

# Innovative-Imitative Practice System at an Enterprise

Konyukhov V. Yu.

Institute of Economics, management and law  
National Research Irkutsk State Technical University  
Irkutsk, Russia  
c12@ex.istu.edu

Rodionov N.

Institute of Economics, management and law  
National Research Irkutsk State Technical University  
Irkutsk, Russia  
nikrodionov411@gmail.com

Zott R.S.

Deputy head of the section of Tarasovskiy coal LLC  
Irkutsk, Russia  
zottroman@gmail.com

Konovalov P.N.

Department of General subjects  
National Research Irkutsk State Technical University  
Irkutsk, Russia  
i03@istu.edu

**Abstract** – The article discusses the concept of the system of practice by students, the advantages and disadvantages of this concept. It also describes the best methods for forming human capital and working with it in the context of this concept as well as the issues of student practice.

**Keywords** – innovation, human capital, education, practice, enterprise

## I. INTRODUCTION

Today, effective human capital management is one of the most important points in the country's successful development. It is clear that there are many global factors that, unfortunately, cannot be changed and improved at the country level. But the more people understand the importance of qualitative transformations in the areas of formation, education and use of human capital, the more the country will move this way, and the sooner the transition to the knowledge economy will be possible.

The human factor is the most important factor in the successful and efficient development of the Russian economy. This is the presence of highly qualified personnel who are versed in current innovation trends and technologies. This is possible only with the high quality of the educational process, an important part of which is practice [1].

Changes occurring in various areas of human activity put forward new requirements for the organization and quality of vocational education. A modern university graduate should not only possess special knowledge and skills, but also have a need for achievements and success, as well as for the application of knowledge in practice. They need to know that they will be in demand in the market [2].

## II. MATERIALS AND METHODS

For deep understanding of the advantages and issues of human capital and possible analysis of one's own abilities, as

well as for the desire to improve, a student must have practice. Practice is a way to get information about your abilities not only from yourself, but also from the head of the practice and their colleagues who work with them on tasks.

During practice, a student also has a chance to learn the list of necessary qualities for the work they like and to improve what they need if they want. This is a good opportunity because no one criticizes you, except yourself. A student understands that they are probably not good enough and are being improved. Only a student's interest in self-improvement is needed.

However, practices at enterprises often boil down to a mere formality. Students have no desire to work in the company to which they were sent, or even the one they chose themselves. This infantilism is associated with a lack of motivation. Students consider this to be another boring task that they want to complete as soon as possible. Therefore, it will be reasonable to determine the main task of any practice; it is the involvement of students in the process. As the saying goes, a doctor will not cure the patient if they do not want to be treated.

## III. PROBLEMS OF PRACTICE AT THE ENTERPRISE

Experts have long been saying that modern approaches to the training of qualified specialists in the higher education system, focused on developing students with certain general cultural and professional competencies, require a new approach to the organization and conduct of production practices [3].

Practice at the enterprise is one of the most important, since during its passage the students have a real opportunity to work under the conditions of a real production. However, training and familiarization practice are also significant, because without knowledge, a new view of the work offered in the production practice is impossible, and this means that development is impossible.

*Experts also highlight some other issues of student practice.*

- The lack of independence of students in a specific job.
- Low interrelation of components of specific disciplines and types of professional activity in practice.
- Insufficient equipment of a laboratory base of some universities in comparison with a base of production structures.
- A student needs to work with unfamiliar software products that could be studied in optional courses according to the individual learning path of some students. [4].

Currently, students do not have the understanding that practice will help them in the future, because the level of organization of practical training is low. Students do not want to work at the company where they do the practice, because often the tasks are boring and do not require creative approach. As a result, they form the opinion that this is meaningless, and, therefore, the student's grade becomes the priority. Many teachers often ask students: "Do you study only for good grades?" However, this is partly the teacher's responsibility, because they could not interest the students. Study is work on both sides. In addition, information is absorbed better if it is presented correctly, which, in part, is the work of the teacher.

There are also various fields of study. If the practice takes place at an industrial enterprise, then only the competence of students is at risk. If people have learning problems and want to become a doctor, for example, then human lives are at risk.

The organization and conduct have many problems that affect the involvement of students in the learning process. When they are set to work, their brains begin to offer them ideas that they did not show up with a frivolous attitude to practice.

So, how to make student engagement as effective as possible?

#### IV. INNOVATIVE IMITATION PRACTICE SYSTEM

One can create an imitation of the largest and most successful companies in the country in which students do their practice.

