Student Attitude to Future Profession in Field of Information Technology at University Training Stage

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Abstract--The relevance of this article is to study such a phenomenon as career growth from the students' point of view. Today, there is a persistent trend of increasing popularity of professions related to information technology all over the world, and Russian society is no exception in this regard. There is also a transformation that has occurred in the public consciousness, associated with the emergence of new information technologies in our lives and the growth of vacancies for developers and specialists in the field of information technology in General. The purpose of this study is to study the factors that influence the career development of young specialists in the field of information technology in Russian companies. Research methods: as a research method, a questionnaire was used as a method of collecting primary information, which allows to quickly and effectively investigating the attitude of students-future specialists in the field of information technology to the chosen profession. Results of the research: the article considers the concept of a professional career, and examines the students' attitude to the future profession in the field of information technology. The features of the dynamics of building a career in this field of information technology are revealed. The authors consider the features typical for the sphere of information technologies, as well as identify problem fields, such as acute shortage of personnel; insufficient competence of employees in this sphere; labor migration of personnel; gender bias towards the male sex. It is determined that the concept of a young specialist is being transformed in the field of information technology. This concept has almost no reference to age and mainly characterizes the set of competencies and qualifications that an employee or candidate has in the field of information technology. It is shown that in the career of a specialist in the field of information technology, specialized higher education ceases to play a key role, and the focus shifts mainly towards self-education and self-study. It is revealed that for students-future specialists in the field of information technology, career growth is not only a formal promotion, but also mainly an increase in salary, as well as in the development

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of their professional skills and competencies. The data obtained in this work can be used in social psychology, labor psychology, Economics, age psychology, as well as for further theoretical development of this issue.

Keywords--*information technology field, student youth, career.*

I. INTRODUCTION

The sphere of work is undoubtedly of the greatest importance for the life of society as a whole and for each individual in particular. Today, there is a persistent trend of increasing popularity of professions related to information technology all over the world, and Russian society is no exception in this regard (Afanasenko, 2011; Nikiforov, 1993; Volkova, 2001; Cao, Kirilova. &Grunis, 2017; Davoudi et al., 2018). This is due to the transformation that has occurred in the public consciousness, with the emergence of new information technologies in modern life; there is a shortage of personnel in the field of information technology, which, due to intensive development, requires an influx of new specialists. In this regard, it is particularly interesting to study new career paths of young professionals in the field of information technology. Today, we can say for sure that the position of the individual in society, the nature of its interaction with the environment is often associated with the concepts of social status, social prestige and social role; all these concepts are directly related to the concept of career (Bouyakas, 2000; Gerasimova, 1992; Ivanov, 1998; Kong, Kayumova&Zakirova, 2017). A professional career is a complex subject for scientific study, which is located in the field of research of a number of scientific areas, primarily: psychology, Economics, and sociology. (Alisov et al., 2018; Tsabolova et al., 2019; Cherdymova et al., 2018; Tastan et al., 2018; Klimov, 1996; Khanmurzina et al., 2020).

Thus, a person can build a career in both professional, economic, and official terms, which may not coincide. In the mass consciousness, there is the following attitude about a career, that it is an escalation on the ladder (from the subordinate to the head). Now, it is increasingly said that a career is the realization of one's potential, one's abilities, the acquisition of a prestigious social status, and the development of a system of social roles for the individual.

II. LITERATURE REVIEW

A professional career is characterized by a specific employee passing through various stages of development in the course of their professional activity: training, employment, professional growth, and so on, finally, retirement. A particular employee can go through these stages sequentially in different organizations, both in the commercial sector and in the non-commercial sector. Despite the wide popularity of so-called modern career theories, empirical research shows that both abroad and in Russia today, the intra-organizational type of career absolutely dominates. In fact, we can say that the two concepts as intra-organizational and professional career, as a rule, are considered to be synonymous, or simply the term career is used (Kabinova, 1997; Ashirov, 2002; Popov,Porshnev&Potoskuev, 2000; Chen et al., 2017). Thus, the intra-organizational career is the main field of professional career development and therefore, regardless of the disciplinary orientations of the researcher, it should be studied first.

From the point of view of researchers, in a rapidly developing global information society, the middle class is the actor and initiator of innovative development in the field of Economics. Middle class is a carrier of creative and divergent thinking (in a situation of transformation, the activity of social groups is embodied in creativity) (Mustafaeva, 2007; Subetto, 1999; Luksha, 2003; Shekshnya, 1996). Over the past two decades, as developed countries transition to the information economy occurs, significant changes have taken place in the social status and composition of the new middle class, which are manifested in new trends in the development of global relations: social, economic, political, environmental, etc. (Gorbunova&Kalimullin, 2017). The social status and share of the elite layer of highly efficient workers in the national wealth of the respective countries is increasing. In the new field of work and the changed system of labor relations, a new type of employee is needed, and this request for a new type of employee is universal, regardless of the characteristics of the profession (Grishunin, 1993; Vasiliev&Stafeev, 2002).

