
Crowd-Technology in the Selection of Personnel

Oxana Leonidovna Chulanova¹, Gulnara Hamitovna Kucherenko¹,
Dmitry Viktorovich Chulanov¹, Andrey Vladimirovich Kirillov²,
Aleksandr V. Melnichuk²

Abstract:

In article is examined the crowdsourcing technology and the technology based on its principles a crowd-recruiting as instruments of staff recruitment in the organization. The presented technologies are new effective tools large-scale by geographical coverage and number of participants of selection of the employees who are really interested in work with this organization. Crowd-technologies, which are based on "the phenomenon of the crowd" can not only greatly speed up the solution of important problems for the company, but also significantly reduce costs. Was designed the methodology of introduction of crowdsourcing technology at staff recruitment in the organization

Because of introduction of this methodology is assumed optimization of costs of the personnel, thanks to improvement of staff recruitment by means of crowd-technologies (crowdsourcing, crowd-recruiting, crowd-staffing), namely: increase of qualitative structure of the personnel and reduction of staff turnover thanks to what will be seen labor productivity growth.

Keywords: *staff recruitment, crowdsourcing, crowd-recruiting, crowdfunding, crowd-staffing, introduction technique.*

JEL classification: *O14, O15*

¹ Surgut State University, Russia, e-mail: chulanova.oxana@mail.ru

² Russian State Social University, Russia, e-mail: MelnichukAV@rgsu.net

1. Introduction

According to the strategy of innovative development of the Russian Federation for the period until 2020, it is planned to attract new technologies which would reduce the increase in the outflow of competitive staff and their promising ideas and technologies that will allow the state to conduct worthy competitive struggle in the field of innovation globally.

Today there is a huge number of technologies for staff recruitment: recruiting, leasing, headhunting, Executive Search, screening, etc. But it is correct to estimate candidates for vacant post, having protected thereby the organization from errors of low-quality hiring of workers quite difficult. Of course, except high-quality selection of applicants also use of well-constructed systems of an assessment is important. But in most cases these procedures are quite expensive from the point of view of temporary, financial and human resources. And even applying most them, the organization is not insured from mistakes. Therefore, in this article we will consider crowdsourcing technology and technologies based on its application a crowd-recruiting and crowdfunding as effective tools of an assessment and staff recruitment.

Crowd-technology is a powerful accumulator of resources used by employers to implement their projects. Note that technologies with the prefix "crowd" have recently become quite common. In the theory of personnel management, the concept of "crowd-technology" is rarely described, so the authors presented their own definition. According to them crowd-technology is a modern technology for selecting ideas, which allows to ensure the process of generating solutions while reducing time and material costs. The general issue in technologies of crowd-sourcing, crowd-funding and a crowd-recruiting is the fact that they are based on use of the most various resources (financial, human, intellectual) since mass character or "crowd". Also, these technologies can be applied not only within one organization, but also in the field of a certain region, the state and society in general. Relevance of this research subject is that by means of application of crowd-technologies is possible fast, economical, and, above all high-quality staff recruitment which along with it means also an assessment of future employees.

2. Methodology

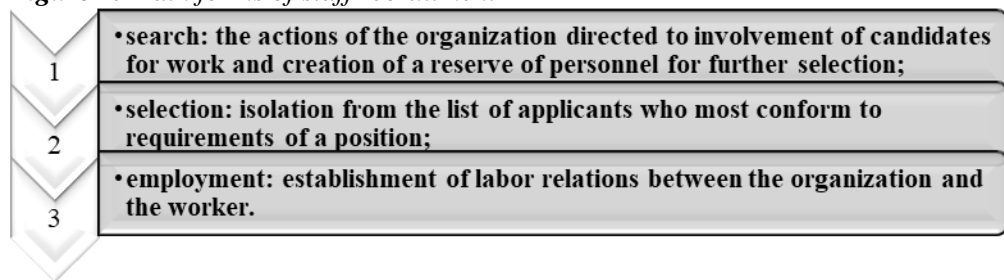
2.1. Forms and methods of recruitment

Selection of personnel is one of the most important functions of human resource management which is carried out by an administrative board of the organization. All heads from foremen to directors are engaged in it (Kibanov, 2007). From this point, the selection of personnel results in the work of the organization in general. Any miscalculations in the selection of personnel can lead to economic losses of the company while effective selection of employees will be a successful investment in

human capital and money (Kirillov *et al.*, 2015; Rogach *et al.*, 2016). It is possible to tell that staff recruitment is the complex process directed to attraction, studying and an assessment of candidates for vacant post for the purpose of selection of the most competent (Chulanova, 2015; Chulanova, 2014a; Chulanova, 2014b; Havlíček *et al.*, 2013) workers conforming to requirements for particular work.

It is necessary to share such similar concepts as "staff recruitment" and "selection of personnel" because very often they have assimilated each other that is not correct. Selection of employees is an isolation any of the candidate's mass while selection of personnel is understood as rational distribution of employees of the organization for structural divisions, sites, to workplaces according to the system of division and labor cooperation admitted to the organizations, on the one hand, and the abilities, psychophysiological and business qualities of workers meeting the requirements of content of the performed work on the other (Kibanov, 2007; Shmaliy and Dushakova, 2017; Kosinova *et al.*, 2016; Sultyanova *et al.*, 2016; Gorina, 2016). As a rule, staff recruitment is carried out in three forms (Figure 1).

Figure 1. Main forms of staff recruitment



The search of personnel can be divided in two types of sources: external and internal. The internal one occurs by filling free vacancies at the expense of employees of the organization (for example, by means of a personnel reserve); an external one is at the expense of the resources which are filled up out of the organization. After a set of applicants, the list of candidates for a position based on which there is the subsequent selection of the workers who are most suitable requirements of a vacant workplace is formed. The staff selection methods can be divided into two groups:

- active: methods in which direct "live" part is taken by two parties – the candidate for a position and the employer (for example, testing, interview, conversation, supervision, etc.);
- passive: occurs only from the employer (for example, studying of a personal record, obtaining necessary data, references, etc) (Barkov, 2010).