The peculiarity of this system is that students will work in real positions that exist in the prototype of the company, receive real money and manage a special local currency for the operations required by the company. They will have their own workplaces, an office and, consequently, corporate cohesion, which has a positive effect on employee commitment and the overall team spirit. After all, it is known that a large part of the collective seeks to comply with generally accepted standards of professional behavior, adapt to others, be guided by acceptance and social approval. On the one hand, this helps to rally the team; on the other hand, it may lead to a decrease in personal initiative [5]. However, the system involves solving this problem of reducing initiative, as described further.

Thus, a team will be created that will have common goals, and each employee will have individual goals. Labor self-realization of the personality of the student will be at a high level, and this will be a good motivation. In particular, the

innovation-imitation system also seeks to bring the student to self-actualization [6]. This important feature is absent in normal practice.

Such a system will help identify problems in the work of the prototype company, as well as identify problems in the human capital of the enterprise. An innovation and simulation system will be able to replace all practices, such as introductory, production, and even pre-diploma ones. This small model of a real enterprise will give complete information about the mistakes that are made, and above all, will involve students in a similar real work flow of the company.

Having received responsibility and status, students will be able to show their abilities in the way that they would be shown in a real workplace and not as part of a boring task, but under the influence of the responsibility of the maximum like a real enterprise and monetary motivation. Some experts consider the problem of students' lack of willingness to work independently in a specific production. However, this is due to the low interest of the students, and this is easily solved by some teaching methods that will maximize the attention of the students, as it will be written further.

A prototype company will also be able to give risky projects to its imitation company in order to test them. This will help to work out the company's innovation.

Students have a lot of responsibility in terms of the system. For managers of this company, for example, responsibility is a tool that allows them to achieve results. The manager takes responsibility for the level of employee commitment to the interests of the company and for achieving their goals. At the beginning of each year, quarter, month or even week, the leader undertakes to move towards the goals set and is responsible for this [7]. Based on this, one should carefully approach the process of selecting students for various positions.

The system itself will perform the functions of a manager.

All employees of the imitation company must be students. In the process of interaction, they will need the help they will seek in teamwork. Of course, without a few managers of a simulation internship system, the project will not function. Managers will manage the external environment of the company and create more or less favorable conditions for the activities of the imitation company. If employees need any kind of threat, for example, an economic one, project managers will create an artificial jump in prices for goods needed for the company. Managers of this project will be selected from various areas necessary for the quality of project management, such as psychology, economics, management, etc.

This whole system is like a board game. Only immersion in the process of work will make students feel part of the mechanism without which this mechanism will break.

Also, in the imitation company there will be a competitive effect. Each student will have a publicly available spreadsheet reflecting their proximity to the "ideal employee" that the original company wants to see in this position. This will allow students to control themselves, because their wages will depend on this, as well as on the successful or disastrous performance of the current tasks of their positions. This will also solve the

issues of a possible decline in personal initiative. And the concept of the "ideal employee" will exist only at the student level. It will be compiled initially with errors, and the student's hidden task will be to correct them. Perhaps, some students will exceed the company's expectations, and this is one of the main ideas of this concept. Thus, the main task of this type of practice is maximum immersion into the real enterprise environment.

#### V. HOW DOES IT WORK?

With the usual practice, even in a world-class company, the student group is always assigned a manager who is ready to help and correct a possible error. There will be no such manager in the simulation company. Chiefs and subordinates will be selected on the basis of testing measuring the level of students' abilities. The program of this practice should be designed in such a way that students study independently. They will be provided with the literature that they use to solve their individual problems. Literature must be properly selected for each position. This is the independent learning of students, where the main help to students is provided in motivation, not in learning.

They receive most of the information independently analyzing their activities and interacting with colleagues. By mastering the company's business and collecting information, students will be able to carry out serious tasks and understand what they are doing.

This type of practice will also eliminate the pressure of project managers on students. If students make a mistake, then punishment will follow the same as in regular work. Project management will only affect the external environment of the imitation company.

Because of the competition, a very high interest of students in education will be created, the quality of training of specialists will significantly increase, and the creative beginnings of students will be activated [8].

Under the conditions of a real enterprise, it is impossible to control each employee and their results on a daily basis, and also to assess their level of ability and correctness of actions. And this is a mistake, because the employee must have the freedom and trust of a manager.

The approach to assessing human capital will be directed to such an imitation company on the student's performance in a team and the student's tasks in their position. Creativity and adaptability of a student cannot be measured unless they are given unusual tasks and do not require to solve problems. Such tasks will be offered for students to perform at later stages of practice in a similar company. It is appropriate to recall the term "social creativity". Social creativity is a common ability for self-actualization; social motivation which expresses the individual's need for constant social contacts and motivational attitudes to communicate with other people; communicative sensitivity; behavioral sensitivity manifested in the ability to adequately interpret the behavior of other people and use different behavioral styles in accordance with the characteristics of partners and the social situation; social imagination which allows one to model the further development of the social situation on the basis of feedback.

