

PhD Illiashenko N.S., PhD Melnyk Yu.M.

Sumy State University, Ukraine

Method of estimation of an institution of higher learning potential

An institution of higher learning potential means its ability of the rational utilization of the available material and non-material resources to meet the needs of a person in education, of the institution in professional development and welfare of its staff, of enterprises in the increase of the professional community potential, of society in extended reproduction of its overall personal and intellectual potential.

The main components of an institution of higher learning potential are as follows: an intellectual component; material support; standard documentation and rights; informational support of its activity; a scientific component; the organizational structure of the institution; a marketing component; a financial component.

Let's dwell on each component in detail.

Intellectual component. This component be evaluated using the following methods. First of all we have to analyze the qualification structure of the teaching staff. The percentage of doctors of science, professors and candidates of science, associate professors, must correspond to norms and requirements.

Then we have to ask students about their teachers professionalism. There are three main questions:

1. What teachers taught you?
2. Evaluate these teachers as to the following parameters according to a 10-point scale: simplicity of material exposition; interesting and creative way of material exposition; intensity of instruction; attending to all students; joint work with students at the lessons; civility.
3. Your propositions.

When students have given all the answers, you can make up a conclusion about the level of satisfaction as to the main consumer needs.

After that, we have to determine the level of professionalism of the teaching staff using the following methods.

1. To determine the characteristics, which basic for determining the level of professionalism of the teaching staff. Choosing from the ones below: teaching and methodical work; research work; brining up and community work.

2. To determine the weight of the following characteristics: teaching and methodical work – 0,5; research work – 0,3; brining up and community work – 0,2.

3. To evaluate these characteristics using different quantitative and qualitative indicators. For example, teaching and methodical work: the number of textbooks written by the teachers, the number of publications, intensity of work, etc.

4. To calculate an integral indicator of the level of professionalism of the teaching staff using the following formula:

$$A = \sum_{j=1}^3 o_j I_j \quad (1)$$

o_j – the weight of j-characteristic

I_j – the value of j-characteristic.

The level of professionalism of the teaching staff (A) has to work for 1.

After that, you have to calculate an average age indicators of the teaching staff.

Next indicator is qualification fluctuation coefficient of the teaching staff. It is the ratio of the teaching staff “outflow” to the teaching staff “inflow”.

After all these calculations, all indicators of this institution and other institutions be tabulated. Than calculate an integral indicator of the level of the intellectual component using the well-known method of distances.

$$\Pi_{imm} = \sum_{i=1}^n (1 - \delta_i) \cdot B_i \quad (2)$$

Π – quantity of indicators;

B_i – the weight of i-indicator;

δ_i – relative value of i-indicator. It is calculated using the follow rules:

$$\delta_i = \frac{\Pi_i}{\Pi_{\max}}, \text{ if the larger value is good} \quad (3)$$

$$\delta_i = \frac{\Pi_{\min}}{\Pi_i}, \text{ if the smaller value is good} \quad (4)$$

Π_i – value of i -indicator;

Π_{\max} – the maximum value of the indicator of all the institutions of higher learning, which are compared;

Π_{\min} – the minimum value of the indicator of all the institutions of higher learning, which are compared.

After that, you have to calculate an average value of the level of the intellectual component: $0,7 \cdot \Pi_{\text{ИТ}_{\text{cp}}} \leq \Pi_{\text{cp}} \leq 1,3 \cdot \Pi_{\text{ИТ}_{\text{cp}}}$. If our integral indicator is less than the average, then the level of the intellectual component is high. If other wise, then the level of the intellectual component is low.

Material support. Its main constituents are as follows: quality of study buildings, lecture halls and labs; computers and information systems; communication components; information systems support; dormitories; social infrastructure.

This component be evaluated using the following procedure. First, we have to calculate the level of availability of study buildings, lecture halls and labs in accordance with requirements. It is the ratio of the number of study buildings, lecture halls and labs, available at the institution to the number of study buildings, lecture halls and labs, which are necessary for normal activity. The same as to calculate the level of conform of the dormitories and social infrastructure. You can evaluate their quality in comparison with study buildings, lecture halls, labs, dormitories and social infrastructure of other institutions.

We can calculate an integral indicator of material support the same way as an integral indicator of the intellectual component.

