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System analysis of the pedagogical and Social psychological mechanism in higher project IT education in the school

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ABSTRACT

The aim of this study namely to improve the quality of higher project IT education in the school by increasing the effectiveness of the pedagogical and social psychological mechanism in higher project IT education; to achieve the goal objectives the following tasks are solved in the work. This research was conducted by qualitative method with science and practice approachs. The subject of the work is the methodology of system analysis of the pedagogical and social psychological mechanism in higher project IT education in the school. The object of the work is the pedagogical and social psychological mechanism in higher project IT education. The concept and structure of the pedagogical and social psychological mechanism in higher project IT education are clarified. The elements of the pedagogical and social psychological mechanism in higher project IT education are investigated. Based on the results the possibility of using gestalt psychology is substantiated. The development of emotional intelligence among students in the framework of project education is described. The research methods are: analytical pedagogy, psychology, system analysis, system approach, social condition. The scientific novelty of the work is the methodology and results of the study of the pedagogical and psychological mechanism in higher project IT-education

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1. INTRODUCTION

The relevance of the work is determined by the need: firstly, to expand the scope of the project approach in education; secondly, to improve the quality of higher project IT education during the formation of a new technological order. The hypothesis of the work is the assumption that the study and improvement of the effectiveness of the pedagogical and psychological mechanism in higher project IT education can ensure an increase in the quality of higher project IT education. The aim of the work is to improve the quality of higher project IT education by increasing the effectiveness of the pedagogical and psychological mechanism in higher project IT education.

To achieve this goal , the following tasks are solved in the work:

- the concept and structure of the pedagogical and psychological mechanism in higher project IT education is being clarified;
- within the framework of the methodology of system analysis, the elements of the pedagogical and psychological mechanism in higher project IT education are investigated;
- substantiates the possibility of using gestalt psychology;
- describes the development of emotional intelligence among students in the framework of project education.

The object of the work is the pedagogical and psychological mechanism in higher project IT education. The subject of the work is the methodology of the system analysis of the pedagogical and psychological mechanism in higher project IT education. Let's analyze scientific publications on the topic of this article. The implementation of pedagogical activity is accompanied by the formation of a certain mechanism of this pedagogical activity (Baibayeva, 2016). Project activity can be considered as a basis for creating an organizational and pedagogical mechanism of educational design (Temerbekova, 2020). The preparation of teachers for innovation can act as a structural element of the mechanism of updating the education system in the context of the Bologna process (Kostenko, et al., 2015). Conducting psychological, medical and pedagogical consultations can be part of the mechanism for managing the quality of education (Svetlakova, 2014; Lillehaug, 1998; Antoni, 2006). The educational process should take into account the existence of a mechanism of pedagogical and psychological protection of the individual (Molchanova, 2018). Teachers should create their own pedagogical and psychological mechanism for improving the quality of education in the context of IT technologies. The need to create such a mechanism is primarily associated with the development of clip thinking among students (Glushchenko, et al., 2018). Social condition is the one of parameter to analyze physicological (Maslach, et al., 2013).

Its own pedagogical and psychological mechanism should also be created when the system-activity approach is put into practice in higher branch vocational education. Such a pedagogical and psychological mechanism was described in (Glushchenko, et al., 2019). To improve the quality of higher education, a client-oriented approach can be used in the work of universities (Glushchenko, et al., 2018). In addition, experts recommend using a product approach in higher polytechnic education to improve the quality of higher education (Glushchenko, 2021). Social physicological is the term to study higher education (Simon, 2008). There are several scoal psychological dimension (Kelman, 1997). To study the quality of higher education, experts proposed to develop analytical pedagogy and psychology, in particular, the product model of the activity of branch universities (Glushchenko and Musatova, 2018). Educators can influence the quality of education by applying the recommendations of Dale Carnegie. For example, when implementing educational projects, a teacher should set students up to ensure that the project tasks assigned to them are not

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difficult to accomplish (Carnegie, D., 2022). Scientists believe that it may be useful to apply a behavioral approach to further improve the quality of higher education (Glushchenko, 2022). Analysts consider the development of emotional intelligence in students to be another direction of improving the quality of higher education (Meshcheryakova, 2022). This is explained by the fact that experts consider emotional intelligence to be one of the forms of human capital (Zakaryan, 2018). Scientists substantiate the possibility of developing students' emotional intelligence in the course of their educational projects (Glushchenk, 2023).