Social creativity is a complex personality quality that allows you to find original and constructive solutions in situations of interpersonal interaction. The structure of interrelated elements of social creativity reveals the unity of motivational, communicative, intellectual, emotional and existential parameters. Each of them represents a separate block of personality characteristics and manifestations that have a certain value in the process of interpersonal interaction [9]. In fact, the proposed innovation and imitation system is an ideal platform for developing social creativity, using it in gaining knowledge and solving the necessary tasks. An important feature of this system is the use of advanced teaching methods and student interaction – for example, the method of "brainstorming." This method is aimed at generating ideas to solve the problem and is based on a process of joint resolution set in the course of an organized discussion. A task may contain a professional or interdisciplinary issue. At the same time, all ideas and proposals expressed by the group members should be recorded so that they can be analyzed and summarized. Sequential fixation of ideas allows us to trace how one idea generates other ideas. The spirit of competition activates the mental activity of students [10].

It is important to evaluate the individual human capital and the total human capital of students. To assess human capital, people can use a qualitative assessment. A person's expenses on education, qualifications and experience in the innovation sphere, in particular, the human capital index or its innovation development index are calculated [11].

Qualitative assessment cannot give a complete picture of the education of a person who can get knowledge from communication with people, informal practices and internships, the Internet and other free sources that cannot be counted. At the same time, a person's resume may indicate a good education, but not the ability to apply it. In the simulation system of a real enterprise, managers who are in charge of the project will be able to more accurately estimate the abilities and results of students, comparing the indicators of students with their actual performance.

A simulation-innovation system of practice will allow assessing the individual level of human capital of each student both at the testing stage before the practice and during the practice. The original company will receive the results and detailed information about the future employees of this company.

Of course, in a productive team, a positive and non-conflicting atmosphere is a necessity. The optimal realization of the personal and group capabilities of the workforce depends largely on the effectiveness of joint professional activities. The favorable atmosphere in the team and good interpersonal relationships not only positively affect the results of work, but also rebuild the person, form their new opportunities [12]. Students themselves must come to this, improve relations in the team and become its full part. Of course, in any office quarrels are inevitable, but students themselves have to deal with this. They must understand that at least what they are doing is practice, their main task is to fulfill their duties. And if they pay too much attention to something else, then punishment will follow.

Care for the workplace, the right temperature, cleanliness, proper nutrition, safety, medical care, etc. are also a necessity. The employee needs organizational harmony, that is, it is necessary to eliminate all resource losses and ensure maximum productivity [13].

## VI. ADVANTAGES AND DISADVANTAGES OF THE CONCEPT OF THE PRACTICE SYSTEM

### *Advantages of the innovation-imitation system.*

- Practice for students is at the same time a good test of their abilities and a way for students to gain invaluable work experience at an enterprise.
- A type of training that combines several meaningful and effective teaching methods, such as the interactive method, the principle of competition, motivation and teamwork.
- Additional way to form human capital.
- A student is willing to learn and perform assignments because of high involvement in the process.
- Analysis of the activities of the original company, the search for errors and testing of risky projects in “laboratory conditions”.
- Forming a base of highly qualified potential employees who do not need a trial period, because this is a practice in an imitation company.

*The system is largely focused on intelligent educational technologies and uses most of their main aspects.*

a) Multifaceted cooperation and personal contacts of teachers and students.

b) Improving the effectiveness of individual educational and creative activities of students.

c) Links of scientific and educational research of students with the content of the educational process.

d) Increase of the volume of independent work of students.

e) Close relationship between theory and practice.

f) Manageability and continuous ability to correct the learning process, etc. [14].

The innovation and simulation system does not use only the first item, because students should receive maximum responsibility, unite during teamwork and learn independently using their need for self-actualization and avoiding criticism from a higher manager. Their experience may prevent a student from looking at their activities and the activities of the company with a “fresh look”.

If a motivated student plunges into an adult environment, they adapt and begin to feel more confident. However, at the same time, they will have the opportunity and desire to act not as an employee in a “comfort zone”, but as a person with a new look at their position, duties and tasks. Students will experiment, but do it wisely and weigh the pros and cons. It is

important to maintain the perfect balance between the quality of their work and the initiative of the student.