Also, all selection methods are divided on traditional and non-traditional. The most often varieties are given in Table 1. Many researchers (Kibanov, 2007; Bizukova,

2008) note that despite a big variety of non-traditional selection methods of personnel, they cannot independently be used as do not give exact information on the person and in most cases their efficiency is scientifically not proved. Application of non-traditional methods is expedient only as auxiliary tools together with traditional methods. Only application of a complex of various selection methods and selection of candidates for a position can guarantee obtaining more exact and full information on the applicant.

Table 1. Traditional and non-traditional selection methods of personnel (according to Sogrina A.V. and Draft T.N.) (2010)

Traditional methods	Non-traditional methods
<i>Interview</i> is specially organized meeting, conversation of the employer and candidate for a position at employment	<i>Stressful (shock) interview</i> is the stressful situation which is artificially created by the employer putting in an uncomfortable position the applicant for the purpose of the analysis of its actions with non-standard to a situation (loss of the resume, delay more than for an hour, etc.)
<i>Questioning</i> is the written form of poll filled by the candidate for a position for the purpose of obtaining more detailed information on the applicant	<i>Graphology</i> is definition of personal traits of character according to the analysis of handwriting of the applicant
<i>Testing</i> is diagnostics method at which psychological, professional, intellectual and other features of the candidate for a position come to light	<i>Brainteaser-interview</i> is the carrying out interview assuming from the applicant of the solution of the non-standard tasks demanding originality and an independent way of thinking
<i>Appraisal centers</i> is a selection method in the conditions of peculiar training game, imitating real working conditions	<i>Physiognomics</i> is definition of personal traits of character of the applicant on features
<i>The resume</i> is short information of provided to the employer by the candidate for a position	<i>Sociomics</i> is definition like identity (one of 16 types) of the applicant on the basis of special tests, physiognomic researches or conversation

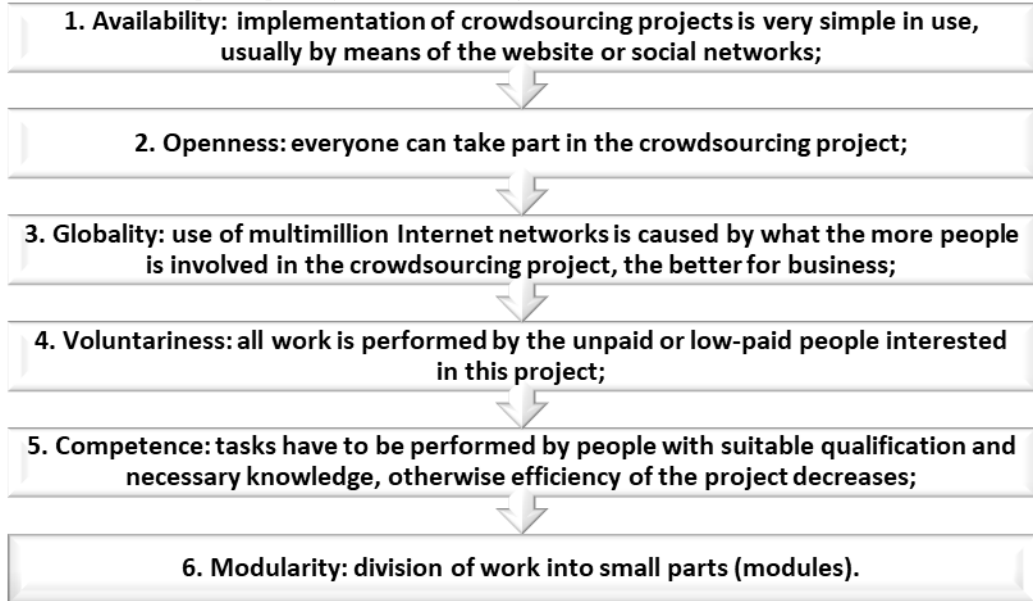
All in all, it is possible to draw a conclusion that in the theory of human resource management there is many approaches to selection of personnel, but in practice the majority of the organizations give preference to traditional methods than non-traditional. It can be proved by two main reasons: threat of the big risks connected with a new method and unwillingness to spend more monetary and temporary means.

2.2. Crowd-sourcing mechanism of action

Crowd-sourcing is the technology allowing to mobilize intellectual resources of a huge number of people by means of computer networks for joint activity for the solution of any tasks. The mechanism of action of crowdsourcing is rather simple: by means of the Internet a certain task which any interested person or a group of persons can execute is given. The people who performed this task offer the versions of the decision to the customer who in turn considers them, selects the most optimum and introduces in the activity.

The basic principles of crowd-sourcing are presented in Figure 2:

Figure 2. Basic principles of crowdsourcing



Crowd-sourcing activity is very diverse therefore possibilities of its use are quite big. That is why it is possible to allocate several types of crowdsourcing, according to spheres of action in which it is used:

1) Business crowd-sourcing. In a business area most often tasks which are to solve most effectively by means of a large number attraction of the interested people. The purpose of any business is to receive any benefit from interaction of people, and, therefore, the more people will be attracted to a solution, the better for business. Business crowdsourcing is the most demanded type of crowdsourcing which is often applied abroad and only recently came to Russia. Here only some examples of its application in business:

- in a coffee houses range Starbucks there is special website on which visitors can tell about any ideas of work improvement in coffee houses. In two years of work of the website nearly 20 thousand ideas were offered, best 50 were realized.
- the automobile corporation Ford held a competition which essence was that it was necessary to shoot the advertising video about the Ford Mustang car. The best videos were showed on television, the winner of a competition won a prize — new Ford Mustang, and corporation Ford – reduction of publicity expenses. (Shchugoreva, 2013).