In addition, analysts believe that the quality of higher education can increase due to the use of the gestalt psychology method in the implementation of educational projects (Glushchenk, 2023). Scientists express the point of view that students' reflection can act as part of the mechanism for the development of pedagogical experience (Metaeva, 2006; Najmiddinovna, 2022; Maor, 2003; Tynjälä; 2003). Scientists recommend applying the methods of philosophy and methodology of science to improve the quality of higher education (Glushchenko, et al., 2009; Elena, 2020; Huarng, 2002; Metz, 2016). The results of the study of publications on the topic of this article show the relevance of this article.

3. METHODS

In the philosophy of science, there are two approaches to describing the role of philosophy itself in science and practice. Within the framework of the first approach, philosophy is considered the science of science (the representative of this approach is Georg Wilhelm Friedrich Hegel). With this approach, philosophy is considered as a general methodological science. Within the framework of this approach, philosophy can be considered as the basis of such a science as pedagogy (Koulaidis, 1995;Taatila, 2012;Monk, 1997;Jumakuziyevich, 2022).

Within the framework of the second approach in the study of the philosophy of science, it is argued that any science forms its own philosophy for itself. The representative of this approach is Auguste Comte. Within the framework of the second approach, we can say that each of the sciences forms in the course of its development a specific philosophy inherent only in this science. With this approach, we can say that pedagogy (as a science and a sphere of practical activity) forms the philosophy of pedagogy, in particular, the philosophy of pedagogy of project education (Glushchenko, et al., 2009; Sergeeva, 2018; Savicevic, 2008).

At the same time, it is known that the philosophy of activity (in particular, pedagogy) affects all aspects of this activity. Therefore, in this article we will proceed from the fact that, in turn, the philosophy inherent in any science generates the following corresponding to it (this philosophy): specific research methods; specific organizational culture of research; specific pedagogical and psychological mechanism of knowledge transfer and more. Based on this, it can be argued that there is also a special, original pedagogical and psychological mechanism of higher project IT education. We will describe and investigate the pedagogical and psychological mechanism of higher project IT education by analogy with the works (Glushchenko, et al., 2019).

In this article we will proceed from the fact that the pedagogical and psychological mechanism are integrated with each other (Richards, 2017; Mukimjonovich, 2022; Shaidullina, 2015). With this approach, they act as a single whole (system). The pedagogical and psychological mechanism of the project approach in higher IT education will be called a set of interrelated pedagogical and pedagogical measures of influence of the teacher (project supervisor) on the educational project group. Such a mechanism ensures the implementation of an educational project, improving the quality of higher professional project education

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based on the use of these specific methodological techniques by the teacher within the framework of this educational approach.

The pedagogical and psychological mechanism of higher project education is a complex system (Dadvand, 2020; Verspoor, 2017; Chow, 2014). Therefore, system analysis can be considered an adequate method of investigating such a mechanism. We will consider the following principles of system analysis: the principle of compatibility of elements in the pedagogical system of project education; the principle of evolution of the pedagogical system of project education; the principle of the complexity of the approach in pedagogy; the principle of taking into account the dynamics of pedagogical systems in project education; the principle of incomplete determinism of the pedagogical system; the principle of the possibility of imitation of projects in the pedagogical system; the principle of variation in the project pedagogical system; the principle of customization and / or customer orientation, and more.

The following can be distinguished as features of the pedagogical and psychological mechanism in higher project education.

The scientific and pedagogical worker (SPW)-the curator of the educational project manages the methods of solving the tasks of the project by the students participating in the project group.