In addition, students will not have any obstacles to work on their projects, which can be used by this company in the future, or developed by students on the basis of the company imitation, but continued independently. The project method today is one of the most effective tools for implementing a competence-based approach to student learning. High performance of the project method is recognized by many Russian and international experts. For example, I.N. Smirnova notes that with the help of project activities, one can teach students to use existing knowledge to creatively solve specific problems and independently acquire new knowledge. During project development, students learn to explore the subject, find solutions to problems, and use critical thinking. In addition, students learn to be independent, substantiate their own opinions, which is important in both professional and other areas of their work. [15].

Such an idea requires funding, but a company that will bear the costs will attend to its future, because any progressive company is committed not to finding qualified employees, but to human capital. The accumulation of human capital precedes the economic growth of the company and serves as the basis for economic growth. The process of accumulating human capital is an investment in education and training, which will further benefit the company that decided to participate in the experiment [16].

*There are two important actions in this concept.*

- Study of the level of human innovation culture.
- Calculation of the index of innovative development of the individual.

This is necessary in order to find out a person's willingness to change with the development of the enterprise in which they work. A negative characteristic of an employee in such a system will be conservatism and inability to adapt. However, this information is not exhaustive, as stated earlier.

*The simulation practice system also has disadvantages.*

- Search for project funding.
- Keeping the original company's trade secrets.
- The inability of some companies to understand the importance of human capital and the principles of its accumulation by employees.
- Difficulty in creating an interesting and dynamic practice program (training programs, engagement and current tasks of the enterprise) [17].

The process of human capital formation occurs at different levels. The simulation practice system affects the level of the enterprise and the level of the individual. These are the two most accessible options for impact using enterprise tools. This kind of practice will help educate students in their willingness to improve their individual human capital, prepare future enterprise personnel and understand the structure of the enterprise, understand the role of the trainee in this mechanism and realize the responsibility in making working decisions [18].

Implementation of simulation practice will require more detailed work.

## VII. CONCLUSION

In conclusion, it should be said that this concept is difficult and requires a professional approach at all stages of its organization and implementation. However, it remains an idea that accumulates the best approaches to learning, improvement of the practical part of the education system, benefits for the enterprise and students, as well as level of human capital of the country. The innovation and simulation system allows one to have all the necessary components for the education of the human capital of students and, consequently, the human capital of the original enterprise, which will have a positive impact on the country's economy.

Theoretical knowledge will never be enough to develop a person, an enterprise, a country and the world. Theory is the past of science, practice is its present, and development is the future.

Of course, theoretical knowledge cannot be underestimated. They are a good basis for scientific activity. It works on the principle of "brainstorming." The point is that one idea may arise on the basis of another.

Each person themselves determines the need for education. This is probably due to the opinion that learning is a boring and useless process. The innovation and imitation system is largely capable of saving the student's time by changing their vision of practical training.

The new system of practice will provide high-quality development and build-up of students' human capital; this is the goal of education. However, to interest a student is the same task as teaching them. If students are interested in the process, they will be able to reveal their abilities and take the initiative. It is necessary to create all the conditions for this.

Having considered the advantages and disadvantages of the proposed system, it can be understood that it does not have barriers and restrictions that would show the unrealistic or impossibility of this project at the concept stage.

This whole concept is a look at the practice of a student, not a teacher. One can discuss for a long time what is good for students without asking them. Still, learning is work on the both sides.

