The main element of any management system is personnel, which can be both an object and a subject of management at the same time. The employees of the enterprise act as an object, because they are the productive force, the main component of any production process. Therefore, planning, formation, redistribution and rational use of human resources in production constitute the main content of personnel management and from this point of view are considered similar to management as material elements of production. Personnel are people with a complex set of individual qualities, among which socio-psychological ones play the main role; it is part of the economic and innovative space of the enterprise [12]. The ability of personnel to simultaneously act as an object and subject of management is the main specific feature of personnel management at the enterprise.

Advanced enterprises are guided by the philosophy of the superiority of human resources over other types of them, believing that the main potential of successful business entities is provided by personnel, their qualifications and dedication to the interests of the enterprise [17].

It should be noted that the quality of personnel and their qualifications ensure personnel security of the enterprise. It is advisable to support it at every stage of the personnel management process.

There are several related concepts regarding personnel. The concept of "human capital" is used in management and at the modern stage has become a logical continuation of the sequence of such concepts as personnel, labor resources, labor force, labor potential, which are characterized as the main wealth of any society, the
prosperity of which is possible by creating conditions for reproduction, development and use of human resources taking into account the interests of each person [11, 14, 16].

In human capital, the key feature is the word "capital", because it is "a modern analogue of variable capital, discovered and scientifically substantiated by the founder of the Marxist direction of political economy" [11, p. 356].

Human capital is basically defined as "capital formed by a person due to educational level, qualifications, knowledge, experience, contains innate abilities that are the basis for its accumulation and development" [16].

Labor resources are "a part of the country's population that, based on its physical development, mental abilities and knowledge, is able to work in the national economy" [13, p. 187].

The political economic category "labour force" is "a set of physical and spiritual abilities possessed by an organism, a living personality of a person and which are used by him every time he produces certain consumer values" [9, p. 211].

Labor potential is "a generalizing characteristic of the amount and degree of aggregate ability to work that an individual, group, working-age population has at a given level of development of the economy, science and technology, education, etc." [12, p. 28].

Personnel is "the main composition of qualified employees of the enterprise" [14, p. 771], who possess a set of qualification characteristics, have undergone professional training and have a special education.

In the English-language literature, the term "personnel" was used for the first time as a general name for all employees of the organization, who have differences in qualifications and positions [2].

Therefore, most authors characterize the personnel as the personnel of the organization, which includes all hired workers, working owners and co-owners [3, 7, 9].

The main characteristics of personnel are: the presence of their employment relationship with the employer, which is formalized by an employment contract
Working owners and co-owners of the organization are included in the staff if, in addition to their due part of the income, they receive appropriate payment for participating in the organization's activities with their personal work; possession of certain qualitative characteristics (professions, specialties, qualifications, competence), the presence of which determines the activity of an employee in a specific position or workplace, therefore, assigning him to one of the personnel categories: managers, specialists, technical performers, workers; targeted orientation of personnel activities, i.e. ensuring the achievement of the organization's goals by establishing adequate goals for individual employees and creating conditions for their effective implementation.

So, there are many authors' approaches to defining the concept of personnel, the main ones are listed in the table. 1.

Table 1.

<table>
<thead>
<tr>
<th>Author</th>
<th>Definition</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>V. M. Hrynyova</td>
<td>The most complex object of management in the organization, extremely sensitive to managerial influence, the reaction to which is uncertain</td>
<td>A complex object of management</td>
</tr>
<tr>
<td>R. L. Daft</td>
<td>The main source of the organization's competitive advantage, a key element of the organizational and economic mechanism</td>
<td>The source of the organization</td>
</tr>
<tr>
<td>A. Ya. Kibanov</td>
<td>Personnel of organizations, including all hired workers</td>
<td>Composition of organizations</td>
</tr>
<tr>
<td>M. and Magura</td>
<td>Personnel performing labor functions in the management process</td>
<td>Executor of functions</td>
</tr>
<tr>
<td>O. S. Melnychuk</td>
<td>A type of economic resources that include people with their ability to produce goods and services</td>
<td>Type of economic resources</td>
</tr>
<tr>
<td>M. And Murashko</td>
<td>People with a complex set of individual qualities, among which social and psychological ones play the main role</td>
<td>Complex of qualities</td>
</tr>
</tbody>
</table>
Based on the main approaches to defining the concept of personnel, presented in Table 1, we define the following interpretation of it. Personnel is the personnel of the company's employees, organizations to which are people with their ability to produce goods and provide services, as well as the ability to achieve certain results in given conditions.

It is expedient to allocate personnel according to the main types of enterprise activity. Such distribution plays an essential role in ensuring personnel security of the enterprise thanks to the optimization of its structure. Basically, the staff is divided into staff of main and non-main types of activities [58]. The main ones include persons working in the management apparatus, in the main and auxiliary units. Non-core types of activities include employees of social sphere divisions.

According to the nature of labor functions in the production process, division into workers and employees is assumed. The share of physical labor prevails in the activities of workers, they directly create material values or provide services of a production nature. The main workers are engaged in technological processes that change the form, structure, as a result of which material products or services are
created. Auxiliary workers related to maintenance of equipment and workplaces are concentrated in auxiliary units.

Servants carry out the organization of people's activities, production management, administrative and economic, financial and accounting, legal and other functions. They belong to the professional group of persons engaged mainly in mental and intellectual work. The employees are united in several subgroups: managers, specialists, technical performers.

Managers perform general management functions. They have the legal right to make decisions and have two employees under their control. In addition, it is customary to highlight linear managers who are responsible for making decisions on all functions management, functional implementing managers – separate functions management.

Specialists of various profiles are the most numerous subgroup of employees. They are divided into engineering specialists, whose activity results in design-technological or design information in the field of engineering and production technology, and functional management specialists, whose activity results in management information.

A subgroup of technical performers consists of employees who perform auxiliary work in the management process: creation, replication, transfer, transformation, storage of information.

The basis for assigning people to one or another category is the staff unit of the organization, which is determined in accordance with the unified tariff-qualified directory of occupations of workers and positions of employees.

Therefore, the staff has a complex interrelated structure and can be considered according to the relevant features. Only then can he ensure personnel security of the enterprise. It is based on different personnel structures.

The organizational structure is a composition of interconnected links in management, which include the management apparatus and production units.

The functional structure reflects the division of management functions between management and separate departments. The management function is a part of the
management process, separated by a certain feature (labor and wages, accounting, quality, etc.).

The role structure characterizes the team in terms of participation in the creative process at production, in terms of communication and behavioral roles.

The social structure characterizes the workforce of the enterprise as a set of groups based on status, age, level of education, national and social composition. The staff structure determines the quantitative and professional composition of personnel, the composition of subdivisions and the list of positions, the amounts of wages and the fund of wages for employees.

All the listed structures are taken into account in the personnel management process, which consists of various stages. Personnel selection is the most important responsible stage in personnel management, because a mistake in the selection of personnel is too expensive for the enterprise and reduces its personnel security. Skill hire the most competent personnel is large and enough rare talent, which must own personnel manager.

Selection personnel - multi-faceted, painstaking and continuous work that requires special abilities, character traits, knowledge and skills. High qualification of HR consultant provides knowledge in the field of law, economics, sociology and psychology. The more meaning in success firm acquire personal quality employees, teams greater need for psychological ones knowledge, the higher is personnel security.

Personnel selection is a goal-oriented system actions to recruit candidates that own qualities necessary for achievement goals set organization.

Personnel selection is search, evaluation and hiring of people who willing and able work that own necessary competencies and share values company.

Let's formulate actually definition The "recruitment" category is a system of measures that are being implemented organization to engage employees who have necessary professional skills and moral quality and capable perform in production official responsibilities, that is, to ensure personnel security of the enterprise.