- the Google company distributed free GPS devices among residents of some cities in exchange for performance of the following task: from citizens it was required to note coordinates of all significant objects by which they pass in the city. If coordinates of objects often repeated from different people - the object was plotted. It allowed to make for quite short time detailed maps of the cities, with the indication of stops, sights, restaurants and other buildings:

- in the Lego company there is special program which is offered to be downloaded to consumers. With its help it is possible to project and build own constructor. As a result, the company receives a huge number of new options of the constructor, and precisely learns needs of clients. According to workers of Lego, use of this program also allowed to reduce the cost of creation of new models of the constructor to surprisingly low level and at the same time to increase satisfaction of consumers almost to 99,9%.

2) Social and public crowdsourcing. This type of crowdsourcing is also applied long ago and means free aid in the solution of the tasks connected with socially important questions and social life of people. One of subspecies of social and public crowdsourcing is volunteering rather known recently. It is possible to carry to examples:

- search of missing people;
- various charitable projects;
- fund raising on building of socially significant objects (playgrounds, schools, kindergartens, monuments);
- the help at natural disasters;
- help in cleaning of territories or so-called "community work days";
- the most striking example of social crowdsourcing is creation of the public, free and constantly filled up knowledge base "Wikipedia". It is created by the ordinary people ready gratuitously to spend the personal time for the sake of creation of such project.

3) State or political crowdsourcing. This type of crowdsourcing means participation of broad masses of society in political activity or in activity of government services. For example:

- participation of citizens in elections and various votes;
- participation of citizens in discussion of bills;
- campaigns for fund raising to politicians. For example, in 2008 Barack Obama managed to collect 750 million dollars within the election campaign;
- the solution of priority problems of social and economic development (by means of the Internet people receive a certain task: for example, the solution of an environmental problem or problem of unemployment among youth is also offered by the solutions of the matters);
- help to law enforcement agencies. For example, the action "Put the Drug Dealer to

the Proson" urging citizens to report about places of sale of drugs; or an appeal of the Tax inspection to granting, for remuneration, information on the neighbors who lease apartments and do not pay for it taxes;

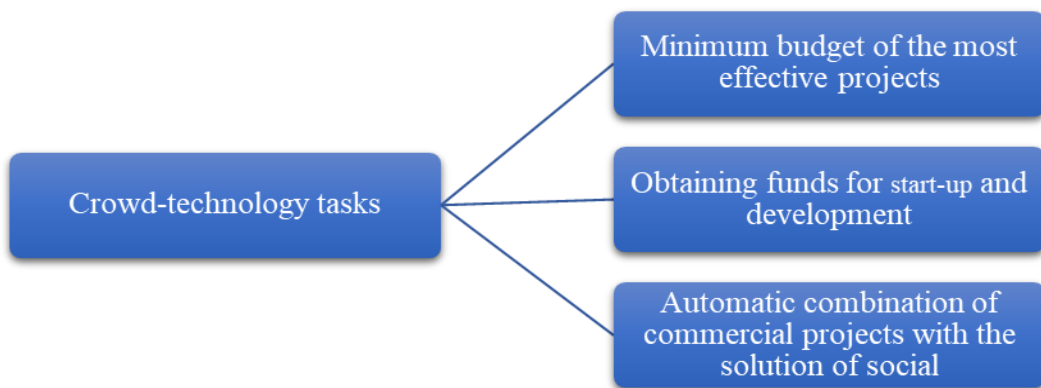
- help in creative competitions of the state value. For example, in Russia in 2013 there was an action about development of a logo of the Olympic Games-2014, in the Republic of Khakassia – the anthem of the republic, and in Iceland – the whole Constitution is written in the same way (Badyina and Minkov, 2014). In the city of Surgut there was a work over Strategy of the city development 2030.

3. Results

3.1. Crowdsourcing application opportunities

Crowd-technologies are aimed at attracting and using external resources and ideas which go from the outer audience, to: create unique, in essence, technologies; improve the processes related to business (Gureva *et al.*, 2016). The tasks that are solved by the crowd-technologies are shown in Figure 3.

Figure 3. The tasks of the crowd-technologies



Source: Compiled by the author based on the source data (The first international crowd-technology, 2014).

As the study showed, possibilities of application of crowdsourcing are rather big therefore it is possible to mark out advantages and disadvantages of this technology.

Table 2. Advantages and disadvantages of technology of crowdsourcing

#	Advantages	Disadvantages
1	Big coverage of performers. Due to use of the global Internet the huge	Project insecurity. Owing to use of the global Internet, there is a risk that hackers will bring