The pedagogical and psychological mechanism (PPM) in the project approach in higher education is characterized by cooperation between the SPW and the project team in the following areas: between the project student group (as a whole) and the SPW; between individual students and the SPW and others. The pedagogical and psychological mechanism of the project approach is characterized by such specifics of the organization, cooperation of the SPW and students in a joint research and educational project at the university, in which students are not only the object of education by perceiving and memorizing the educational content prepared in advance by the SPW, but also actively influence the organization of the educational project, determine the characteristics of the educational project by personal participation in the planning and implementation of an educational project.

The characteristic features of the pedagogical and psychological mechanism of an educational project can be recognized as the integration of processes: the introduction of students' knowledge (obtained by them in the subject part of the educational process); obtaining new knowledge in the process of applied scientific research in the course of the project; the elimination of gaps in subject knowledge by incrementing knowledge on relevant components of the project; the development of psychological readiness of students to carry out innovative activities on on their own initiative; formation of empathy, psychological readiness of students to help each other and more.

The main result of the implementation of an educational project by a student at a university can be considered: not only the assimilation by a student of the competencies provided for in the program, but also training in ways of their practical use; the assimilation of values and the formation of the foundations of professional organizational culture; comprehensive development of the student's personality in the process of innovative, research and educational actions jointly with the project team and the SPW. At the same time, in the process of implementing an educational project, the main scientific and pedagogical task of the SPW is the creation and organization of conditions and motives that initiate active scientific, cognitive and practical innovative behavior of students in the project (innovation, research and educational) process. This contributes to improving the quality of education, understood as the degree of readiness of students for further professional activity in the real economy.

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At the same time, the position and role of the SPW in relation to the group of students studying the project method is as follows: to go to students not with a ready answer on the project and / or professional problem, but also with a question about the method and tools for solving problems based on the knowledge and skills acquired in the classroom earlier. This can motivate students to increase their activity when studying subjects at the university.
The analysis shows that organizational behavior management skills can be useful when working with a training project team (Chiocchio, F., 2015; Chen, et al., 2004; Edmondson, 2009). For example, it is known that even D. Carnegie pointed out that it is necessary to present the project in such a way that a person would consider his task easily achievable.

The skill of the SPW in curating an educational project and a student project group also consists in creating a sense of the feasibility of tasks for students, which reduces the fear of action among students. The fear of action can be understood as a psychological state, blocking the student's activity due to fear of failure or punishment for the initiative shown by him in an educational project. Educational projects successfully implemented by the student: reduce the fear of action; increase the student's self-esteem; motivate to participate in new, larger and more complex projects. The SPW should understand that the fear of failure is an emotion that can restrain the student's active participation in the project. SPW can reduce the student's fear of action by organizing the work of the student project group in such a way that would activate the interaction of students in the process of their joint project, In addition, the curator of the project can use team building techniques and more.

Another recommendation of D. Carnegie, which can be used by a mentor, curator of an educational project, is that it is necessary to create such a situation that students would think that the idea (or set, "tree" of ideas) of the project belongs to them. To do this, the mentor must "lead" the students of the group to certain ideas by forming suggestive and clarifying questions. At the same time, confidence in the co-authorship of the project idea makes the project management system involved, increases the activity of students in the project. More broadly, the participatory nature of project management and the active position in the educational project of the student (project team member) is as follows: active implementation of their knowledge within the project; manifestation of initiative; study of methods of knowledge commercialization; participation in the collective generation of ideas; analysis of business processes, technologies, relations in the professional field (including its competencies and culture); creation of a system of mutual control and support within the framework of an educational project and a friend.

At the same time, the role of the SPW consists in specially constructed (SPW with the participation of students) and for this purpose organized within the framework of an educational project forms and conditions of cooperation (between the SPW and students, students themselves within the project team) in the implementation of an educational project covering the training and education of students-members of the project team. These factors (the pleasure of communicating with the SPW and the group members) can increase the internal motivation of students in the learning process. This is a very important factor in student performance. Thus, a survey of students studying IT specialty in the subject form of education showed a rather low level of internal motivation of students (40-60%), therefore, a project approach can solve this problem.