## References

- [1] C.I. Safonova and S.V. Podolsky, "Features of properties of educational services and their interrelation with educational process," *Integration of education*, No. 1, 2010. Retrieved from: <https://cyberleninka.ru/article/n/osobennosti-svoystv-obrazovatelnyh-uslug-i-ih-vzaimosvyaz-s-obrazovatelnyim-protsessom>
- [2] V.K. Starodubtseva, "Motivation of students to study," *Modern problems of science and education*, No. 6, 2014. Retrieved from: <http://www.science-education.ru/ru/article/view?id=15617>
- [3] T.A. Miroshnichenko, "Problems of the organization of industrial practice of students at level training of personnel of agrarian and industrial complex in the directions "Management" and "Economy"," *Education, science and production*, No. 1(6), 2014. Retrieved from: [https://cyberleninka.ru/article/n/problemy-organizatsii-](https://cyberleninka.ru/article/n/problemy-organizatsii-proizvodstvennoy-praktiki-studentov-pri-urovnevoy-podgotovke-kadrov-apk-po-napravleniyam-menedzhment-i-ekonomika)
- [4] N.A. Antonova, M.A. Smirnova and E.A. Spirina, "Problems of the organization of practical training of students in the conditions of credit technology of training," *Bulletin of BSU. Education. Personality. Society*, No. 5, 2010. Retrieved from: <https://cyberleninka.ru/article/n/problemy-organizatsii-proizvodstvennoy-praktiki-studentov-v-usloviyah-kreditnoy-tehnologii-obucheniya>
- [5] E. V. Budaeva, "The influence of socio-psychological climate on interpersonal relations in the workforce," *Bulletin of BSU*, No. 6, 2015. Retrieved from: <https://cyberleninka.ru/article/n/vliyanie-sotsialno-psihologicheskogo-klimata-na-mezhlichnostnye-otnosheniya-v-trudovom-kollektive>
- [6] I.M. Novokhatko and K.N. Moralesa, "About the features of the motivational characteristics of students and graduates of research university," *Modern problems of science and education*, No. 1-1, 2015. Retrieved from: <http://www.science-education.ru/ru/article/view?id=18363>
- [7] V.Y. Konyukhov, A.V. Chemezov, V.V. Fedchishin, K.V. Suslov, A.A. Kachkin, E.A. Kuchkina, T.I. Zimina, N.A. Shamarov, A.S. Danilov and S.T. Belyaev, "Management efficiency of innovative – investment projects in the field of labor protection of industrial enterprises," Irkutsk: Irkutsk national research technical University, 2016.
- [8] R.A. Dolzhenko, "Management of emotions of students as a basis of formation of positive motivation to training," *Bulletin of Tomsk State University. Economy*, No. 1(13), 2011. Retrieved from: <https://cyberleninka.ru/article/n/upravlenie-emotsiyami-studentov-kak-osnova-formirovaniya-positivnoy-motivatsii-k-obucheniyu>
- [9] N.N. Dvulichanskaya, "Interactive teaching methods as a means of forming key competences," *Mechanical engineering and computer technologies*, No. 4, 2011. Retrieved from: <https://cyberleninka.ru/article/n/interaktivnye-metody-obucheniya-kak-sredstvo-formirovaniya-klyuchevyh-kompetentsiy>
- [10] O.V. Shinkaryuk, V.F. Stolyarov and V.I. Ostrovetsky, "Global and national assessments of innovation and human capital development," Retrieved from: <https://cyberleninka.ru/article/n/globalnye-i-natsionalnye-otsenki-innovatsiy-i-razvitiya-chelovecheskogo-kapitala>
- [11] V. Yu. Konyukhov and A.V. Proskurin, "The development strategy of engineering education," *The future of engineering education. Collection of scientific articles*. Moscow: MG TU named after N. Eh. Bauman, 2016, pp. 51-55.
- [12] C.I. Safonova and S.V. Podolsky, "Project activities for University students: project planning and evaluation of the impact of their implementation," *Society: sociology, psychology, pedagogy*, No. 5, 2018. Retrieved from: <https://cyberleninka.ru/article/n/proektnaya-deyatelnost-studentov-v-vuze-planirovanie-proektov-i-otsenka-rezultativnosti-ih-realizatsii>
- [13] K.A. Noskova, "Formation, accumulation and development of human capital," *Humanitarian scientific researches*, No. 5, 2013. Retrieved from: <http://human.snauka.ru/2013/05/3033>
- [14] A.E. Banikova, "Psychological aspects of development of social creativity of students," *Bulletin of TSPU*, No. 6, 2011. Retrieved from: <https://cyberleninka.ru/article/n/psihologicheskie-aspekty-razvitiya-sotsialnoy-kreativnosti-studentov>
- [15] V.F. Gorshenin, "Transformation of the concept of the workplace in modern systems of management of labour processes," *Bulletin of CSU*, No. 3(257), 2012. Retrieved from: <https://cyberleninka.ru/article/n/transformatsiya-ponyatiya-rabochego-mesta-v-sovremennyh-sistemah-upravleniya-trudovymi-protsessami>
- [16] M.A. Afonova, "Intellectual educational technologies as a factor of development of scientific potential and human capital in high school," *Modern problems of science and education*, No. 9, 2008. Retrieved from: <http://www.science-education.ru/ru/article/view?id=3727>
- [17] V. Yu. Konyukhov, N. G. Urazova, A.V. Chemezov, V.A. Martynyuk, N.N. Konyukhova, A.S. Danilov and A.A. Kychkin, "Risk management in innovative activity," Irkutsk: Irkutsk national research technical University, 2015.

- [18] V.Yu. Konyukhov and A.V. Salivon, "Innovative activity as the engine of economic growth," Problems of management of production and innovative systems: materials of articles of the all-Russian scientific and practical conference, 2018, pp. 119-121.