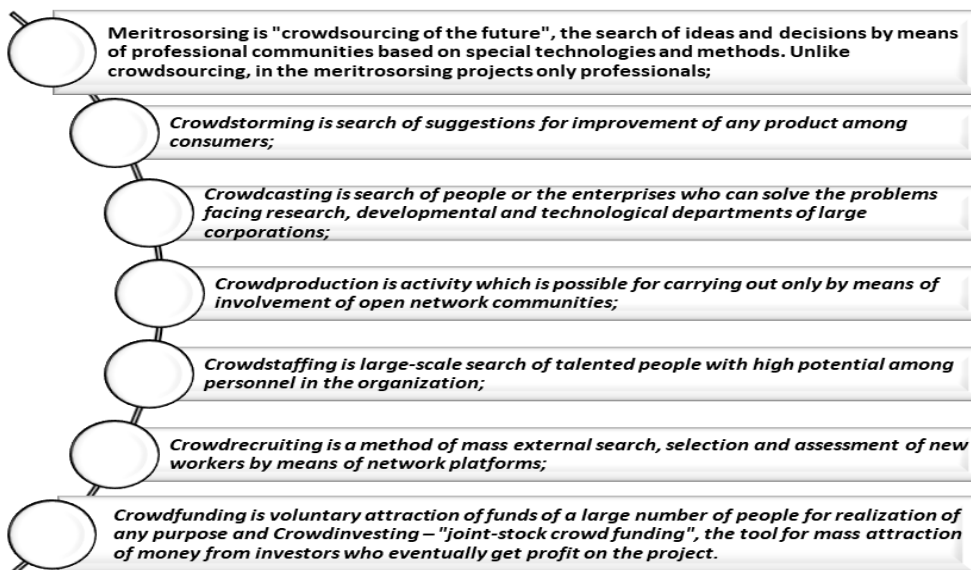
	number of users are potential performers which can be involved in the crowdsourcing project.	elements of a malicious code in the final product.
2	Ample opportunities of application. As it was told above, crowdsourcing is involved in many spheres of activity of the person.	Often ideas, cheaper and simple performed by, win more expensive and difficult even if the last are much more interesting and more effective.
3	Involvement of performers of the project without additional costs of motivation. One of the main principles of crowdsourcing is voluntariness. Work is performed only by the people who are really carried away by this business in the free time.	For Russia: almost total absence of platforms and experts for implementation of crowdsourcing projects. Unfortunately, in our country there are only two full-fledged platforms for exchange of information: Wikivote and Witology. Besides for effective organization of the project work of competent experts whom we practically do not have is necessary.
4	Granting a huge number of versions of solutions of one problem. It is reached due to big coverage of the most various performers with various unique ideas.	Often really competent experts, professionals of the business, do not want to participate in crowdsourcing projects because of unwillingness in vain to spend the time.
5	Existence of clear temporary boundary. The majority of crowdsourcing projects has accurate terms which participants have to keep within that allows not to tighten the solution of a question, and to have rigid temporary reference points.	In relation to performers: unfair principle of rewarding. Only work of the winner of the crowdsourcing project whereas other participants worked for nothing is paid. Next problem follows from this one.
6	Economy of financial resources. As a rule, crowdsourcing projects do not demand big financial investments, generally it is only payment of the fee to the performer, but also it is paid already from that profit which was made for business.	The huge number of the provided ideas can be both plus, and minus: often really effective solution of the set problem is lost among weight simple, and at times and enough silly offers.

Dolzhenko (2014) devoted his research to crowdsourcing as the instrument of improvement of the organization, state and society, notes that crowd-sourcing technology has a huge potential because on its basis many other related technologies have been developed (Andreeva and Sviridov, 2017). They are presented in Figure 4. Let's consider in more detail two technologies most popular now crowd-recruiting and crowd-funding.

3.2. Crowd-recruiting implementation

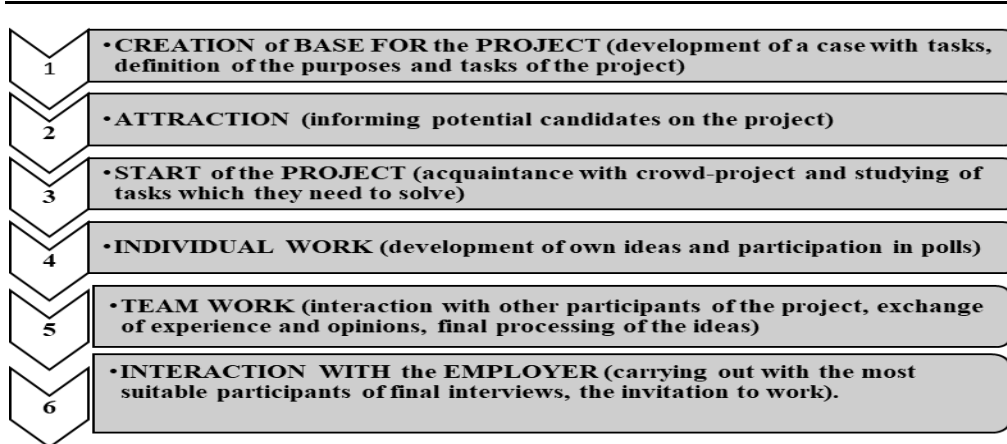
Crowd-recruiting is understood as the organization and carrying out the crowdsourcing project by firm employer in which specific objectives, important for this enterprise, are included. The special Internet platform is necessary for implementation of the project thanks to which there is an opportunity to attract the potential of hundreds and thousands of people by granting joint online of work to them. Thanks to such platform organizers of the project have an opportunity to observe behind work of each participant, to draw conclusions and to sum up the result: who will become the regular employee of the organization (Fokin 2012; Bondarenko *et al.*, 2017; Dmitrishina and Uskov, 2015).

Figure 4. Main crowd-technologies



It is possible to divide crowd-recruiting into several stages (Figure 5).

Figure 5. Stages of carrying out the crowd-recruiting-project (Yakuba, 2014)



Important point is that the purpose of the crowd-recruiting project is not receiving profit on the solution of an objective and even not the solution of a task, but search of employees. That is the put problem can be completely not solved, but organizers of the project, having observed behind work of participants, can invite to final interview most, in their opinion, candidates, suitable for vacant post. Because of full involvement of participants of the project in the solution of objectives thanks to which participants have a chance in the shortest possible time to prove to be from different parties and as much as possible to realize the potential, crowd-recruiting differs from other trial and error methods of personnel. Therefore, the crowd-recruiting-project must include tasks which will help participants to show such knowledge and skills as:

- Professional knowledge: knowledge and understanding of a subject on which the organization works;
- General knowledge: ability to solve the put tasks, applying knowledge in adjacent areas;
- Work with information: its analysis, synthesis, search;
- Work in team: ability to be both the leader, and the valuable "ordinary" participant of team in collaboration;
- Individual work: personal qualities necessary for successful work (for example, punctuality, initiative, etc).