The functions and role of the SPW in the framework of the project approach in IT education is not only in teaching and upbringing, but also in: creating a moral and psychological atmosphere of active research search based on the manifestation of creative activity of students; consulting support of the SPW for the work of the project group; ensuring the adequacy of the research and innovation process in the educational project group; forming a

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communication system and maintaining educational contact with the project team and individual students in the group.

It is advisable for the curator of the project (SPW) to organize educational research and innovation activities in the group so that students have needs for creative work and develop the ability to creatively assimilate, transform the knowledge they receive and acquire themselves in order to master new knowledge, professional skills within the framework of an educational project of independent creative scientific and innovative search.

Education within the framework of the project model generates the features of project consciousness, which can be a form of the psyche. In turn, the processes act as a form of manifestation of the project psyche. Therefore, it is logical to assume that the subject and project models of higher IT education differ not only in the organization and methodology of scientific and pedagogical activity, but also in the specifics of mental processes in SPW and students.

When studying and describing project mental processes, we will take into account that, as is known from classical psychology, the mental state of the subjects of the educational process is determined by five basic psychological processes: sensation; perception; memory; imagination; thinking. With the inclusion of these basic psychological processes, students' consciousness: assimilates the basics of knowledge; consolidates professional skills in their future practical activities; masters the professional space and the world surrounding the student and the SPW.

We will analyze the features of consciousness and psychological processes in the subject and project models of higher professional IT education within the framework of classical psychology.

Sensation in the subject and project approaches is the simplest mental process, which is simultaneously considered as a factor determining the mental state of the subjects of the psychological system of higher education and is a factor shaping the quality of the process and the result of higher professional education. The sensation in subject education consists in displaying individual properties (physical, chemical, economic, etc.) of objects and phenomena of the professional environment as part of the material world, as well as the internal states of the organism of subjects (participants) of the educational process when exposed to certain stimuli on the corresponding receptors of the individual. The feeling of the project approach in higher IT education is characterized by a systematic display of design innovation, technological and business processes in general. At the same time, the key elements of the project are felt in their mutual connection and with the apperception on the economic results (consequences) of the project, as well as taking into account the internal states of the organism of the participants of the educational project through the systemic effect of certain stimuli on the corresponding receptors.

Perception acts as a factor in the formation of the mental state of the subjects of the educational project. At the same time, perception can also be described as a condition affecting the student's activity in the project, a factor determining the quality of project higher IT education. This is explained by the fact that perception is a reflection of objects and phenomena in a holistic form, which is possible thanks to the awareness of the identification features of the elements of the project. Images of objects or phenomena previously perceived by the student in the project are called representations. The degree of adequacy of the ideas formed by the student and the SPW in the educational project process is a condition for the real effectiveness of the student's practical activity in the project. The adequacy of the views of the project participants may be a factor affecting the quality of higher project education

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and the socio-economic efficiency of the subsequent practical activities of graduates of project-oriented universities.

At the same time, the perception of the subject approach in education is focused on reflecting the individual properties of the real object of professional activity. In this case (in the case of subject education), representations and images of subject perception do not directly reflect the socio-economic consequences of professional actions. Therefore, in order to obtain a systematic socio-economic assessment of professional actions, subject perception needs to be supplemented in the form of developed logical thinking, which a particular student (future employee of the industry) may or may not possess. Within the framework of subject education, it should be taken into account that, according to foreign estimates, only 37% of employees of organizations understand the consequences of their actions for the entire organization. Such a situation, connected with the psychological peculiarities of the subject nature of higher professional education, may be the reason for a decrease in the safety and effectiveness of management in the real economy.