To ensure personnel security, the selection and placement of personnel is one of the most important functions of the management cycle, which is performed by the company's management. The efficiency of the enterprise largely depends on the
quality of personnel selection and placement, both in the production system and in the management system.

Personnel selection is characterized as a rational distribution of the company's employees by structural subdivisions, areas, workplaces in accordance with the system of division of labor and cooperation adopted in the organization, on the one hand, and the abilities, psychophysiological and business qualities of employees that meet the requirements of the content of the work performed, on the other hand [64].

The initial data for personnel selection are: service career models; philosophy and personnel policy of the organization; The Labour Code; materials of attestation commissions; employee contract; staff schedule; job instructions; personal affairs of employees; Regulations on payment and labor incentives; Regulations on the selection and placement of personnel [1, 2, 6, 22]. Therefore, vacant workplaces at the enterprise must be filled taking into account the personal wishes of employees and their planned career and ensuring personnel security.

Increasing the efficiency of personnel selection is associated with the consistent evaluation of the candidate's business and personal qualities.

The formulation of requirements for future employees based on the analysis of labor functions should consist of the following stages [8]:

- definition and clarification of the tasks facing the organization and the unit in the future period; the amount of authority and responsibility required by employees, taking into account changes in scale, technology, organization of their future activities;

- description of individual types of work, taking into account the size of the organization and divisions, level of management, content of activity, its form, degree of independence, type and scope of powers, frequency of performance of various tasks;

- description of general and specific requirements, as well as requirements proposed for the qualities of managers in different situations.
The principles of personnel management consist of rules, basic provisions and norms that should be followed by managers and specialists in the process of building a personnel selection system. In works [11, 20, 63] it is stated that personnel selection should be carried out in accordance with the proposed criteria based on the following principles:

- focusing on a person's strengths rather than their weaknesses and searching for not the ideal candidates, but the most suitable for the given position;
- refusal to accept new employees, regardless of personal qualities, if there is no need for them;
- focus on the most qualified personnel, but not more highly qualified than the workplace requires;
- ensuring compliance of the individual qualities of the applicant with the requirements proposed by the content of the job (education, seniority, experience, and in some cases: gender, age, health, psychological state).

In work [64] it is noted that the selection and placement of personnel should be based on the principles of compliance, perspective, changeability.

The principle of conformity means the conformity of the moral and business qualities of the personnel with the requirements of the positions they replace.

The principle of perspective is based on taking into account the following conditions: establishing an age limit for various categories of positions; determination of the duration of the period of work in one position and in the same area of work; the possibility of changing profession or specialty, organization of systematic professional development; health status.

The principle of changeability is that the better use of personnel should be facilitated by intra-organizational labor transfers, which are understood as the processes of changing the place of employees in the system of labor distribution, as well as changing the place of work within the organization, because the stagnation of personnel in the same position has a negative consequence for the company's activity.
In addition, when forming a personnel selection system, it is necessary to adhere to such scientific and methodological principles as [64, 68]:

objectivity – repeatability of the results of the assessment of the specified personnel qualities at different stages of selection, as well as minimizing the influence of the subjective opinion of the consultant who makes the final decision;

scientificity - the use in the process of preparation and selection of the latest scientific achievements and the latest technologies.

completeness – a comprehensive study and assessment of the candidate's personality (study of business and personal qualities, state of health, biographical data, professional career, level of professional knowledge and skills);

continuity – constant work on recruitment and selection of qualified specialists, formation of a personnel reserve for managerial positions.

Personnel selection is carried out from the number of applicants for the vacant position of manager or specialist by means of an assessment of the candidate's business qualities. At the same time, special methods are used that take into account the system of business and personal characteristics, which include the following groups of qualities: the level of knowledge and work experience, attitude to work, organizational skills, the ability to work with documents and information, the ability to make and implement decisions in a timely manner, moral and ethical character traits [57].

In order to correctly determine the selection criteria, it is necessary to clearly formulate the employee's qualities necessary for the relevant type of activity. The criteria should be formed so that they comprehensively characterize the employee: experience, health, personal characteristics. The level of requirements for each criterion is developed based on the characteristics of the employees already working in the organization, who cope well with their duties.

The publication [40] states that to ensure personnel security, the personnel selection system must meet certain requirements.
A clear definition of the goal that is related to the goal departments or the organization as a whole. The search and selection of new employees is frequent directed at the desire of the organization to reach a new level of efficiency. At the same time, the use of such methods and requirements that allow to more effectively select employees who correspond requirements organizations.

The use of effective methods and procedures that allow to solve the tasks as best as possible. When using standardized and good using tried-and-tested methods of personnel selection, as well as carrying out work based on the regulations and conditions recorded in the documents and approved by the management, the enterprise will reach a high level of development. The regulation on recruitment of personnel not only fixes the goal of recruitment, but also defines the range of tasks that must be solved for its achievement. Otherwise, the selection of a new employee will be solved every time as a new task and mistakes will be a common phenomenon.

Provision of the necessary financial and material resources. Performers must have the necessary resources and must be created for them conditions which allow in the best possible way to reach the set goal. It is very difficult to select personnel successfully, without having the necessary premises, sufficient necessary funds, equipment, time. Needed groschi, to advertise in media mass information or to attract to jobs of recruiting workers agencies.

Availability of rules, regulations, according to which the process of personnel selection is implemented. For practical implementation of the process appropriate organizational support should be provided: responsible persons, designated departments and officials person, what perform main volume work. This should be reflected in the relevant ones documents: in the Regulation about the department or in the job descriptions of employees.

Periodic assessment effectiveness and the established practice of correction based on the results of the assessment. The most important resources for increasing efficiency tasks are the identification of factors that hinder work and reduce its
effectiveness (low qualification of employees, low control system, lack of practice of
delegation of powers), identification of opportunities that were not used or were not
used enough (acquaintance with the experience of other organizations, involvement
of external experts). The final result should be subject to quantitative or qualitative
assessment. This is the most important provided that _ allows not only to monitor the
work process in this direction, but also to obtain contemporary feedback and have
data for evaluation efficiency search and selection. If we consider the search and
selection of personnel not as a natural disaster, but as personnel-technology, then
this work should include premature installed the procedure for making corrections,
etc aimed at increasing efficiency work in this direction.

In works [45, 50], it is stated that when forming a personnel selection system, it
is necessary to ensure the coordinated activity of the team, taking into account the
scope, nature and complexity of the work performed, based on compliance with the
following conditions:

- uniform and full loading of employees of all services and divisions;
- specifying the functions of the executors, so that each employee clearly
  represents the scope of his duties;
- confirmation by the performer of work that corresponds to the level of
  knowledge and practical skills;
- ensuring the necessary interchangeability of workers based on their mastery of
  related professions.

Recruitment at the enterprise should be considered as a process in which the
head of the personnel department selects from the list of applicants the candidate or
group of candidates who best meet the professional criteria of the vacant position,
taking into account environmental factors.

The effectiveness of the selection system will increase if the discrepancy
between the employee's personal qualities and the proposed requirements for the
work he performs are minimal. In modern conditions, it is advisable to form a model
of personnel selection, in which candidates for vacancies will be considered not only for their compliance with the requirements of the workplace, but also for the enterprise as a whole, its traditions, and culture.

Therefore, when forming a personnel selection system, it is necessary to maintain certain proportions in terms of qualifications, social activity, age, and status. Compliance with these proportions will ensure personnel security of the enterprise. The social and psychological aspects of the compatibility of employees should be recorded in the personnel placement instructions.

The most important means of ensuring personnel security and personnel management and the main link of the entire economic mechanism is planning. The HR planning system should include the calculation of such indicators as: the number of personnel by categories and positions; the specific weight of employees of the management apparatus in the total number of employees, expenses for their content; the number of workers, specialists and managers who must study in various types of educational institutions, including in the system of training the reserve of management personnel; the number of training places in the system of personnel training and advanced training, availability of training places; turnover, turnover and change of personnel of various categories and professional groups. This allows planning to comprehensively cover all possible links, problems and processes of working with personnel at the enterprise [42].