The crowd-recruiting-project lasts on average 2-4 weeks (in rare instances – 5), part in it is taken by hundreds and thousands of people therefore at the end of the project the employer has a detailed report practically about each participant that helps to estimate and make a right choice, without having spent at the same time and money. That is why it is possible to mark out the following advantages and disadvantages of a crowd-recruiting (Table 3).

Table 3. *Advantages and disadvantages of crowd-recruiting technology*

Advantages	Disadvantages
- Simultaneous performance of three functions of a personnel management system: search,	- In the crowd-recruiting-projects young specialists and university graduates while highly

<p>selection and assessment of personnel;</p> <ul style="list-style-type: none"> - Huge coverage of candidates for a position (from several hundred to several thousand people); - Reduction of time expenditure on staff recruitment; - Reduction of cost on staff recruitment; - Unique possibility of evaluation of the work of participants of the project in real time; - A possibility of the employer to see the potential of the candidate for a position in a real situation, to estimate it from the different parties, to check "in business"; - Freedom of action of participants of the project; - An opportunity to pick up personnel from various spheres, age, sex. 	<p>qualified specialists prefer more traditional methods of job search take part more often;</p> <ul style="list-style-type: none"> - While the technology a crowd-recruiting actively develops in foreign countries, the Russian businessmen still watchfully treat such innovations that slows down development of a crowd-recruiting in Russia; - Though the technology of a crowd-recruiting is theoretically applicable for any organizations, it will be economically inefficient for small business enterprises, with a small staff or absence of service on human resource management.
--	--

It is possible to draw a conclusion that crowd-recruiting is modern technology allowing to pick up and estimate quickly and effectively personnel, but which, unfortunately, is poorly developed in Russia.

4. Discussion

Management of innovative activity of the organization becomes the most important question in the modern world. The only way for the company seeking to continue successful existence in the market is the organization of activity and stimulation of personnel on search and introduction of various innovative ideas. Let's carry out the comparative analysis of various technologies of search of personnel, for identification what of them is the most optimum (Table 4). We will mark in black color of a background weaknesses of these technologies, white – strengths, gray – the categories which are not relating neither to minuses, nor to pluses.

Table 4. Comparative analysis of various technologies of personnel search

Personnel categories	Selection quality	Expenses	Search scale	Execution time
Event-recruiting				
application of special events which along with involvement of candidates for free positions bring any benefit (financial, advertizing) the organizations employers (for example, to organize Open Days, actions, competitions and training). Usually this technology is applied for hiring young specialists to work on launching sites usually not being attractive to skilled workers (Classification according to the Center for Career Growth of the Faculty of Economics of the Southern Federal University).				
Young specialists for launching and linear sites	High (by results of case-study, testing or mini-interview)	Minimum (from \$30 to \$150)	Within the country	1-3 weeks
Headhunting (Chulanova, 2011)				

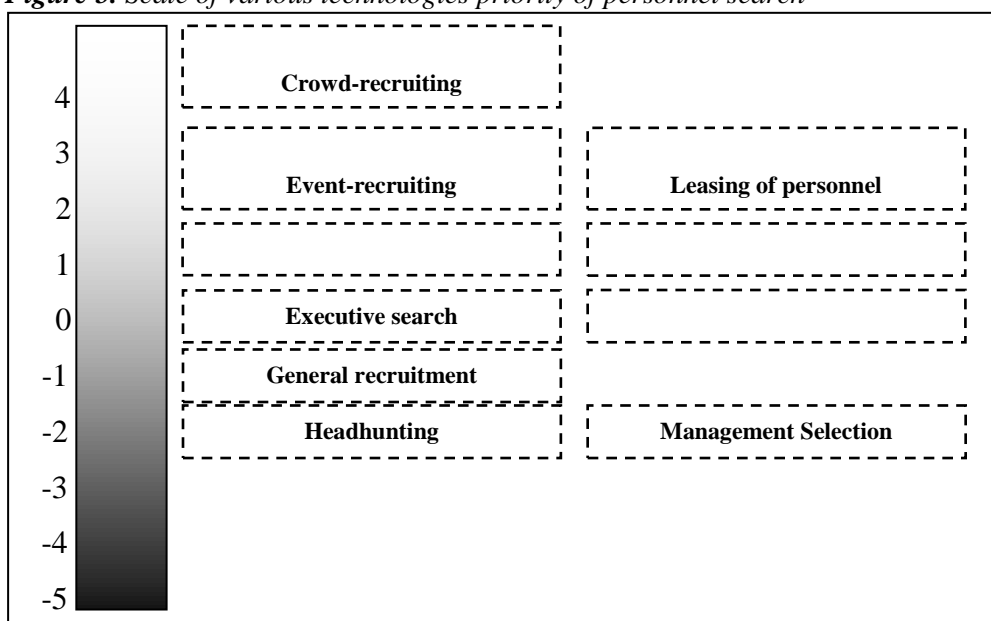
<p>technology of search and selection of valuable professional employees, usually specialists of the top management, narrowly targeted or rare professions. Usually special agencies which entice the certain "ordered" expert from the concrete organization are engaged with headhunting</p>				
Specialists of the top management, narrow specialties or rare professions	High	High (33% of annual earnings of the candidate)	Short scale (in firms of a profile of the customer, only among successful workers)	6-12 weeks
<p>Executive search (Chulanova, 2011)</p>				
<p>consulting service in the operated purposeful search of the best experts which essence consists not only in hiring of the worker, but also in achievement of definite purposes of the organization, an assessment of current situation and search of the optimal solution: for example, increase in profitability, development of a new segment of the market, etc. The analysis of the market, search and the candidate's assessment is only the part of Executive search process. The technology purpose is not simply to find the worker, but to make so that he successfully fitted into structure of the company and made for it profit. The Executive search technology includes the Headhunting methods and recruiting.</p>				
Specialists of the top management, highly qualified specialists	The highest (the probability of stay and selection of the necessary candidate guarantees the greatest, nearly 100%)	High (25–33% of annual earnings of the candidate)	High-large-scale (international)	2-3 months
<p>Leasing of personnel (Chulanova, 2008)</p>				
<p>selection and granting personnel by firm-lessor to firm-customer for performance of any production functions for long term. It is usually applied to implementation of temporary projects without transfer of workers to the state.</p>				
Experts of all profiles (statistically: 75% - workers and employees, 20% - experts, 4% - heads) (30)	Average, with a big share of risks	Averages (worker's salary + commission agencies: usually 20 - 30% of a salary of the expert, sometimes above)	Generally, within the country, sometimes within neighboring countries	From several days
<p>Outsourcing of personnel (Chulanova, 2010)</p>				
<p>the technology allowing to provide services on engaging employees for the long period in the form of business processes by the firm specializing in this field (for example cleaning, transport, translation services, safety, advertising).</p>				
Business processes (generally the lowest and average link: protection, cleaning, advertizing, etc.)	High (the firm-lessor, guarantees quality of services)	Averages (high for the urgent order for the short-term period)	Within the settlement	From 1 to 3 weeks (the urgent order is till 7 days is possible)
<p>Crowd-recruiting (crowd-staffing)</p>				