With the project approach in higher IT education, perception is considered as a coordinated process of systemic reflection of the process and the result of the project in the totality of their various properties, parts with their direct impact on the senses of students. The result of perception in the project model of higher IT education is the image of the educational project as a whole, and the project perception itself is always characterized by consistency. Therefore, the perception of students in the project approach includes not only individual objects of the surrounding professional world, but also their systemic relationships. This specificity of perception in the project approach, in turn, allows us to systematically perceive not only the project actions of team members themselves, but also their socio-economic consequences. This feature of perception in the project model of higher education allows students (and, consequently, industry personnel) to directly assess the consequences of certain project decisions. It is this feature of perception in the project approach that can be considered as the basis for increasing the quality of higher project education (in relation to subject education), generate an increase in the effectiveness of professional actions of specialists and increase the effectiveness of management decisions in the industry.

At the same time, an important preparatory stage of the work of the psychological system for improving the quality of project education can be the formation of a methodological basis for students' systematic perception of information within the framework of an educational project based on psychological and pedagogical techniques. For example, a SPW may practice emphasizing in an educational project the system connections of parts of the project and/or the design object. In addition, the SPW can emphasize, strengthen the purposeful perception by students of individual parts of the practice of an educational project (as a direct practice before real economic professional work). For this reason, the methodology, didactics of the project approach acts as a methodology capable of seriously influencing the success or failure of university graduates in their subsequent professional activities and more.

Students' memory as a psychological process consists in organizing and preserving past experiences. It is memory that makes it possible to reuse past experience in activity or return this experience to the sphere of consciousness for comprehension and application in practice. In this regard, memory appears as a factor in the formation of the mental and emotional state of the subjects of educational project activity in higher professional education. For this reason, memory can also act as a factor, to a large extent, determining the quality and result of higher project education, the entire educational process at the university. By memory we will also understand the general designation of a complex of higher mental functions and cognitive abilities of a person focused on: fixing the student's attention; memorizing

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information by the student; accumulation, systematization (classification), a typical representation of information in the student's brain; storing information and data for further reproduction of them at the request (signal) of thinking for the reproduction of competencies (skills, knowledge). Thus, memory contributes to improving the results of education by reproducing the competencies acquired by the student in subsequent professional practice.
Memory with the subject method of teaching can fix individual properties of the subject or object, but does not give its systematic representation of the object of study and does not reproduce the consequences of the observed subject features of the object of the scientific and pedagogical process at the university. Such a property of memory with a subject approach may limit the effectiveness of subsequent practical special actions for students in the process of their work in the real economy and social practice. Therefore, memory in subject education can limit, not allow and increase the quality of subject higher education.

Memory with the project approach in education will fix the whole complex of individual properties of the object in their systemic connection with the socio-economic results of the educational project, and subsequently in the professional activity of a university graduate. It can be expected that the memory with the project approach will be better structured and organized, which will not only improve the use of the knowledge stored in it, but also increase the efficiency of the search, speed up the process of searching for the necessary knowledge. This becomes especially important in critical and stressful situations of real project and professional activity. These features of project memory can have a positive impact on the quality of project higher education, which in turn can increase the socio-economic efficiency of graduates in the real economy.

Imagination in the scientific and educational process at the university can be characterized as the ability of a student (student) to the following. Imagination provides purposeful creation in the creative act and/or accidental appearance of a person's mental state, which leads to the emergence of processes of generation, synthesis in the student's mind of projects, images, representations, ideas, objects. At the same time, the objects of imagination could not be observed and/or could not be felt by the senses in a holistic form in the student's daily life (experience) (or SPW). For this reason, imagination is studied as a factor in the formation of a student's mental state (or SPW), the process of higher education and a factor determining the creative skills of students (trainees), as a factor in the quality of higher professional education.

The imagination of a scientific and pedagogical worker (SPW) and/or a student with a subject approach in the university's activities is aimed at generating projects, images, ideas related to a separate subject side of the functioning of the object (for example, with the physical wear of mechanical engineering products), but it will not be related in any way to other aspects, for example, the effectiveness of the industry business process.