When developing a personnel selection system at the enterprise, it is necessary to take into account the peculiarities of the demographic situation related to the balance of labor resources, as well as the processes of release and redistribution of employees, the most important trends of scientific and technical progress in production, growing requirements for improving planning and organization of management, accumulated experience the main areas of work with personnel in previous periods.

Recruitment at the enterprise should be considered as a process in which the head of the personnel department selects from the list of applicants the candidate or
group of candidates who best meet the professional criteria of the vacant position, taking into account environmental factors.

It should be noted that the leading place in the personnel planning system is given to the development of plans for the need for personnel and sources of their supply.

In order to carry out the initial selection, it is necessary to first attract potential candidates. So, let's consider the main methods of attracting potential candidates.

Search in the middle of the organization. The most common methods of internal search are the announcement of a vacant position in the internal means of information: the company's newspapers, specially issued information leaflets, as well as appeals to department heads with a request to nominate candidates and analysis of personal files in order to select employees with the necessary characteristics. The search within the organization does not require significant financial costs, it helps to strengthen the authority of the management in the eyes of employees. At the same time, when searching for candidates within the organization, the possibilities of choice are limited by the number of its employees, among whom the necessary people may not be found.

Recruitment with the help of employees. The human resources department can ask the organization's staff for help and engage in an informal search for candidates among their acquaintances. This method is characterized by low costs, guaranteed decency and responsibility. The negative features are moral obligation, the risk of low qualifications, the lack of qualified knowledge among employees in the field of candidate selection, as well as complete information about the workplace and remuneration.

An alternative to hiring new employees can be overtime work, when the organization needs to increase the volume of output. At the same time, there is no need for additional costs for hiring and selecting new employees, the company already has qualified employees who do not need training. And overtime work itself can provide additional income to existing employees, but there are problems of fatigue and an increase in industrial injuries. Prolonged or frequent overtime work
leads to an increase in personnel costs and a decrease in labor productivity.

Self-manifested candidates. Almost any organization receives letters, phone calls, and other inquiries from people busy looking for work. Not having a need for their work at the moment, the organization should not refuse their offer - it is necessary to maintain a database of such a group of people; their knowledge and qualifications may agree in the future. Maintaining such databases does not require significant costs, it allows you to always have a reserve of potential candidates [25].

Advertisements in mass media. The main advantages of this method of recruitment are a wide coverage of the population, quick provision of information. The disadvantages of this method are the large flow of applicants, most of whom do not have the necessary qualities, which leads to difficult interpretation of the results.

State employment agencies. The governments of most modern states contribute to increasing the level of employment of the population, creating for this purpose special bodies engaged in finding work for citizens who have applied for help. In Ukraine, the state employment service operates in order to implement the population employment policy and provide citizens with appropriate guarantees. According to Art. 20 of the Law of Ukraine "On Employment of the Population", enterprises, institutions and organizations located in the territory of the region are obliged to provide the state employment service with information on the availability of vacant jobs (vacant positions) on a monthly basis [4]. Each regional employment center has a database of job vacancies and registered citizens looking for work, with detailed information about them [2]. Organizations engaged in the search for employees have the right to use this information to select the right employee. The use of government agencies makes it possible to search for candidates at low costs. However, this method rarely provides a wide coverage of potential candidates.

Private recruitment agencies. Private agencies ensure a fairly high quality of candidates, their compliance with the client's requirements and, thereby, significantly facilitate the further selection process. High costs are a factor that limits the wide application of this method, which is used in cases of finding managers and specialists that have a significant impact on the functioning of the organization [19].
Internet selection. Online selection or online collection of job application forms opens up access to more candidates and saves time and money for the employer. Abroad, in addition to publications about work on its own websites, the organization can use the services of commercial sites. Job seekers post their resumes there, and employer companies select qualified employees. Ukrainian enterprises do not abandon traditional methods of personnel selection, but Internet selection has become a valuable tool in the hands of personnel selection managers [26].

Search for candidates on the forums. In such events, it is important to create additional value, that is, to increase the level of attractiveness of the employer. Enterprises work in different industries, each of them has its own image, its own internal development opportunities, its own compensation packages. It is very important that they attract exactly those candidates who are interested in career development in them - not from the point of view of material goods, but from the point of view of the development of professional skills and personal qualities.

In addition, an important distinguishing feature is the shortening of the procedures preceding the candidate's meeting with a potential employer. Candidates can attend presentations and communicate directly with managers, who have the opportunity to research the candidate market within the target audience and conduct interviews not only with those with whom they were scheduled, but also with each of those present at the forum.

In addition, the forum helps to select candidates for graduate development programs. In Western countries, many companies have developmental training programs. Recently, they have become widespread in Ukraine as well, and many organizations attract personnel precisely with the help of career forums.

Personnel leasing. In a rapidly changing economic environment, companies are looking for new technologies to manage human resources, while at the same time striving to optimize personnel costs. Personnel leasing is one of the underdeveloped technologies for the Ukrainian market.

When leasing personnel, the recruitment agency acts, in contrast to the generally accepted practice, not as an intermediary, but as a direct employer: at the
request of the customer, it finds a specialist (or even a whole team), concludes an employment contract with him, and pays him a salary. The employee is provided to the customer for the time specified in the contract between the agency - the employer and the customer, and the latter pays only the provided invoice, and the agency takes over all personnel administration, tax payment, etc. Staffing relationships are often of a short-term nature, arising to meet the needs of the customer in temporary labor resources [64]. The advantage of using temporary workers is that the organization does not have to pay them bonuses, train them, provide compensation and take care of the next promotion. A temporary employee can be hired or fired at any time depending on the requirements of the work they are performing. The disadvantage of hiring temporary workers is that they do not know the specifics of the organization's work, which hinders its effective work.

Therefore, both internal and external methods of personnel involvement have their advantages and disadvantages, as can be seen from the table. 2. The human resources department must possess the entire set of techniques for attracting candidates and use them depending on the conditions formed at the enterprise and the tasks set for it.

After the preliminary selection, the selection begins among those applicants who have entered a narrower circle of applicants. Let's determine the value and peculiarity of each of the methods of personnel selection.

Analysis of questionnaire data. When evaluating candidates, great importance is attached to his life experience, which is closely related to the length of continuous work experience. The information obtained allows to systematize the selection of events and situations from professional and personal areas. The questionnaire allows you to get more detailed information about the previous place of work, professional inclinations and interests, personal hobbies and work experience [42]. However, when selecting personnel, the use of only questionnaires does not give effective results, since such a method does not reveal the ability to express one's own opinion, conduct business negotiations, possess the norms of etiquette, and internal psychological qualities.
Table 2.

Comparative characteristics of internal and external sources of personnel involvement to ensure personnel security

<table>
<thead>
<tr>
<th>Benefits of engagement</th>
<th>Disadvantages of engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External sources of personnel involvement</strong></td>
<td></td>
</tr>
<tr>
<td>more wide choices; the emergence of new impulses for the development of the organization; hiring covers the absolute need for personnel; less threat of intrigues within the organization.</td>
<td>higher costs for attracting personnel; high specific weight of employees, which contributes to the growth of staff turnover; a long period of adaptation; blocking career growth opportunities for employees of the organization; low knowledge of the organization.</td>
</tr>
<tr>
<td><strong>Internal sources of personnel involvement</strong></td>
<td></td>
</tr>
<tr>
<td>increasing the degree of attachment to the organization; improvement of the social and psychological climate at work; low costs for attracting personnel; applicants for the position are well known in the organization; requires lower costs.</td>
<td>limiting the ability to select personnel; possible tension, rivalry in the team in the event of the appearance of several applicants for the position of manager; reluctance to refuse something to an employee who has a long experience in this organization.</td>
</tr>
</tbody>
</table>

Interview. The purpose of this selection method is to assess the candidate's degree of compliance with the established requirements of the position; potential for professional growth and development; ability to adapt in the organization; working conditions and wages [8].

