Educational Environment of the College as a Factor of Professional Competence Forming of Future Middle-Level It Specialists

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Abstract- The article presents the results of the analysis of approaches to the interpretation of the concept of "educational environment", describes the modern requirements for the professional competence of college graduates in the field of information technology, defines the essential characteristics and features of the educational environment of the university college. Nowadays, due to the rapid development of all spheres of our life, highly-qualified middle-level specialists are needed. The system of training in the college is similar to the university, but has its own peculiarities. Educational institutions of secondary vocational education train middle-level specialists with a high level of basic knowledge. The problem of professional competence forming of a college student can be solved with careful attention to the peculiarities of the educational space of the college. Modern needs of society to preparation of the middle-level specialists require the development of scientifically-proved strategies and methods of forming the professional competence of students in the educational space of a college, which will be effective if considering all the features of the educational process in the college.
Keywords: *Educational Space, Information Technology, College, Professional Competition.*

1. Introduction

One of the priorities of the country's development in the near future is the creation of an innovative economy in the global information society. To solve this important task, not only specialists with higher education are needed, but also workers, middle-level specialists of high qualification [1]. Educational institutions of secondary vocational education (SVE) should train middle-level specialists or workers with a high level of basic knowledge. The system of training in the college is largely similar to the university, but still has its own characteristics. The problem of professional competence forming of a college student can be solved with careful attention to the peculiarities of the educational space of the college. Therefore, the theme of the study of the educational process organization in secondary vocational education is relevant.

2. Methods

The following empirical research methods are used: *observation* as a method of cognition, which consists in an active, systematic, purposeful and deliberate study of the educational space of the college and its features; *abstraction* as a form of cognition for the purpose of mental distraction from insignificant properties, connections, relations in determining the characteristics of the educational space of the college and the allocation of several parties of interest to us as researchers. *Direct analysis* and *elementary-theoretical analysis* were carried out, which showed that the phenomenon of the educational environment and its impact on the quality of education are one of the central places in modern pedagogical science and practice. Researchers define the educational environment in different ways: it is a *pedagogical space* [8], and *the system of conditions for the organization of educational activities* [9], and *a set of psychological, social and spatial-subject factors* [11], and *the educational environment of a particular educational institution* [4]. According to the researchers, professional training in Russian colleges has special features: its *innovative nature* [6], and *the possibility of obtaining practical skills* [10].

3. Results and Discussion

In the context of the introduction of Federal State Educational Standards of Secondary Vocational Education (FSES SVE) teachers of educational institutions had to face a number of difficulties, as the characteristics of professional activity of future specialists are based on the concept of competencies, the forming of which is the purpose of vocational training. However, along with the mandatory requirements set forth in the Federal state educational standards of secondary vocational education, other requirements of employers are imposed on middle-level specialists in the field of information technology. They are the following:

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1. *Mobility, ability to self-education*. Software products quickly become obsolete and are often replaced by others, more modern ones. Future graduates should have experience with the latest versions of software products, which can be difficult to provide in practice. Mid-level specialists in the field of information technology should be able to master new technical and software solutions as soon as possible, pay special attention to the process of self-training, self-education [5].

2. *Willingness and ability to interprofessional interaction and cooperation with specialists in other fields*. Information technologies are distributed in all sectors of the economy, so there is often a need to adapt software products to the needs of users of different subject areas, which leads to close interaction of specialists in the field of information technology with specialists in other fields.

3. *Ability to navigate in related areas*. Information technologies penetrate into all spheres of human activity. Often, effective professional activities in the field of information technology require a mid-level specialist to have "hybrid" basic knowledge in related areas. For example, for the successful promotion of certain information technology products one needs to own not only the means of the competent presentation to the user, but also basic knowledge of marketing, psychology.

4. *English language skills*. Taking into account the fact that the vast majority of training literature and supporting documents in the field of information technology are written in English, and the rate of change of standards and techniques in the industry is high, a serious competitive advantage of the employee is the knowledge of English [2,3].