The imagination of the SPW and the student in the project model of the functioning of the Polytechnic University will be directed to the analysis of the state, synthesis of projects, images, ideas aimed at improving the safety and socio-economic efficiency of educational and real projects in their holistic perception. For this reason, project imagination is systemic in nature. Because of this, it (project imagination) can increase: the percentage of employees of organizations who understand the consequences of their actions for the socio-economic results of the organization's activities in the current external conditions; the effectiveness of real innovative projects of the organization; financial results of the organization as a whole.
Within the framework of educational project activities, the SPW-curator of the student project group can develop and actualize the imagination of students by applying certain pedagogical techniques and procedures, for example, by organizing collective generation of

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project ideas; psychological stimulation of the nomination of alternative ideas and other pedagogical techniques.

It is known that thinking is described as a mental process of cognitive activity. Thinking is characterized by a generalized and indirect reflection of reality. Thanks to this property of thinking, a person: reflects objects and phenomena in their essential features; reveals the interrelationships of objects and phenomena; analyzes and evaluates the consequences of professional and managerial decisions. In this regard, thinking is defined in the psychology of the 21st century as a factor in the formation of the mental state of participants in the educational process, the processes of research work, higher education and a factor that determines the quality of the process of scientific research and education. By thinking, we will also understand the ability of the subjects of a scientific and educational project (or process) to draw correct conclusions (to think logically, to reason), to form in their minds an adequate process of reflecting the objective reality of educational project activities at the level and in the form of scientific, business, personal ideas, judgments, concepts.

With the subject approach in the educational activities of the university, the thinking of the subjects of scientific and pedagogical work is focused on building correct conclusions about the individual properties of the object of activity. For example, thinking is able to determine whether the wear of parts of a mechanical engineering product is permissible or a part with observed wear requires replacement during repair based on comparison, measurement of the part with drawings of this part.

With the project approach in the work of the Polytechnic University, the thinking of the subjects of educational project activity is aimed at forming a chain of correct conclusions to assess the impact of observed phenomena on the safety and socio-economic efficiency of the educational project as a whole. For example, the decision on whether the wear of parts of a machine-building product is permissible or a part with observed wear requires replacement during repair is already based on an assessment of the probability of an accident and possible damage from this accident for the entire project as a whole. Thus, the project approach forms the system thinking of students. At the same time, such systemic thinking of these students is able to build correct conclusions and assess the consequences of their project management decisions for higher levels of complex systems, the industry as a complex system.

4. RESULTS AND DISCUSSION

The analysis performed in this work allows us to determine psychological processes (sensation; perception; memory; imagination; thinking) the main psychological tools of the impact of the SPW (scientific and pedagogical worker) on the student (trainee). The use of pedagogical and/or psychological techniques by a teacher affects the quality of the process and the level of results of higher professional education within the framework of the practical psychological system of project education at the university.

In the psychological system of project higher IT education, the ability to effectively apply and/or update the psychological processes and/or tools studied above can act as the main reserve for improving the quality of project higher IT education. For the growth of the quality and socio-economic efficiency of higher education, it is also important that the project method of education is able to improve the emotional state of the SPW and students at the same time. It is known that emotions are defined as the mental reflection of phenomena and situations by the subject in the form of a direct biased experience of the life meaning of these phenomena and situations. At the same time, such a biased experience of the life meaning of

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these project phenomena and situations will be conditioned by the relation of their objective properties to the needs of a particular subject of IT education.

It should be noted that emotions are not classified as cognitive processes. At the same time, it is important that a positive emotional background formed by a sense of one's higher competence and professional readiness within the framework of the project model of scientific and educational work at the university can generate additional internal satisfaction of the SPW and students with their activities in the project. For students, their participation in projects can form their increased satisfaction with the quality and results of the higher education process at the university. At the same time, internal satisfaction, in turn, is considered as a factor of internal motivation of subjects of scientific and pedagogical activity at universities. Therefore, internal satisfaction (as a factor of internal motivation) of the project subjects (SPW and student) can lead to an increase in the level and effectiveness of projects, research and education at the university.