The interview can be one-on-one or with a group of applicants. A one-on-one interview is psychologically more comfortable, it is better to control the situation, it is easy to organize, but the results of the interview may be subjective, and the assessment may be erroneous. A group interview gives a more objective assessment of candidates, but creates a psychologically difficult situation, possible mistakes in recognizing professional qualities due to the lack of focus on the candidate.

Regarding conducting an interview [8], it is advisable to use the following suggestions.

Preparation. The candidate's case is studied, the candidate's assessment method is determined, and questions are prepared for him.
Creating an atmosphere of trust. It is necessary to relieve tension, give an opportunity to relax and thereby reveal professional qualities.

Information exchange. It is necessary that the manager maintains control over the situation, but does not put too much pressure on the candidate. It is desirable for the candidate to speak.

Conclusion: The ending should be sharp, but not pushy. Then it is necessary to: thank the candidate; explain the procedure for consideration of candidacy.

Rating. Before the interview, it is necessary to prepare a reference in order to ask for information from people and organizations who know the candidate. It is advisable to ask for written recommendations.

Thus, the wide use of a comprehensive approach to personnel selection, namely a number of principles and criteria for determining professional characteristics, allows employees of the company's personnel department to obtain the most complete and reliable information about the candidate.

In addition, it is worth cooperating more closely with specialized organizations that develop diagnostic tools, from which you can not only purchase effective tests, but also receive the necessary methodical and informational assistance, which is very important for the success of an entrepreneur.

Effective assessment of personnel plays an important role in management and is the basis of such functions as: hiring, dismissal, internal transfers, enrollment in the reserve for promotion to another position, material and moral stimulation, application of sanctions, retraining and professional development, improvement of the organization managerial work, techniques and work methods, improving the structure of the apparatus [8, 10].

To ensure personnel security, it is advisable to classify the assessment procedure [8] according to the characteristics presented in the table. 3.

In general, it is advisable to consider personnel evaluation as a purposeful process of establishing the compliance of the qualitative characteristics of personnel (abilities, motivation, and properties) with the requirements of the position or worker's position [26].
Based on the degree of compliance, the following main tasks are solved:

- choosing a place in the organizational structure and establishing the functional role of the evaluated employee;
- development of a development program;
- determination of the degree of compliance with the specified criteria for remuneration;
- determination of employee motivation methods;
- establishing feedback with the employee on various issues and satisfying his need to evaluate his own work and quality characteristics.

### Table 3.

Classification of the assessment procedure

<table>
<thead>
<tr>
<th>A sign of classification</th>
<th>Types of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By object of assessment</strong></td>
<td>goal achievement, quantitative and qualitative results;</td>
</tr>
<tr>
<td></td>
<td>individual contribution and contribution to the organization as a whole;</td>
</tr>
<tr>
<td></td>
<td>degree of expressiveness of personal or other qualities;</td>
</tr>
<tr>
<td></td>
<td>the level of mastery of the relevant functions</td>
</tr>
<tr>
<td><strong>By period</strong></td>
<td>assessment for a certain calendar period;</td>
</tr>
<tr>
<td></td>
<td>evaluation for the time of work in the organization, unit in this position</td>
</tr>
<tr>
<td><strong>According to data sources</strong></td>
<td>documents (autobiography, resume, characteristics);</td>
</tr>
<tr>
<td></td>
<td>assessment of special and general testing;</td>
</tr>
<tr>
<td></td>
<td>reports on the performance of production tasks</td>
</tr>
<tr>
<td><strong>By assessment subjects</strong></td>
<td>candidate or employee performing self-assessment;</td>
</tr>
<tr>
<td></td>
<td>colleagues, subordinate managers, members of a special commission evaluating the employee</td>
</tr>
<tr>
<td><strong>According to the degree of coverage of the contingent</strong></td>
<td>global assessment;</td>
</tr>
<tr>
<td></td>
<td>local assessment</td>
</tr>
</tbody>
</table>

Therefore, personnel evaluation allows you to identify and reveal the potential of each employee and direct this potential to the realization of the company's strategic goals.

One of the most important issues when conducting a business assessment is the choice of methods by which it is possible to assess the performance of personnel.

In works [8, 40, 64], the methods of performing evaluation procedures are divided into the following main types:
The method of standard evaluations consists in the fact that the manager fills out a special form characterizing each aspect of the employee's work. This method is simple and affordable to use. However, it should be noted that the manager's assessment is usually subjective, therefore, to increase its validity, the form can be filled out by an employee of the personnel service, who previously comprehensively discusses the work of the person being certified. Such an approach will ensure uniformity of evaluations, will contribute to overcoming subjectivism, but will require significant costs.

The method of the scale (graphic scale of ratings) assumes the point determination of the values of indicators that characterize the degree of expressiveness of the indicator [28]. This method is easy to use, economical, and does not require high development costs. However, the numerical designation of the expressiveness of the indicator assumes a wide field of interpretation by the evaluator. In order to reduce subjectivity when using the scale method, it is necessary to use the scale method of ratings of descriptions of behavior. At the same time, the numerical characteristics will be interpreted with a detailed description of the course of action corresponding to the given numerical value. The effectiveness of this method increases with increasing specification of the description of the scale segments. It is worth striving for a direct reflection in the scale of requirements for the workplace. Thus, a lower tendency to skewed estimates is achieved.

The method of paired comparison makes it possible to identify the highest ratings among employees on one or another evaluation indicator through a consistent comparison of employees with each other [53]. The implementation of this method is compiled in tabular form. However, company managers often overestimate their employees, which makes it impossible to reliably evaluate personnel. Therefore, it is necessary to use the method of the specified distribution of ratings (forced distribution), according to which the percentages of the distribution of the evaluated employees by ratings are set in advance.

The method of interviewing consists in the fact that the applicant is offered to conduct an interview with several job candidates and to solve the question
accordingly. This method is aimed at testing the ability to correctly evaluate, formulate questions and draw conclusions.

The method of modeling the situation makes it possible to make the assessment more reasonable and objective. The method consists in creating artificial but close to real working conditions and management situations (selection of business papers, development of projects, filling out documents, etc.). The assessment criteria are the ability to organize and plan, decisiveness, flexibility, work style, and the ability to make managerial decisions [28].

The 360-degree evaluation method consists in the fact that the employee is evaluated by everyone with whom he contacts in the course of work, while filling out a general and special form for each level of experts [26]. However, the main difficulty in using it is that this method works only in a certain corporate culture. If the company is highly politicized, there are hidden or open conflicts, then the 360-degree evaluation method will not work effectively. A very strong corporate culture, when employees perceive themselves as a whole, as a single team, also complicates its application. Accordingly, it is quite difficult to give real grades in such a culture.

The method of the given point evaluation is characterized by the assignment of a predetermined number of points for each employee's achievement, followed by their summation. It ensures the clarity of the criteria and the evaluation system itself, its simplicity, but only takes into account the current results [18].

A situational interview consists in the fact that applicants are offered descriptions of identical situations, and then questions are asked about their possible actions. The disadvantages of the method are the complexity and high costs of preparation, beyond the universal nature of situations, in encouraging answers that correspond to the traditions of the organization, which prevents the emergence of people with new ideas.

Each method of personnel evaluation has its positive and negative sides, as can be seen from the table. Therefore, it is necessary to use each of the evaluation methods depending on the conditions at the enterprise, the tasks set, formed by the
requirements of the position or workplace, and it is also possible to use a combination of different evaluation methods.