Standard documentation and rights. Their main constituents are as follows: the level of license; the level of accreditation; ownerships of patents, merchandise marks, designs, know-how, trade marks etc.; certificates of conformance of educational services to international educational standards, for example, in developed countries. To evaluate this component can using the following methods. We can evaluate the ownerships of patents, merchandise marks, designs, know-how, trade

marks etc using cost parameters: input method, income method (that is royalty exemption), analog method, determining market value.

To evaluate other constituents we can use the following indicators: total amount of professions; the portion of professions of the IVth level of accreditation; the portion of professions with certificates of conformance to international educational standards; the number of new, popular professions; availability of correspondence courses; availability of post-diploma education; other indicators.

Then all these indicators are compared with analogous indicators of other institutions. The integral indicator of this component is calculated just as the integral indicators of the previous components.

Informational support of an activity. Its main constituents are as follows: teaching and methodical literature; library stock; Internet access.

To evaluate this component we can use the following indicators: the level of availability of teaching and methodical literature in accordance with the requirements; quality of the teaching and methodical literature as compared with other institutions; the level of the library stock as compared with other institutions; availability of Internet access; others.

The integral indicator of this component is calculated just as the integral indicators of the previous components.

Scientific component. Its main constituents are as follows: state budget research and economic agreement research; international grants; scientific schools; business projects; conferences, seminars, competitions, exhibitions.

To calculate this component we can use the following indicators: the number of conferences, seminars, competitions, exhibitions, in which students and teachers take part; the number of conferences, seminars, competitions, exhibitions, which students and teachers organize themselves; the number of reports of conferences, seminars, competitions, exhibitions, in which students and teachers take part; the number of winners in all-Ukrainian competitions; the number of reports, in which students won; the number of grants won by the institution; quality of business projects performed by the institution; the level of conferences organized; others.

After that you have to compare all these indicators with analogous indicators of other institutions. An integral indicator of this component is calculated the same way as the integral indicators of the previous components.

The organizational structure of the institution. Its main constituents are as follows: an effective organizational structure; manager's qualities; social and psychological climate; corporate culture.

To calculate efficiency of the organizational structure, social and psychological climate and corporate culture you can use different sociological and psychological methods.

To evaluate manager's qualities you can use the following methods. You have to evaluate the following qualities of managers: business qualities (education, knowledge and experience); ability (talent, genius); culture and erudition, honesty and decency; character; temperament; the main interests; age; health.

Each quality is evaluated using a 5-point scale. An integral indicator of manager's qualities is evaluated using the expert method. An integral indicator of this component is calculated just as the integral indicators of the previous components.

Marketing component. Its main constituents are as follows: an effective marketing complex; relations with economic contractors; economic information; image, reputation. To calculate this component we can use the following methods.

First, we have to calculate a marketing complex. It consists of four main parts: product policy, price policy, sales policy and communication policy. All these parts be evaluated separately.

To calculate the level of the support of economical information we can use the following coefficients: information completeness coefficient; information accuracy coefficient; information argumentativeness coefficient; an integral indicator of the level of the support of economical information. It is the previous coefficients multiplication. If it is less than 0.3 then the level of the support of economical information is low. If it is more than 0.3 but less than 0.7 then the level is average. If it is more than 0.7 then the level is high.

To calculate the level of the relations with economic contractors we can use the following indicators: the number of contractors, with which the institution communicates; the portion of students placed in a job at the enterprises, with which the institution communicates; the portion of students done practical work at the enterprises, with which the institution communicates; the portion of applicants entered the institution from schools, with which the institution communicates; others.

To calculate the image of the institution we can ask potential applicants, students, their parents, teachers, enterprises representatives, international partners about that.

An integral indicator of this component is calculated just as the integral indicators of the previous components.

Financial component. Its main constituent is the level of the financial condition, which means the ratio of the gross institution's proceeds to main its costs. The main costs consist of: the wage fund of teaching staff, educational support personnel and managerial personnel; factor costs on realization educational program, which consist of costs on teaching material, current educational costs, costs on stationery, etc; costs on institution keeping, which consist of costs on fixed assets keeping, costs on professional development of the teaching staff, costs on development of good image, etc.

If the level of the financial condition is more than "1", then it is high. If other wise, then it is low.

An integral indicator of an institution of higher learning potential is calculated just as the integral indicators of its components.