In addition, it is possible to put forward a private hypothesis of this study that participation in educational projects develops the emotional intelligence of the SPW and students. Therefore, it should be borne in mind that project education contributes to the development of emotional intelligence in SPWs and students as a result of their joint work and analysis of project results.

In 2023, emotional intelligence is considered as an important factor of human capital and the potential for building a career of university graduates (Meshcheryakova, 2022). As you know, in 1990, psychologists from the USA John D. Mayer and Peter Salovey announced a new kind of intelligence. In their opinion, this type of intelligence is responsible for the emotional perception of information. It became clear that on the basis of emotional intelligence (EQ), the subject of economic activity can come to success. Therefore, scientists and practical psychologists began to actively study this topic and describe the properties of EQ. In turn, employers, when applying for a job, began to pay more attention not only to the competencies, but also to the social skills of candidates.

Emotional intelligence (EQ, emotional quotient) is defined as the ability of an individual: to identify his own and others' emotions; to understand and predict the intentions of the interlocutor, his motivation and desires; the ability to use knowledge about the emotions and intentions of the counterparty to solve practical problems. It is known that Google HR analysts in one of their research projects carried out an analysis of the principles on the basis of which employer companies hire managing managers. In the course of this study, it turned out that the candidates' technical knowledge was not so important. It turned out that priority is given to: the ability of candidates to balance the negative and positive in the team; the ability to listen to colleagues and be a good conversationalist for them.

With this approach, the ability to understand colleagues, understanding the way colleagues think, predicting their actions and feelings are the basis of success. The development of these skills is defined as elements of the process of developing emotional intelligence, which can be implemented as part of educational projects during the student period.

Psychologists usually distinguish four components (elements) of emotional intelligence. Let's consider these components of emotional intelligence, taking into account the influence of educational project activities on them:

1. Awareness of emotions, which means the ability to identify your emotion and name it correctly. An important role in the awareness of emotions by a person is played by the environment (this may be the environment of an educational project). If a student participates in the work of a project team with an open organizational culture, which is

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characterized by the fact that project team members can not hide, call emotions, then such a student will be more emotionally aware than the student who participates in a team with a closed organizational culture, within which it is not customary to talk about feelings.

2. Understanding the emotions of other members of the project team. Such an understanding is based on the awareness of one's own emotions. This is due to the fact that a person perceives the feelings of others by projecting on his experience according to the "formula": "I understand what this person feels, because I know that I myself am experiencing in such a situation."
3. The ability to correctly disclose, express, discuss your emotions and the emotions of colleagues. Developed (pumped) emotional intelligence allows you to tactfully (environmentally friendly) express your feelings, while not hiding them. This can be learned (to pump up the skill) within the framework of interpersonal communications between participants of educational projects.
4. The ability to manage your own and others' emotions. It should be borne in mind that you can learn to manage other people only on the basis of experience, when a person knows how to manage his emotions.

The analysis of the structure of emotional intelligence carried out in this work shows that the fifth element of emotional intelligence can be distinguished, namely, the ability to correctly and constructively use emotions to solve urgent tasks of an educational project. Constructive use of emotions in work can be learned in the process of managing emotions associated with the work of project team members. When using, working with emotional intelligence, it should be taken into account that it (emotional intelligence) is classified as "soft professional skills (soft skills). These skills can and should be developed and trained (pumped) to ensure effective interaction with people (members of the project team). Mastering such a skill opens up the opportunity to: quickly realize the essence of the project problem; use the appropriate management technique in a particular situation; ensure maximum results in the project.

Project-based learning can also be an effective tool to reduce the negative impact of clip thinking on the quality of higher education.

As you know, the clip consciousness of students (and SPW) is characterized by the fact that: professional reality appears in the consciousness of the subject as a series of video images, the result of cognition.