In modern conditions, many Ukrainian enterprises make mistakes in business evaluation of personnel, caused by the objective or subjective inadequacy of the evaluator. Mistakes in personnel assessment lead to distortion of the obtained results and, as a result, to the adoption of inadequate management decisions. Typical mistakes are: using personal experience as its basis; focus exclusively on the quantitative ratio of positive and negative traits; approach to the past based on modern standards; assessment of personal attributes instead of performance results.

In order to maximally reduce the degree of negative impact from personnel evaluation, it is necessary to formulate an organizational process for preparing a business evaluation. This process should include the following mandatory measures:

- development of the methodology of business assessment and linking it to the specific conditions of the organization;
- the formation of an evaluation commission with the involvement of the probationary employee’s direct supervisor, specialists of higher, equal and lower levels of the hierarchy, as well as specialists of the personnel management service of the organization or specialized evaluation centers;
- determining the place and time of the business assessment;
- establishment of the procedure for conducting evaluation results;
- formation of issues of information support of the evaluation process (formation of a complete set of documentation in accordance with the evaluation methodology, its reproduction, distribution and determination of channels and forms of information transmission);

When developing a methodology for business evaluation, it is necessary to pay attention to the description of the evaluation. Based on the best experience of the best domestic and foreign enterprises, the authors [18, 21, 40] distinguish several stages of business assessment:

- collection of preliminary information from the individual, non-generalized assessment of the employee by assessment subjects;
generalization of the information obtained at the previous stage;
preparation of the manager for the evaluation interview and summary of the results;
formation of an expert opinion based on the results of a business assessment and submission to the expert commission;
making decisions of the expert commission on the essence of proposals contained in expert opinions.

In order to increase the effectiveness of evaluation, it is necessary to converge and unify evaluation criteria, create standard forms for all employees, use written reports and openly discuss individual achievements. since those being evaluated know their capabilities better, it is advisable that they themselves participate in the development of the evaluation program or carry out a self-assessment, since if the task is not carried out, the assessment may turn out to be low. This will ensure the necessary level of personnel security of the enterprise.

It should be noted that the correct assessment of personnel is possible only when the requirements for it are precisely formulated. The result of the assessment of a good candidate is 70-80% of the ideal [26].

Therefore, following such a personnel evaluation system will avoid or partially minimize errors that may occur in the evaluation process.

Thus, it can be concluded that in order to ensure personnel security, advanced enterprises are guided by the philosophy of the superiority of human resources over other types of it, believing that the main potential of successful activity of business entities lies in the personnel, their qualifications and dedication to the interests of the enterprise.

So, the staff is the personnel of the company's employees, the organizations to which belong people with their ability to produce goods and services, as well as the ability to achieve certain results in given conditions.

In order to correctly determine the selection criteria, it is necessary to clearly formulate the employee's qualities necessary for the relevant type of activity. The criteria should be formed so that they comprehensively characterize the employee:
experience, health, personal characteristics. The level of requirements for each criterion is developed based on the characteristics of the employees already working in the organization, who cope well with their duties.

When forming a personnel selection system, it is necessary to observe certain proportions in terms of qualifications, social activity, age, and status. The social and psychological aspects of the compatibility of employees should be recorded in the personnel placement instructions. The effectiveness of the selection system will increase if the discrepancy between the employee's personal qualities and the proposed requirements for the work he performs are minimal. In modern conditions, it is expedient to form a model of personnel selection.

Thus, alternative modern methods of decision-making on the selection of one candidate from a set of applicants, used by HR representatives and company managers, were analyzed, one of the most popular of which was the "ideal worker" method. Their advantages and disadvantages were indicated, it was justified why attention should be paid to the use of the method of fuzzy cognitive maps for the decision support system.

The following conclusions can be drawn on the basis of the study of operating enterprises. Enterprises mainly search for personnel primarily from internal sources, namely: internal competition, combination of professions, rotation, which, according to the head of the enterprise, lead to an increase in managerial qualifications, career advancement of specialists, and a reduction in financial costs for personnel selection.

The general process of selecting candidates takes place through questionnaires and conducting interviews for vacant positions on competitive terms, which are based on the principle of competition in the selection of candidates for work in the management apparatus. The conditions of the competition are determined by managers.

Persons who wish to participate in the competition submit the necessary documents to the competition commission, namely: application for participation in the competition; completed personal card with relevant attachments; two photo cards; copies of education documents, certified by a notary or in another manner established
by law; a copy of the passport and identification number. After that, each applicant passes a questionnaire, which allows to determine the conformity of the applicant's education with the minimum qualification requirements, the conformity of practical experience with the nature of the position, the presence of restrictions on the performance of official duties. Next, the personnel service analyzes the provided information for compliance with their established qualification requirements and the corresponding level of the position.

After collecting the questionnaire data, the company management organizes an interview with the candidates, which allows to assess a wide range of qualities necessary for the job offered: cultural level, value orientations and motivation of the candidate, his business qualities.

When conducting an interview, the company's management uses informal selection methods, namely conducting interviews in the presence of three experts and conducting interviews simultaneously with several candidates.

In the role of experts, the competition commission acts, the members of which determine the candidate's qualifications, his personal and professional qualities, level of knowledge, internal development potential. The tender commission includes a representative of the personnel management department and heads of structural divisions. A meeting of the tender committee is considered valid if three experts and the chairman of the committee are present. The decision to accept a candidate is made by the majority of votes of its members present.

The meeting of the tender commission is formalized by a protocol, which is signed by all its members present and submitted to the head of the enterprise no later than three days after the vote. Each member of the commission has the right to add his opinion and arguments regarding the admission of a new candidate.

The competition commission notifies the candidates about the results of the competition within three days after its completion. The decision on the appointment to the position is taken by the manager based on the proposals of the competition commission within five days from the day of the commission's decision.
After conducting an interview and analyzing the received information, the management of the company selects the most suitable applicants and gives them the opportunity to demonstrate their abilities in the course of performing their work duties.

Test conditions are stipulated in the order (order) on hiring. Labor legislation applies to employees during the probationary period. The test is not established when hiring: persons who have not reached the age of eighteen; young specialists after graduating from higher education institutions; persons released to the reserve from military or alternative (non-military) service: disabled persons sent to work in accordance with the recommendation of the medical and social examination. The test is also not established when hiring in another area and when transferring to work at another enterprise [2]. The trial period for employment generally does not exceed three months, in some cases, upon agreement with the relevant trade union committee, six months. If during the trial period it is established that the employee is not suitable for the job for which he was hired, the owner or the body authorized by him during this period has the right to terminate the employment contract.

The current management personnel selection system consists of several stages: searching for candidates, collecting questionnaire data about candidates and their analysis, conducting interviews, internships, making a decision on hiring or searching for a new candidate.

Analyzing the state of the current management personnel selection system, it should be noted that when conducting personnel evaluations, company management makes a number of mistakes that prevent the selection of qualified candidates, the main of which are: uncertainty of criteria, changing standards during the evaluation process, lack of feedback and internal PR project.

The current personnel selection system does not provide an opportunity to obtain a complete description of the candidate, as it does not include a complex of assessment methods, principles and criteria. The lack of personnel evaluation methodology leads to incorrect interpretation of the data, and reference only to the
results of the interview leads to a subjective view of the reception of this or that candidate.

When staffing, the company proceeds from a specific situation and inherent quantitative characteristics: the general set of costs, types of costs, lost profits and the effectiveness of the investments made. On the basis of this, the management of the enterprise determines specific methods and procedures, using which the management personnel selection system is carried out.

The identified main shortcomings of the personnel recruitment and selection system at the investigated enterprises are as follows. Lack of a clearly formulated personnel management strategy in the field of recruitment and selection. Insufficient personnel analysis, long-term and medium-term personnel planning.