<p>technology of a set and performance appraisal by means of supervision over their activity in the simulated situation imitating working process (the crowdsourcing project) on the special platform in Internet space.</p>				
Experts of all profiles, most often – young specialists	High (following the results of the performed work)	Allows to save up to 50% in comparison with traditional methods of search of employees (Novash I., Chernozatonskay)	High-large-scale (part can be taken at the same time from several hundred to several thousand participants worldwide)	2-4 weeks
<p>General recruitment</p>				
<p>search of candidates for vacant post in business circles by means of own business connections and in the personal database of the manager.</p>				
Experts of all profiles	The average, depends on quality of business connections of the manager	Minimum	Limited (a business environment, own business connections, the personal database)	Long
<p>Mass recruiting</p>				
<p>large-scale search and selection of unskilled personnel, that is not demanding from the candidate for a position of special knowledge (for example, to a position of cashiers, consultants, security guards, loaders, cleaners, etc.). The main selection criterion is presence of potential to the performed work and desire to work.</p>				
Unskilled personnel	Low	from 2000 to 5000 for the expert	High-large-scale	2-5 weeks
<p>Management Selection</p>				
<p>the technology applied to search and selection of an average administrative link and key experts of high qualification according to requirements of firm customer. Usually such experts seldom run for job search therefore they need to be looked for carefully and to motivate in addition.</p>				
Average administrative link and key experts of high qualification	Average (depending on its quality, from 10 to 80% hesitate)	High: 15–24% of annual earnings of the candidate or of 50% to 100% of the planned monthly income of the expert	Within the country	Long, about 107 days
<p>Screening</p>				
<p>the "superficial selection" of personnel which is carried out by recruitment agency according to formal requirements of the summary from the general flow of candidates (for example, a sex, age, experience, education, etc.). Difference of screening from recruiting that the recruitment agency only provides the curriculum vitae of suitable candidates while final selection of personnel is carried out by firm customer.</p>				

Experts of all profiles	Low (the probability of closing of vacancy does not exceed 5%)	From 10000 rubles	Within the region (sometimes – within the country)	Long
-------------------------	--	-------------------	--	------

Based on Table 4 we will make a scale of priority of various technologies of search of personnel: for each white division we add technologies 1 point, for gray – zero, for black – we take away 1 point. Results are presented in Figure 5. The most optimum technology of search of personnel which almost does not have weaknesses is the crowd-recruiting. The only minus of this technology is that though by means of a crowd-recruiting it is possible to gather any personnel, only young specialists and candidates with small length of service respond most often.

Figure 5. Scale of various technologies priority of personnel search



As our task consists in work with personnel, application of such technologies as a crowd-recruiting and a crowd-staffing based on crowdsourcing methods is expedient. That is why it is possible to allocate two types of projects:

- external, carried out by means of a crowd-recruiting with participation of employees of the organization, clients, partners and Internet users. Assumes introduction of modern technologies of mass selection based on Internet technologies, uses of potential of social networks; involvement of candidates for mass positions and involvement of linear experts; promotes creation of effective system of attraction of youth: formation of a personnel reserve for replacement of senior positions in the future due to the focused work with the best Higher education institutions.

- internal, carried out by means of a crowd-staffing with participation only the staff of the organization.

After the choice of a type of crowdsourcing, it is necessary to define the purposes of the project, the rule of participation, the requirement to participants, to make the plan of the budget, to appoint responsible persons, and, the most important is to develop tasks (case) on which participants of the crowdsourcing project will work. At the following stage it is necessary to inform the public on start of the project and as a result – to create the list of participants of the project. After the number of participants, sufficient for carrying out crowdsourcing action, will be taken, there is an acquaintance of participants to the project, the organization, competitors, tasks. Further there are most important stages: individual and group work. Exactly thanks to these stages project managers can observe behind activity of each candidate for a position in real time and draw the conclusions (Bakhtina *et al.*, 2015). Important point is here that a main objective of the project is not the solution of a case with tasks, and a possibility of workers to prove to be "in business". At the last stage of the project the employer selects the worthiest participants, conducts with them preliminary interview or at once invites to work.