The project pedagogical process is able to reduce the negative impact of clip thinking on the quality of higher education. Let's consider the mechanism of the positive impact of the project form of education on the quality of higher education among students with a clip type of thinking:

1. a student with a clip type of thinking cannot concentrate on information for a long time, while his ability to analyze this information significantly decreases, because any information does not linger in his mind and is quickly replaced by new information. The consideration of the project situation and information, the study of the object from different sides, the practical implementation of a logical and comparative analysis of the properties of the design object and the process of implementing an educational project within the project can increase the level of concentration and logical thinking of students in educational projects;

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2. students with clip thinking have a lower level of academic performance and a lower coefficient of learning. This is due to the fact that students do not read much and / or do not understand the meaning of what they have read, quickly forget what they have recently been taught, and cannot master the topics covered. A specific compensating pedagogical technique in project training: repeated study of the object or the design process from different positions, in different contexts; a systematic approach with the study of the object and the progress of the educational project;
3. students with clip thinking become more susceptible to manipulation and influence. This is due to the emphasis in the perception of information on emotions, when a person largely loses the ability to think, analyze information. Pedagogical and psychological counteraction to this effect in the technology of project education: the formation of a project team in the process of work, the creation of an atmosphere of games and competitions (gamification of classes) in the classroom during the project implementation, mutual support and control of project team members;
4. clip consciousness in students can weaken the sense of empathy, which prevents the humanization of education and socio-economic reality. Pedagogical counteraction to this effect within the framework of project higher education: consolidation of efforts in the implementation of the project, development of team spirit, mutual support, active exchange of information between members of the project team;
5. clip thinking protects the brain from excessive information overload. Within the framework of the project form of training, pedagogical counteraction to information overload consists in the following: teaching the division of information into relevant (related to the project) and irrelevant (not related to the project; giving practical examples of the relevance (importance right now) of certain project information; timely application of unloading, attention-shifting techniques in the process of implementing an educational project.
6. with the clip consciousness of students, they develop multitasking thinking of students, which can distract the student from the topic of classes. Within the framework of project education, multitasking can be used to solve a number of project tasks in parallel, to establish the degree of priority of solving project tasks in the current time period;
7. in students, their clip consciousness accelerates their reaction. The project form of higher education makes it possible to orient this property (accelerated reaction) of students in the project in such a way as to achieve timely solutions of tasks by the participants of the project group.

In the process of studying the pedagogical and psychological mechanism, the existence of differences in project education was established not only at the levels of methodology and pedagogy, but also in the psychological aspect. If the methods of traditional psychology are more suitable for subject education, which consist in dividing the psychological state of the student into psychological processes (sensation, perception, memory, imagination, thinking). However, the analysis showed that the psychology of project higher IT education can be more adequately displayed and described within the framework of gestalt psychology. This conclusion is based on the fact that gestalt psychology focuses on the integrity of the perception of the project experience of the project team members and the practical use of this previous experience in the educational IT project being implemented [16, pp. 173-178]. In addition, when assessing the feasibility of using gestalt psychology in project IT education, the following should be taken into account. The basic concept (category) of this direction in psychology is gestalt. A gestalt is understood as a certain integral structure, an image

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consisting of many parts, signs combined into one figure. The presence of common features (multi-element, integrity, completeness, etc.) allows you to associate and correlate the concept of "gestalt" and the concept of "project" with each other. At the same time, one of the key, basic properties of the gestalt is its desire for its own completeness. This is another argument in favor of the proximity of the concepts of "gestalt" and project." In gestalt psychology, the term "close the gestalt" is interpreted as the need and ability to exhaustively, "that is," sort something out and put an end to something in the subconscious, in awareness of something, in a particular process and/or issue. All this can make gestalt psychology more adequate and productive within the framework of project higher IT education.

5. CONCLUSION

The study of the pedagogical and psychological mechanism of higher project IT education is carried out. Based on the materials of this article, it can be concluded that it is possible to improve the quality of higher project IT education through: the professor's comprehensive use of pedagogical and psychological tools; the creation of a favorable moral environment; the development of students' emotional intelligence; the use of gestalt psychology methods and others. The materials of this article show that the creation and use of the pedagogical and psychological mechanism of higher project IT education can seriously improve the quality of this kind of education.

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