Lack of information and documentary (normative and methodical) provision of the personnel recruitment system. Low degree of automated personnel information system.

Insufficient attention is paid to the formation of personnel in the process of selecting applicants, to the issue of staffing teams. The result of this is the absence of a single corporate culture in the organization, disunity of values and standards of behavior of employees, lack of team spirit among employees and their indifferent attitude to the results of their work.

The lack of a degree of prediction of the candidate’s potential when identifying the compliance of the applicant’s characteristics with the requirements of the workplace, which causes the appearance of the factor underutilization of labor potential and leads to weak motivation of employees for high-productivity work, low level of satisfaction with the work of personnel, and a decrease in the level of work intensity.

Insufficient analysis of employee expectations during hiring (type of motivation of applicants, their plans in terms of long-term cooperation, work requirements) and assessment of the possibility of their fulfillment (achievement of employee expectations at the enterprise), which leads to an increase in the level of
staff turnover, a decrease in productivity and the degree of satisfaction with the work of employees.

It should be noted that improperly organized selection and placement of personnel at the enterprise causes a number of problems, and most importantly, reduces the personnel security of the enterprise:

appearance of defective products in the production process;
high cost of error correction and non-compliance with established requirements;
salary increase;
decrease in the effectiveness of employee interaction;
damaged relations with clients;
drop in competitiveness;
reduction in sales volumes;
decrease in profit.

The current personnel management system at enterprises lacks clear regulations and a system of rules that determine how key management issues should be resolved. The development of measures for the formation of a personnel selection system is not based on the achievements of science in the field of management, taking into account changes in development in market conditions.

The main problems that reduce the effectiveness of the current personnel selection system are of an emotional and psychological nature, because companies use only the biographical method of selection and interview to assess the professional qualities of candidates.

The lack of an effective system for selecting managerial personnel for managerial positions leads to high production costs, as a result of forced layoffs of qualified workers who do not see the opportunity to continue working with incompetent managers.

One of the most important functions of personnel management is organization effective selection staff, which in general is defined as provision of the enterprise with personnel needed at each specific moment time in the required quantity and
required quality, and as well as the creation of a reserve candidates for all workers places

IN direction improvement structures enterprises was suggested attract a specialist in reception and adaptation of personnel (new staff unit). It will allow lead to more careful selection candidates on replacement vacant positions

For attracting reception and adaptation specialists at enterprises, a typical cost calculation is as follows. As a rule, enterprises have ready-made products rooms and equipment. Earning pay specialists can be on average 8,240 UAH per month in general with with deductions, it will amount to the following amount:

\[ Z_p = 8240 + 22\% = 10052, 8 \text{ UAH. month.} \]

\[ Z_p \text{ year} = 10052.8 \times 12 = 120633.6 \text{ UAH. per year} \]

evaluate personnel using the "360 degrees" method. Evaluate an employee will be him working environment: colleagues head, mentor, at least four people. Questionnaires will be filled out during working hours time (15 minutes on filling questionnaires) this time employees will be to be paid on average monthly earnings. Estimated costs for personnel evaluation will be draw up: 12,000 hryvnias, year.

At search staff we will use the following methods: advertisements in newspapers, on the radio, use services of employment services, private recruitment agencies, as in this saves time for an interview with candidates who clearly do not meet the requirements, what appear and selection candidates is more targeted Costs will be draw up about 18,000 hryvnias, year.

Costs for the training of the involved personnel and their adaptation are approx will be draw up: UAH 14,400, year, it will be surcharges mentors.

Medical examination at the expense of the company is UAH 700 per person. At enterprises, as a rule, the medical commission is passed only once after interviews with department personnel, which gives referral on passage examination. Costs on the medical commission is made up on average by year 8,400 hryvnias.

Under time internship and teaching involved employees is paid minimum wage, but if a person has shown himself to be qualified specialist, this payout may increase. Approximate costs during training and there will be adaptations for the year.
draw up: 120 000 hryvnias

Others costs will compose about by year 8,000 UAH It will be expenses for heating the premises of the personnel department in the winter period, expenses for lighting rooms, electricity, paper for driving affairs employees, refilling cartridges for printer, etc. Thus, the costs of activity a specialist with reception and adaptations are presented in table. 4.

Table 4. Costs on activity a specialist with reception and adaptation, UAH year

<table>
<thead>
<tr>
<th>Name expenses</th>
<th>Amount , UAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earning pay a specialist with reception and adaptation</td>
<td>120,633.6</td>
</tr>
<tr>
<td>Costs on assessment staff</td>
<td>12 000</td>
</tr>
<tr>
<td>Costs on search staff</td>
<td>18 000</td>
</tr>
<tr>
<td>Costs on teaching staff and adaptation</td>
<td>14 400</td>
</tr>
<tr>
<td>Costs on passage honey, Commission</td>
<td>8 400</td>
</tr>
<tr>
<td>Costs on salary fee employees under time teaching and adaptation</td>
<td>120 000</td>
</tr>
<tr>
<td>Others costs</td>
<td>8,000</td>
</tr>
</tbody>
</table>

For more complete using internal reserve enterprises, recommended to allocate attention already working personnel on the enterprise. To increase personnel security of enterprises, it is proposed arrange internal competition on occupation vacant positions by selection a specialist in the reception and adaptation of the relevant employees requirements to positions.

To improve the organization of the recruitment process enterprises must also be taken participation in at the "Job Fair" events, which takes place annually. For HR employees need to prepare for the event to give be able to to everyone willing get acquainted with specificity work on the enterprise. But this West is ignored department personnel.

Reasoned conclusions and specific data are made for the identified problem recommendations, having applied which on practice you can much raise efficiency work enterprises, and exactly much raise quality selection staff, by accounting values individual factors, for compliance busy positions you can to achieve more target set, take away more literate, competent specialists who will correspond to their position,
such in order to reduce staff turnover in the organization, thereby reducing costs enterprises to attract personnel.

As proven by studies at enterprises, there is no certain schedule of certification and training of employees, almost they do not conduct testing and attestation employees, not is being conducted CONTROL over training, which negatively affects personnel security of enterprises. Therefore, to ensure personnel security, it is advisable for enterprises to implement: increasing the labor potential of employees, rational using materials, increase efficiency labor in in general, education of young capable workers, growth of social qualities employees and their job satisfaction. Forms of personnel training are possible as individual, Yes and group So itself maybe external and internal teaching.

For external teaching necessary for management to direct heads of departments to undergo advanced training at the best enterprises related in terms of activity. Studying under this program gives an opportunity to get in-depth knowledge with professional discipline and to acquire practical experience. But it need do by folding schedule learning because it is impossible send everyone managers at the same time for training, it will be harmful the enterprise as a whole. It is also recommended to rotate among them so that in case of absence one, was man which will be capable fully replace him. It is recommended Each year send on to one employee on teaching.

The training of one employee will cost the company UAH 42,500. by two years, provided that the person already has a higher education and will start studying from third year The employee will get Bachelor's level of education. It is possible to send two people to the first training. Formula calculation capital attachments (investment) in training is as follows:

\[
IS = Y*n + R*n, \\
\]

where IS - size capital attachments (investment) in teaching UAH.;
Y - the cost of training for one employee;
n - number employees;
R - salary of the employee at the time of passing the exams.
So, general costs on teaching employees are:

\[
IS = 42\,500 \times 2 + 4000 \times 2 = 93\,000\,\text{hryvnias}
\]

The result of the training is a reduction in labor intensity as a result application learned innovative methods, expected increase about will make 2%, what will give income from the main species activity (174 UAH 930 , year ) = 9 204 000*0.03=174 930 hryvnias, year

For that in order to to evaluate or brings teaching staff expected use the quantitative effect on enterprises and qualitative methods. For it is necessary to resolve the issue of effectiveness or ineffectiveness of training economic assessment of costs and economic assessment of benefits from education. Costs on education it investment, let's calculate period payback investments in teaching.

\[
PP = \frac{IC}{PN},
\]

where RR is the investment payback period, years;
IC – amount of investments, UAH;
PN is the average annual additional profit or cost savings received in as a result making investments, UAH

\[
RR = 93\,000/ 174,930 = 0.53.
\]

Estimated investment return period after graduation makes up half year But effect from teaching you can will be already to feel after the first year teaching managers, because of application of the proposed methods.