After practical application of technology crowdsourcing (crowd-recruiting and crowd-staffing), it is possible to draw a conclusion that these methods allow to reduce time for search, selection and an assessment of personnel as at the same time carry out all three of these functions of a personnel management system; allow to attract a huge number of applicants without spending at the same time big monetary resources; give the chance to the employer to see the potential of the candidate for a position in a real situation, to estimate it from the different parties, to check "in business".

At the same time in Russia the crowd-recruiting is developed quite poorly, there are practically no platforms for work with projects and competent experts in this area. Also, weakness of a crowd-recruiting it is possible to call that highly qualified specialists seldom participate in crowdsourcing projects, including it waste of time and preferring more traditional methods of job search.

Applying technology of crowd-recruiting, risks of low-quality selection are minimized practically as the organization customer for several weeks can watch in real time work of participants of the project, see their strong and weaknesses, ability to work in team and to generate new ideas. Therefore, the risk of increase in fluidity of personnel owing to inefficient staff recruitment is also minimized. Use of a crowd-recruiting also prevents "professional obsolescence" of personnel as generally participants of crowdsourcing projects are the vigorous, bright young specialists are capable to inhale a little new in work of any firm.

5. Conclusion

Important stage during the work with personnel at any enterprise is high-quality staff recruitment and depending on the fact how well personnel is gathered, results of work of the organization are in general direct dependence: miscalculations in personnel selection can lead to economic losses of the company while effective selection of employees will be a successful investment of money. The new environment in labor market develops because of prompt scientific and technical progress and mass coverage of consumers information. The gain in productivity of work and output and the offered services leads to a sharp aggravation of the competition between various companies seeking to win and secure certain segments of the market (Maruhno, 2010).

As well as any market, labor market is based on the competition, and not only between applicants, but also between firms' employers. Any organization desires to have only the best experts therefore before HR departments the most problem and important task is involvement of potential employees in the staff. The problem of attraction is that it is very complex, long, labor-consuming and expensive challenge.

The competition in labor market forces employers to look for the innovative approaches in the areas of personnel search capable most effectively to fill up staff with skilled workers at the smallest expenses. To survive in modern conditions the organization needs to act promptly and transition to an innovative development path that will be a push to get away from traditional methods.

References:

- Andreeva, L.Yu. and Sviridov, O.Yu. 2017. Experience of Greece on Recapitalization of Banks, Marketing Management and Personnel Retraining in Conditions of Economic Recession. *European Research Studies Journal*, 20(1), 390-409.
- Badyina, L.P. and Minkov, S.L. 2014. Crowdsourcing: synergy of Internet communities. *Journal Modern high technologies*, 5-2, 63-66.
- Barkov, S.A. 2010. Human resource management. Moscow, RGOTUPS, Publ.
- Bizukova, I.V. 2008. Frames of management: selection and assessment. Moscow, *Economica Publ.*, 112.
- Bondarenko, T.G., Isaeva, E.A., Orekhov, S.A. and Soltakhanov, A.U. 2017. Optimization of the Company Strategic Management System in the Context of Economic Instability. *European Research Studies Journal*, 20(2B), 3-24.
- Buhalkov, M.I. 2009. Human resource management. Moscow, Infa-M Publ., 398.
- Chulanova, O.L. 2008. Modern technologies of consultation in the field of human resource management. *Journal Scientific works of Free economic society of Russia*, 91, 262-271.
- Chulanova, O.L. 2010. Consulting of the personnel. Surgut, Sursutskiy Gos. Univ. Publ.
- Chulanova, O.L. 2011. Selection of the administrative personnel on the basis of competence-based approach: from experience of energy companies. *Journal Personnel officer*, 12, 192-198.
- Chulanova, O.L. 2014a. Relevance of competence-based approach in human resource management. *Journal of science*, 5 (24).
- Chulanova, O.L. 2014b. Monitoring of application of competence-based approach in human resource management of the organizations of small and medium business of the

- region. *Journal Standard of living of the population of regions of Russia*, 2(192), 55-6.1
- Chulanova, O.L. 2015. *Methodology of research of competences of the personnel of the organizations*. Moscow, Infa-M., Publ.
- Dmitrishina, E.V. and Uskov, A.D. 2015. *The Issues of Covering Science and Technical Policy of Modern Russia in the Strategic Planning Documents*. *European Research Studies Journal*, 18(4), 57 -74.
- Dolzhenko, R.A. 2014. *Crowd-sourcing as instrument of improvement of the organization, state and society*. Barnaul, Altayki Gos, Univ. Publ.
- Dorofeev, N.V. 2012. *Regions master new administrative technologies*. *Journal Russian Federation today*, 12, 25.
- Fokin, M. 2012. *Recruiting of clever crowd*. *Journal Strategy*, 6.
- Gorina, P.A. 2016. *Issues and Perspectives of the Educational Service Market Modernization*. *European Research Studies Journal*, 19(3) Part B, 227-238.
- Gureva, M.A., Kirillov, A.V., Vinichenko, M.V., Melnichuk, A.V. and Melnichuk, Y.A. 2016. *Management of Innovations and Innovative Process: Concept, Essence, Classification and Diffusion*. *International review of management and marketing*, 6(6S), 147-153.
- Havlíček, K., Thalassinos I.E. and Berezkinova, L. 2013. *Innovation Management and Controlling in SMEs*. *European Research Studies Journal*, 16(4), 57-70.
- Kibanov, A.Y. 2007. *Bases of human resource management*. Moscow, Infa-M Publ.
- Kohanov, E.F. 2010. *Selection of the personnel and introduction to a position*. Moscow, Infa-M Publ.
- Kosinova, N.N., Tolstel, S.M., Sazonov, P.S. and Vaysbeyn, D.K. 2016. *Development of Methodological Approach to Enterprise's Financial Strategy Based on Comprehensive Evaluation of its Strategic Potential*. *European Research Studies Journal*, 19(2), 21-33.
- Kozina, I.M. 2014. *The labor relations in the conditions of leasing of the personnel*. XIV international scientific conference on problems of development of economy and society. Moscow, NIU VSHE Publ., 143-151.
- Kuznetsova, N.V. 2005. *Selection and placement of personnel*. Vladivostok, Dalnevostochnyi Gos. Univ. Publ., 305.
- Latuha, M.O. 2009. *The comparative analysis of policy of hiring, advance and dismissal of the personnel in the European countries and in Russia*. Retrieved from http://irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe/
- Maksimov, N.N. and Parshina, V.S. 2012. *Crowd-sourcing as way of activation of development of the personnel*. *Journal Young scientist*, 12, 233-236.
- Maruhno, D.U. 2010. *Advertising phenomenon in the changing conditions of the modern world*. *Journal Young scientist*, 10, 337-360.
- Maslova, V.M. 2010. *Human resource management. Explanatory dictionary*. Moscow, Dashkov i Ko Publ., 309.
- Myakushkin, D.E. 2006. *Selection and staff recruitment*. Chelyabinsk, Uzno-Yralskiy Gos. Univ. Publ.
- Novash, I., Chernozatonskaya, E. 2012. *Beautiful decision. In a situation of personnel hunger of the IT company are ready to become intellectual donors for universities*. *Journal Harvard Business Review*, 1.
- Rogach, O.V., Frolova, E.V., Kirillov, A.V., Bondaletov, V.V. and Vinichenko, M.V. 2016. *Development of Favorable Learning Environment and Labor Protection in the*