At the moment, the employee must have accurate compliance with job descriptions, and at the same time, must be able to maintain horizontal communications independently, make operational, often creative decisions within the framework of their competence, that is, be flexible, labile and creative (Mityunina& Stepanova, 2002; Poole & Warner, 2002; Cherdymova et al., 2019; Travin&Dyatlov, 2003). This means that you need to pay attention to continuous learning and self-improvement; mastering new work skills, which are often quite far from the main responsibilities. For a successful career, you now need to keep up with the times, not only in your profession, but also in General in the need to be a modern person. It is the field of information technology that is in urgent need of this type of employee and makes the greatest demands on his/her flexibility and creativity in General. Today, factors such as the ability to quickly find the necessary knowledge and learn new technologies, the ability to develop formal, informal and business relationships with people, build relationships in an interactive dialogue, the ability to guess the current needs of potential consumers and meet them, self-realization becomes an end in itself and becomes a criterion for evaluating the employee, the desire to constantly self-improve, the ability to sell one's labor force (Ashirov, 2002; Popov,Porshnev&Potoskuev, 2000; Popova, 2004; Zemnukhova, 2013; Utkin,Satabaev&Satabaeva, 2002; Akhmadeev&Iskhakova, 1999).

Working in the field of information technology is a constant self-development. Specialists need a lot of time to process information in the professional sphere and related fields, topics or specialties, and they need to constantly improve themselves: read news, digests of events, and participate in conferences and discussions with colleagues.

III. THE STUDY GOALS AND STRUCTURE

For the study, the survey method was used, namely, an interview. For the study, the completeness of the social picture was important, so we selected informants of different ages and work experience (who have been working in this field for a long time, and those who came recently). Based on the collected information, the analysis of factors affecting the career development of young professionals in the field of information technology was carried out. The average age of the company's specialists ranges from twenty-three to thirty-five years. The object of the study was heads of departments and young specialists in the field of information technology.

The study used the method of free interviews with specialists in the field of information technology using units with questions. In the developed interview units, the topics are arranged in accordance with the logic of the research, which contributes to the best solution of research problems, which were as follows:

- to identify factors that contribute to the promotion of information technology professionals on the career ladder;
- to identify factors that may interfere with the promotion of information technology professionals on the career ladder;
- to identify features of the status of a young specialist in the field of information technology;
- to determine the degree of influence of specialized education on the career of a specialist in the field of information technology;
- to determine the importance of career development for young professionals in the field of information technology;
- to find out whether there is discrimination in career advancement between women and men in the field of information technology.

IV. RESULTS AND DISCUSSION

Despite the fact that the heads of departments indicated a clear age range for an employee who was attractive to them, they did not link the age criterion to the concept of a young specialist in any way. Based on the research, a young information technology specialist can be considered a candidate who does not have sufficient qualifications (98%), as well as a sufficient set of cases or experience (56%), as well as a portfolio that he/she can demonstrate as an example of his/her achievements (43%). The next task was to understand whether the presence or absence of specialized education affects the career path in the field of information technology. According to students, education is for a programmer, or anyone else, a meaningless thing (44%). Only self-education matters (78%) Moreover, if we look at the answers of the specialists themselves who already have a job in this field and even have some career growth, it turns out that not almost all of them have a specialized education (89%). The next logical task was to understand where the respondents got the necessary competencies in order not only to enter, but also to make a career in the field of information technology. After analyzing the responses of the respondents, it can be seen that they acquired some information technology skills naturally, that is, through daily contact with media technologies (89%). We are not talking about acquiring any professional qualifications. This only highlights the growing interest in the field of information technology and the opportunity to make a career in this field, because in fact what we face every day can bring a good income. Today, in General, self-education is becoming more and more popular (98% of respondents gave such answers), and the sphere of information technologies most clearly illustrates this. The next task that was solved in the framework of an empirical study was to understand whether a career was important for young professionals in General. Based on interviews with Department managers, it was assumed to hear different opinions, since all managers believed that women were not motivated for career growth (100%), since they had a higher motivation to perform their biological functions. However, in all interviews with female respondents, we received a different unambiguous answer. Women's career motivation is as high as men's are.

Despite the fact that the question of a career for young professionals is of the importance, in the course of the study, we received an unambiguous Yes, but there are also subtleties. In summary, we can say that today the very concept of career and career growth has been transformed. Career growth for an employee in the field of information technology is not always a formal promotion, but the development of their skills, participation in new interesting projects, building competencies, adding to the professional portfolio, and because of all this, there will be an increase in wages.

