such services<br>* Distance from the faculty headquarters to the nearest canteen owned or operated by the HEI<br>* Number of canteen seats per number of students<br>* Number of places in students' hostels per number of students with permanent residence outside the locality<br>* The institution gathers information on the level of student satisfaction with respect to social, cultural and sports services provided | <br>Input<br>Output<br>Input<br>Process<br>Input<br>Input<br>Input<br>Input |
| **C8.1.1** | **The central quality assurance commission operates on a permanent basis, in compliance with the legal provisions, on the basis of quality evaluation procedures and activity schedules drawn up by the Senate, and publishes a yearly evaluation report** (YES/NO) | Process |
| **P_MC_1** | **Internal quality audit reports**<br>* The period of time covered by an internal audit report<br>* Minutes of the Senate debate concerning the Internal audit report<br>* Improvement plans were elaborated on the basis of the internal audit report | <br>Process<br>Output<br>Outcome |

## Notes

i. Source: HEFCE, "Benchmarking Methods and Experiences", Consortium for Excellence in Higher Education, 2003.

ii. Document available at http://www.acu.ac.uk/chems/onlinepublications/961780238.pdf.

iii. Document available at http://www.acu.ac.uk/chems/onlinepublications/961780238.pdf.

iv. The "Ranking / table leagues" technique, by means of which comparative hierarchies are carried out between organisations in terms of performance, raises methodological questions, as it intends to offer a comparative perspective in terms of performance at the level of a diverse range of higher educations institutions (Vlăsceanu et al., 2007, p. 79).

v. In this respect, see the information available at http://www.hesa.ac.uk, section dedicated to performance indicators.

vi. Despite the fact that HESA does not define performance indicators as league tables, they can still be used for comparisons between education institutions, though with some precautions and only to compare two institutions. According to HESA, the use of performance indicators (PIs) in order to create comparative tables, which should cover all higher education institutions, would be irrelevant because of the heterogeneity of the higher education sector in terms of mission and substance. However, for the purpose of cross-institutional comparisons the indicators and benchmarks generated could not cover all issues referring to a higher education institution's performance.

vii. See the definition of this concept in the present document.

viii. Presentation tables T1, T2 and T7, in the standardization carried out by HESA from 2002/03 until present.

ix. A young student is a student who is under 21 on 30 September of the academic year in which he/she is first enrolled.

x. It concerns students enrolled "full-time", namely those for whom a course lasts not less than 24 weeks.

xi. The concept of "entrant to an institution" is used here – the student who started a study programme in a certain institution. Tables T3, which represent data measured at the level of "entrants", do not take into account students who transfer from one institution to another. Students who move from an institution to another to obtain the same diploma, as well as those who resume their studies after 1 year, are measured by tables T5. They are registered in the "starters" category.

xii. In "Quality Assurance: A Reference System for Indicators and Evaluation Procedures", European University Association, available on http://www.eua.be.

xiii. According to Vlăsceanu, L., & Barrows, L. C. (Eds.). (2004). Indicators for Institutional and Programme Accreditation in Higher/Tertiary Education. Studies on Higher Education Series. Bucharest: CEPES.

xiv. The CIPOF acronym stands for the categories of indicators **C**ontext, **I**nput, **P**rocess, **O**utput, **F**eedback.

Papers published within the project „***Quality assurance in Romanian higher education in European context. Development of academic quality management at system and institutional level”***:

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