- Context of Harmonization of Social Interaction of Educational System Objects. *International Electronic Journal of Mathematics Education*, 11(7), 2547-2558.
- Saprykina, E.V. 2013. National features of personnel management systems. Retrieved from <http://hr-portal.ru/article/nacionalnye-osobennosti-sistem-upravleniya-personalom-yaponiya-ssha-rossiya-ukraina>.
- Shamarin, A.V., Morozov, A.N. and Suhorukov, E.V. 2009. Improvement of procedure of selection at the enterprise. *Journal Human resource management*, 7(209), 48-50.
- Shchugoreva, E. 2013. Crowdsourcing in activity of the businessman. Retrieved from <http://indivip.ru/sovety/kraudsorsing.html>
- Shlender, P.E. 2010. *Human resource management of the organization*. Moscow, Infa-M Publ., 398.
- Shmaliy, V.O., Dushakova, A.L. 2017. Contractual Forms of Agreement between the Bodies of the Executive. *European Research Studies Journal*, 20(1), 276-283.
- Sogrina, A.V. and Chernova, T.N. 2010. Features of modern nonconventional methods of selection of the personnel. *Journal Messenger*, 9(8-2), 86-89.
- Yakuba, V. 2014. Crowd-recruiting: New tool of an assessment and set of the personnel. *Journal Business quarter*, 4. Retrieved from [http://nn.dk.ru/blogs/post/kraudrekruting-novyy-instrument-otsenki-i-nabora-personalactive-population-of-the-Republic-of-Crimea-\(2016\),Journal-of-Applied-Economic-Sciences-Open-Access,Volume-XI-Issue-8-\(46\)Winter-2016,pp.1569-1580](http://nn.dk.ru/blogs/post/kraudrekruting-novyy-instrument-otsenki-i-nabora-personalactive-population-of-the-Republic-of-Crimea-(2016),Journal-of-Applied-Economic-Sciences-Open-Access,Volume-XI-Issue-8-(46)Winter-2016,pp.1569-1580).
- Sokolov, S.A. 2002. The organization and improvement of the investment resources application efficiency on the enterprises (considering the Ukraine iron and steel enterprises data). Ph.D. thesis for obtaining economic sciences degree. Kyiv, 22.
- Stepanenko, S.V. 2001. Investment resources and their application in transformative economics. Ph.D. thesis for obtaining economic sciences degree. Kharkiv, 18.
- Sullivaut, S. 2007. *Strategies for Protecting National Critical Infrastructure Assets: A Focus on Problem Solving*. Hoboken, Wiley.
- Sultanova, V.A., Chechina, S.O. 2016. Human Capital as a Key Factor of Economic Growth in Crisis. *European Research Studies Journal*, 19(2), 72-79.
- Sutnata, D., and Byrd, D.M. 2007. *Computational Models of Risks to Infrastructure*. Amsterdam.
- Sykhoryko, O.V. 2006. Economic investment operating efficiency in the agricultural sector of the region. Ph.D. thesis for obtaining economic sciences degree. Dnipropetrovks, 24.
- Synigovets, O.M. 2001. Investment process management in the enterprise. Ph.D. thesis for obtaining economic sciences degree. Kharkiv, 36.
- Valenčík, R. and J. Červenka, 2016. Analysis Tools of Connecting Investment Opportunities and Investment Means in the Area of Small and Medium-Sized Enterprises. *European Research Studies Journal*, 19(4), 130-139.
- Varnaliy Z., Onishchenko S. and Masliy A. 2016. Threat prevention mechanisms of Ukraine's economic security. *Economic Annals-XXI*, 159(5-6), 20-24.
- Vivchar, O.Y. 2004. The activation to investment activity organization. Ph.D. thesis for obtaining economic sciences degree. Lviv, 25.
- Vorobyov, Y.N. and Vorobyova, E.I. 2004. *Investment: Educational aids*. Simferopol, Tavriya, 340.
- Zeldner, A. 2000. Priorities, institutes and mechanisms of crisis recovery for agricultural sphere in XXI century. Moscow, RAN, Economics institute, 208.