The Internet today is full of articles about what a specialist in the field of information technology should be, what set of skills he/she should have, what experience, what qualifications and what he/she needs to do to successfully move up the career ladder in this field. There are many similar articles; this is primarily due to the breadth of the concept of a specialist in the field of information technology, so the next task of our research was to try to identify a set of objective factors that can help young professionals move up the career ladder in the field of information technology. In addition, to understand whether the factors that are important for Department managers and Directors of firms coincide with those factors that are considered important by young professionals themselves. To do this, we asked Department managers to list the factors that are important to them in a hierarchical order. After analyzing interviews with Department managers, the following factors were identified that can help an employee move up the career ladder: fulfillment and over-fulfillment of tasks and key performance indicators (found in 98% of responses). It is necessary to focus on the result (100%). There are employees who are focused on careful execution of the process, strict compliance with all formalities, etc., such employees usually follow the instructions of the Manager and eventually get the result. There are employees who are always looking for new ways to get results, more effective ways, faster, such employees are able to solve any problem with minimal losses. Moreover, these specialists are promoted in companies. Personal characteristics (78%). The majority of respondents from Department managers expressed this as adequate communication (56%) and initiative (89%). That is, people who want to move forward must not only be able to perform their tasks well and quickly, they must make it clear to the Manager, they must be able to defend their point of view, offer new ideas and be able to set up communication with their Manager.

These questions were asked to young professionals themselves to understand how important factors for managers coincide with the ideas about what to do to move up the career ladder in the minds of employees themselves. Respondents named their strengths, among which were high motivation to work (98%), creativity (78%), quick learning (56%), and the ability to move forward (13%). To the question: What factors contribute to the promotion of an employee on the career ladder? Responses were received that did not always coincide with managers' ideas about factors that were important for career growth. In addition, here we identified an important problem that existed in Russian companies in the field of information technology: problems in communication between managers and subordinates (67%). Employees do not always or almost never have an idea of what is important for their management, what kind of competencies they should develop in order to have the opportunity for career growth. Most companies in the field of information technology position themselves as open companies, without a rigid hierarchy, this is emphasized even by their corporate culture: for example, in most companies it is customary to communicate informally with colleagues and managers on the job, regardless of what position the

person holds, and the company under study broadcasts this corporate culture. There is still a huge issue in communication with managers, it is possible that this problem is more common for Russia, as young professionals come from universities which have adopted a strict hierarchy and insubordination, which might be why young professionals are not so easy to openly talk to the Manager and to Express their point of view, as well as to know the opinion of the head of his/her competencies and their future in the company. Most likely, this problem is not fully realized not only by young professionals, but also by managers. The second problem area that has been identified in the course of empirical research is in the career development of young specialists in the field of information technology. Today, you need to be not only an excellent technical specialist, but also to some extent a marketer. All managers identified personal qualities among the important factors, that is, any employee who wants to move forward must be able to sell and present himself or herself correctly to the Manager. That is, in addition to the fact that the specialist does his/her job perfectly, he/she must present it correctly and show him/herself (this assessment was given by almost 90% of managers). Here again, there is a problem of building proper communication with the Manager, that is, these problems are directly interrelated.

V. CONCLUSION

The global digitalization of society is transforming the very concept of labor, and the modern economic system implies an increase in the number of employees engaged in intellectual and creative work. Such professions are by far the most popular and highly paid. The emergence of a new type of employee has raised questions for science such as determining the social status of such employees, determining their career field, but there has been no radical change in public relations, since the basic structures and social ties have remained the same.

We can say for sure that new information and digital technologies today are the engine of social progress, replacing the usual communication practices, and in addition, require the emergence of new professions, and therefore the emergence of a new type of workers who could successfully present themselves in this labor market. New forms of employment are emerging, for example: freelancers, who are prominent representatives of employees in the field of information technology; all these changes inevitably lead to the transformation of such concepts as career and career growth.

However, in practice, the researchers' forecasts were not fully justified. In General, social relations remained the same, and without significant changes, they were moved to the new labor sphere, to the sphere of information technology, which caused a number of problems. With the elimination of the centralized state system for distributing graduates of educational institutions to their places of work, young professionals, as a category of labor resources, have significantly lost their positions that they had in Soviet times. Analysis of the theoretical, legal and practical aspects of the current state of this problem has shown that at present there are no common features and criteria for classifying an employee as a young specialist in theory and practice. In addition, the new field of work required new career paths for young professionals. In this regard, research on the social status of a new type of employee, as well as the study of factors affecting their career growth, is particularly relevant.

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