5. *Forming entrepreneurial skills*. At present, the need for the development of small innovative entrepreneurship and the emergence of promising start-ups is obvious in our country. Therefore, the introduction of economic disciplines, the forming of economic competencies is a very urgent problem.

6. *Orientation of education to the practical needs of the information technology industry*. Most of the employed graduates of secondary vocational education have to be trained in the workplace in order to develop the necessary production skills. This training usually takes place at the expense of the employer and requires not only scientific, human and technical base, but also significant investments. Therefore, secondary vocational education, along with good theoretical training, should be even more focused on the practical component.

7. *Information management skills*. In modern conditions, information is considered as the most important resource that requires conscious, productive coordination of senior and middle-level IT specialists. And it is not just the ability to practically operate information technology, but also the ability to manage the creation and use of information in the interests of the organization.

The potential of a professional educational institution in the field of educational activities lies in its ability to ensure the quality of education, that is, to create appropriate conditions, an effective educational environment. In our study we understand the educational environment as the educational environment of the Kazan College of Technology and Design, in which the processes of training, education, socialization and professional development are harmoniously organized.

4. Summary

Based on our own experience and conclusions, it is possible to formulate the following features of the educational environment of the university college:

– *The opportunity to get a specialty at a time when peers continue their education at school*. Students receive a diploma of education and a certificate of secondary education at the same time. Some colleges have combined training in another specialty, which allows students to get several specialties at the same time.

– *Facilitated conditions for admission*. To enter the College, it is enough to have a certificate of incomplete secondary education (after 9 classes) or the results of the exam and a certificate of complete secondary education (after 11 classes).

– *Considering the age of students*. Since this age period is characterized by its own *peculiarities* (increased psycho-emotional excitability, anxiety state of mind, personality transformation, professional and personal self-determination, etc.), the account of all these characteristics should be reflected in the features of the organization of the acquisition and accumulation of professional experience.

– *Forming basic professional competences*. Unlike educational institutions of higher education, the college forms students' basic professional competence and in-depth knowledge of special disciplines.

– *Differentiation of the content of secondary vocational education*. It is manifested in a variety of professional educational programs. Currently, secondary vocational education is implemented in two main programs – basic and advanced levels. The higher level allows the graduate to acquire a qualitatively new qualification.

– *The obligation of the college to arrange a student to practice at the enterprise*. As a rule, colleges make contracts with enterprises that the latter are ready to accept students for practice. Well-established students are invited to work in the future [7].

– *Practice-oriented training*. In the system of SVE such methods of training are used, which allow to form professional competencies and acquire strong skills of practical work in the specialty necessary for a particular

professional activity, which makes them more popular. The conducted research shows the presence of students' expressed desire and ability to perform coursework and diploma works focused on
practical goals and implementation.

– *Preparation for the specifics of training in higher education.* While studying in college there is an adaptation to the forms and methods used in higher education. The lecture-seminar system of training used in college allows to prepare students for the changed conditions of training in which all educational process is considered as continuously connected, passing into each other functions. Of course, in modern conditions, this form of education is used in the conduct of classes in the school system, for example, in specialized classes. However, the college, along with the organization and conduct of lectures, seminars, practical and laboratory training sessions, also implemented a system of independent cognitive activity of students.

– *The opportunity to enter a higher education institution without the exam on the results of the internal exam.* In addition to the popular profession, the student has the opportunity to continue learning at a higher level of education.

– *Integration processes in the education system itself.* The result of this integration is the creation of educational complexes of various types, including university, providing continuity and diversity of training of future specialists in various programs and levels.

Taking into account the features of the educational environment of college allows to carry out indirect influence not only on all components of educational process, but also on its result – professional competence of the graduate.

5. Conclusions

Thus, modern requirements of society to preparation of middle-level specialists put on the agenda need of development of scientifically-proved strategies and methods of forming the professional competence of students in the educational space of the college, which will be effective only when taking into account all the features of the educational process in the college.

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