One with basic ways increase efficiency teaching there are workers cascading teaching. It is based on the principle of gradual transfer of knowledge, abilities, and skills from managers who have passed external teaching, his own subordinates By goals implementation principle cascading training is:

transfer purchased in process teaching knowledge;
development work with customers;
development creative thinking;
increase general equal of knowledge everyone employees

For the purpose of implementation cascade training is recommended to install such the order of its application. After training, the manager, which him passed must:

- prepare short seminar for subordinates on topics, which were studied;
- agree with the HR department on the list of employees who are subject to training necessary in work and allowed b raise qualification;
- agree the date and time carrying out seminar

After implementation measures on development and teaching staff will be possibility analyze general level development (grade) staff By with the help of attestation, questionnaires and testing, which will be conducted for employees upon completion of completed courses. All results will be possible to process and on their basis are made conclusions, about that, as far as useful teaching, and it will also be possible to make suggestions for improving the process teaching. Such an analysis will help to improve the personnel management system in industry training on the enterprise.

After end cascade teaching recommended issue document - certificate about passage internal teaching in within the framework of internal certification and personnel development with the signature of the head of the personnel department. Issuance given certificate increases prestige internal teaching and him attractiveness for employees Especially it relevant at decrease financial opportunities enterprises for external teaching employees

Cognitive analysis of a complex situation - selection of the best candidate you can break into several stages.

The first and one of the most important is the formulation of the main task and goals One from founders Gestalt psychology outstanding German psychologist M. Wertheimer put forward an idea about that, what the main in process decision-making is not so much operational and technical procedures aimed at on decision already formulated tasks, How many exactly formulation tasks, a clear statement of
the problem, and what exactly is related to this side of the mind the process should attract the attention of researchers. Artificial intelligence systems can solve the tasks set, but to set them is still a privilege a person For example, software development project managers allocate huge attention to goals and missions this project, for what on can communicate with the customer and his team for several months. Very it is important to have as clear a picture as possible of what you need to get and for what and available her to explain to everything state development, after all exactly this one they will be guided by the picture on almost everyone at the stage of accepting those or others solutions

It often happens in practice that in the absence of such an approach, developers will complete the task, but it will be useless due to cognitive misunderstanding from the customer, or through sudden change wish in the customer

Using the example of selecting an employee for outstaffing, this stage is also possible consider creation ideal candidate, whose in the end wanted would find employers in specific case.

The second stage is the study of the socio-economic process relatively delivered goals Also here you can take away definition characteristic of the subject situations requirements, conditions and restrictions

The next important stage is the collection, systematization, and analysis of existing data statistical and qualitative information on the problem. Sources for finding are usually public platforms, Internet, scientific publications, experience employees, experience of other companies, analysis of proven and newest solutions from search for candidates, selection methodologies, etc. For example, at the selection stage are applied common universal approaches and methods for evaluations personnel, such as testing, interviewing, reviewing resumes, and in the future, each firm already decides for herself which specialized tools she wants to use for selection

Fourth stage – selection basic characteristic signs researched process and relationships between by them separation the most important and influential factors by an expert group. Allocation basic social subjects, connected with the situation also
plays back an important role, taking into account their subjective interests in the development of this situation will allow to determine are possible changes in objective development situations highlight factors on which realistically they can influence subjects situations For example, in the task of determining the best candidates for outsourcing, it is difficult experts who conducted professional may have a share of influence on the result interview and an interview for definition soft skills (communicative abilities, time management, collective cooperation, stress resistance and leadership traits), a also employees, which they can vouch his own reputation by quality applicant.

The next logical step is to build a cognitive (graph) model problem situation. Formally, the cognitive model of the situation can be, as well as cognitive map, presented count, but each arc in this count already represents some kind of functional dependence between the corresponding basic ones factors. Such way cognitive model situations presents itself functional Count.

For factors characterizing the problem situation are used to build a graph model. They should be selected by experts and managers project, on the fourth stage cognitive analysis as the most essential. It is called selection in totality basic factors, targets factors.

IN tasks search the best a specialist candidate is possible formulate the following factors:

- availability resume from list necessary knowledge and skills;
- availability confirmation of this knowledge with the help of internal and individual tests companies, which is looking for candidates;
- availability of confirmation of completed higher education educational institution, required degree;
- availability experience and skills on this or similar vacancies;
- necessity in work;
- availability satisfactory reviews from others workers;
- consideration rating trust recommender;
- availability satisfactory feedback on others places work, him own image;
consideration analysis alive interviews;
consideration conclusion from HR, etc.

Balance factors expedient regulate by myself employers and managers when creating vacancies

Defined also additional factors, what affect on targeted factors. If these factors they can be strong levers impact on situation, they will also be included in the model.

At the decision problems improvement selection staff in outstaff you can to add such factors, as "Number the unemployed in region", "Financial state region"(can explain the salary indicated by the candidate in the resume and orient himself on those regions, which more fit on this parameter), "Number unsatisfactory reviews", "Rating of the candidate's higher educational institution" and others

Factors can be grouped by blocks. Those with are combined into one block them, which characterize a separate area of the task and determine the interrelationships in this area. There are various options depending on the specifics of the task, goals, the number of subjects of the situation, etc.

In case of selection of workers, it is possible to distinguish a block of professional factors and a block of social factors, why for Each from them to indicate own coefficient impact

You can also expose removed Indexes in of order more impact: changing those located first can completely change the overall the picture being modeled. This can be done the other way around: add to the factors more those which characterize trends and processes in this sphere more in detail. However, it is not necessary to overload the cognitive apparatus too much after all it may bring to losses transparency, and to unpredictable complexities of the system. It is also worth emphasizing once again that all these methods that described here, are used not successively, and considering specific the situation and opportunities.

Definition connections and relationships between factors and blocks factors is next important step by step at modeling process and construction cognitive map. This step allows you to determine the main directions of influence factors between themselves and factors of different blocks on each other (positive or negative impact)
and weight these influences.

Definition immediate connections factors within block is quite a difficult task that relies on experts and experienced people employees in the field of development and in the project itself. First, this is a definition the direction of the influence of factors on each other (indicated by the direction on the edges graph, which is why it is called oriented) and interactions between factors (bilateral directed graph).

For better description connections you can use definition strength influence and mutual influence of blocks of factors by qualitative characteristics (weak, strongly) represented by linguistic variables.

The functional model can be represented thanks to the IDEF0 methodology (SADT). It allows you to create a description of the system and its external environment determination of the final requirements for it. The model in IDEF0 notation is totality hierarchically orderly and interconnected diagrams Data diagrams made it possible to create a description of the system and its external environment determination of the final requirements for it [24]. In other words, with the help of this methodology, the system was gradually built and analyzed until the moment, when it became possible to imagine its embodiment.

For the definition problem or suitable candidate on position of a specialist, it is advisable to create a context diagram and a row decomposition diagrams. Contextual chart, being top tree-like structures charts, showed appointment systems and her interaction from external environment IN to each models may be only alone contextual chart.

After description main functions should be performed functional decomposition, i.e. to determine functions, with whose consists the main.

Further is performed decomposition everyone necessary blocks subsidiaries diagrams to achievement transparent equal detailing researched systems. Each decomposition session is followed by examination sessions on conformity real ones processes created diagrams. Found inconsistencies eliminated.

Factors are used to decompose the blocks of the basic model characterize a problematic situation. They should be selected by experts and managers project, on
the fourth stage cognitive analysis and divided by type impact one on one. It is called selection in aggregate basic factors targeted, managers, intermediate and incoming factors.

IN tasks selection the best candidate by evaluating a resume, the following governing criteria can be formulated: work experience, level education, professional skills, literacy comparison resume, necessity in this position.

From the research psychologists in Idomo, what man from mediocre abilities able simultaneously save in memory to seven characteristics object, and with this one reasons for description any criterion is used not more, than 5-7 informative granules. It rule appropriate both in the context of choosing the number of evaluation criteria and in the context of choice quantity values linguistic variable.

IN that the same time experience from modeling real ones systems proves what practically always is certain accuracy threshold, exceeding whose does not give much benefit. Occurrence similar situations connected with certain paradoxes what have place in complex systems (existence chaos), therefore there is no sense create very big number nodes in count.

Balance factors expedient regulate by myself employers and managers when creating vacancies.

Defined also additional factors, what affect on targeted factors. If these factors they can be strong levers impact on the situation then they will be too entered in model.

Further should be created mathematical model systems, what is being developed.

Description algorithm method is as follows. First, necessary clearly to determine whose specialist and on which position necessary take away. Experts have highlight the most important competencies and requirements to vacancies, to form base psychological portrait. This can be done with the help of the national competence framework, which is only recommendation for given work not puts by purpose limit performers special methods, and vice versa offers flexibility without bindings to them.
In the next step, executives from the personnel department should agree on that, how many everything measures and which exactly will be to be used for assessment the most essential from competencies. Managers of personnel management should select all possible criteria for each of the measures help in defined the best applicant it you can perform based on the company's competence map (if available) or on classic methods evaluations department HR (example, skill to solve problems, creativity and attentiveness must be present characters-junctions applicant).

Highlighted criteria trace divide on target, managers, intermediate and incoming as already mentioned in this work, the number of target factors and factors management has not exceed 5-7. This step will make it easier the process of establishing the type of relationships between criteria and their weight. Intermediate and there can be many entrance criteria, because, for example, professional recruiters under time carrying out interviews are evaluated not only answers on question, and and non-verbal signals, by which ones you can read degree sincerity candidate.

Analysis criteria will help adjust their such way in order to cognitive map became more visual, leaving only those factors, which have the biggest weight, and the strongest influence on adoption decision. On this steps is defined complexity cards (density), consonance, dissonance.

To get a sufficiently defined result when evaluating a candidate next step by step necessary to create understood base rules evaluations competencies, listing which factors and how exactly they will affect it. Such way subjectivity can be reduced in selection.

Stage defuzzification to be used not will be for in him there is no necessity it is worth noting that the final decision on employment remains by specialists HR services and manager.

At search staff necessary for enterprises we will use the following methods: advertisements in newspapers, on the radio, use services of employment services, private recruitment agencies, as in this saves time for an interview with candidates who clearly do not meet the requirements, what appear and selection candidates is more targeted. Costs will be make an average of 18 000 UAH on year.
Costs for the training of the involved personnel and their adaptation are approx will be draw up : UAH 14,400 on year, it will be surcharges mentors

Medical examination at the expense of the company is UAH 700 per person . At enterprises, the medical commission is passed only once after interviews with department personnel, which gives referral on passage examination. Costs on medical commission roughly amount to year 8 400 hryvnias

Under time internship and teaching involved employees is paid minimum wage, but if a person has shown himself to be qualified specialist, this payout may increase. Approximate costs during training and there will be adaptations for the year draw up 120 000 hryvnias

Others costs will amount to an average of year 8,000 UAH It will be expenses for heating the premises of the personnel department in the winter period, expenses for lighting rooms, electricity, paper for driving affairs employees, refilling cartridges for printer, etc., presented in Table 4.

It is expected that the profit of the studied enterprises will increase due to the hiring of more qualified employees on average 7%, income from the main species activity will make about 644 280 UAH for a year. That is, \(9,204 \text{ 000} \times 0.17 = 644 280\) UAH year.

Estimated annual economic effect from the introduction of innovations we define by by the formula:

\[
IS = Pf - Vf, 
\]

where \(E\) is the projected annual economic effect;
\(Pf\) — profit from involvement of a specialist;
\(Vf\) — costs on involvement a specialist

\[
IS = 644280 - 276800 = 367480 \text{ UAH.}
\]

For evaluations efficiency from teaching was suggested use the formula period return on investment in teaching.
\[ PP = \frac{IC}{PN}, \] (4)

where RR is the investment payback period, years; IC – amount of investments, thousand UAH;
PN is the average annual additional profit or cost savings received in a result making investments, thousand hryvnias..

\[
RR = \frac{93,000}{174,930} = 0.53.
\]

Formula calculation capital attachments (investment) in teaching:

\[ IS = Y*n + R*n, \] (5)

where IS - the amount of capital investments (investments) in education;
Y - cost teaching by one employee;
n - number employees;
R - salary of the employee at the time of passing the exams.

So, general costs on teaching employees are:

\[ IS = 42,500*2 + 4000*2 = 93,000 \text{ UAH} \]

Calculation expenses on teaching given in Fig. 1.

Figure 1. Expenses on teaching

The result of the training is a reduction in labor intensity as a result application learned innovative methods, expected increase about will be 2%,
which will give income from the main type of activity (174,930 hryvni, year).

Period payback investments in teaching averages 0.53 years.

Calculation efficiency from training is presented in Fig. 2.

![Excel Table]

**Figure 2. Calculation period payback in education**

Estimated investment return period after graduation makes up half year. But effect from teaching you can will be already to feel after the first year teaching managers, because of application learned methods.

Thus, the following conclusions can be drawn. Advanced enterprises are guided by the philosophy of the superiority of human resources over other types of it, believing that the main potential of successful activity of business entities lies in the personnel, their qualifications and dedication to the interests of the enterprise. This creates conditions for ensuring personnel security of enterprises. Personnel is the personnel of the company's employees, organizations to which belong people with their ability to produce goods and services, as well as the ability to achieve certain results under given conditions.

In order to correctly determine the selection criteria, it is necessary to clearly formulate the employee's qualities necessary for the relevant type of activity. The criteria should be formed so that they comprehensively characterize the employee: experience, health, personal characteristics. The level of requirements for each criterion is developed based on the characteristics of the employees already working in the organization, who cope well with their duties. When forming a personnel selection system, it is necessary to observe certain proportions in terms of qualifications, social activity, age, and status. The social and psychological aspects of
the compatibility of employees should be recorded in the personnel placement instructions. The effectiveness of the selection system will increase if the discrepancy between the employee's personal qualities and the proposed requirements for the work he performs are minimal. In modern conditions, to ensure personnel security, it is advisable to form a personnel selection model. Further research in the given direction will allow creating universal criteria templates, and gradually improve them due to the experience of previous use. The personnel selection model can be adjusted to the needs of enterprises of various sizes and fields of activity, which will make it possible to select candidates for any position.

The lack of an effective system for selecting managerial personnel for managerial positions leads to high production costs, which provokes the forced dismissal of qualified workers who do not see the possibility of continuing to work with incompetent managers, which disrupts the balance between personnel security and the efficiency of the enterprise.

Further research in the given direction will allow creating universal criteria templates, and gradually improve them due to the experience of previous use. The personnel selection model can be adjusted to the needs of enterprises of various sizes and spheres of activity, which will make it possible to select candidates for any position and ensure compliance with personnel security of enterprises at the stage of admission and in the process of personnel management as a whole.

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