

lessons such students are easily connected to new types of work, but with difficulties and can easily lose interest in learning. Students belonging to this type of cognitive activity may surprise teacher with quick and correct answers, but this happens only occasionally. Tactics of educational interaction with these students is the constant reinforcement of their subjective (active) state in educational activity. The help of the teacher is valuable, who can help them remove the intellectual fatigue, if necessary, to overcome a strong-willed apathy, to stimulate their interest in learning. We have identified several examples of activation exercises. For example - "delayed guessing". At the beginning of the lecture the teacher offers students a riddle (a surprising fact), the guessing of which will be found during the presentation of educational material. Another example of activation of the learning - "survey-crossword": students fill a crossword puzzle on the theme of the study, which was prepared in advance by the teacher or his assistants. "Aerobatics" can be called a situation where part of the concepts of the crossword "prepares" a new theme. It is found that the students of this type of cognitive activity are inherent in haste and incompleteness of actions, so it is important for them to have the ability to use a response plan based on the reference signals and create algorithms of a training action, tables. But there is one feature: for such students it is easier to remember and use the schemes, which they create themselves (or with a teacher). Thus, the teacher's strategy of actions in dealing with situational-active students is to not only help them to engage in learning activities, but also to support the emotional and intellectual atmosphere throughout the session. Then the student experiences a sense of satisfaction and inspiration not only in the perception of the learning task, but in the course of its implementation. Having experienced the feeling of success once he wants to repeat and consolidate achievements and to show certain intellectual and volitional efforts. If subsequent lessons do not deceive his expectations, then preconditions for the gradual transition to an executive and an active type of knowledge will occur (Kulyutkin, 1984).

Students of the third type of cognitive activity (performing), as a rule, are favorites of teachers. They are readily included in those forms of work which offers teacher. The main advantage of these students is the stability and permanence. However, they have their own problems. For the assiduity and diligence they are often called "learners by rote". But some teachers think that these students study very easily. This is the truth, but for some reason they forget that such apparent easiness - the result of earlier efforts: the ability to focus on the task, carefully to get acquainted with the conditions of the task, strengthen the existing knowledge, to choose the most successful version of the solution. Therefore, these students need in careful attention of the teacher. Sometimes they get bored if the material under study is quite simple. Gradually this type of students is accustomed to limit them by the learning task and do not want or wean to look for unconventional solutions. They understand that the approval of the teacher can be obtained not for something "over and above the original", but simply for the quality work that does not require search for additional material. The main methods for stimulating of the students of this type can be called all problematic, partially search and heuristic situations that are created on the lecture. For example, a "problematic dialogue" when discussing the topic proposed by the teacher, students predict its development. Or "brainstorming", consisting of the following steps: creation of a bank of ideas, analysis of ideas, presentation of the work of the group and the further selection of ideas proposed by experts. Often presenting the ideas, new proposals are born, which are immediately included in the discussion. One can offer students special role situations: students can take the role of "expert" and evaluate the oral and written responses of other students (Lozovaya & Trotsko, 1989).

Creative - the fourth type is characterized by bright cognitive activity of a subject position of students. These students have a non-standard way of thinking, vivid imagery perception, especially individual imagination, a unique attitude to the world. However, they often create problems in the educational activity, which is based on the sequence, logic and thoroughness. For example, the teacher proposes to solve any problem, and then adds: "Tell us how to get the answer." He waits step by step explanation of mental actions. But this type of students cannot always explain how the knowledge occurs. Their explanations often go beyond all logic. The activity of the teacher in this type of cognitive activity is to develop the students' need for creativity, desire for self-expression, self-actualization. To help in achieving this goal can techniques that activate the creativity of students, develop imagination, creative thinking and intuition: didactic games, project method (Petrova et al., 2016).

Functions of individual educational paths. Individual educational path - is a personal way of development of students' creative potential, their personal and professional skills needed in modern conditions of life and professional activity (Kliminskaya, 2014). 1.1. It is found that the individual educational paths fulfill the following functions:

1) target - based, which enable the student independently or jointly with the teacher to set a goal of education, determine the steps to achieve it, the pace of progress, adequate forms, methods, means (Turkina, 2006). This feature allows you to find a teaching material, organize such forms of cooperation that will contribute to the student's own initiative, the manifestation and the formation of personality. In practice, the implementation of this function is shown in the preparation of a special training curriculum (for a semester, a year, the entire period of study). The components of such a program are: the goals, objectives, stages, forms and methods of training, personal content of education (compulsory subjects, elective courses, self-study), control system and evaluation of the results (Terentyeva, Pugacheva & Lunev, 2015).

2) Content- based, contributing to the formation of knowledge, abilities, skills, values, understanding of the world and oneself in this world (Uvarova & Maksimchenko, 2012). This feature helps students to adapt to the current social and economic situation and establishes creation of varieties educational environment, providing students with the range of opportunities and help in the selection. In practice, the implementation of this function is shown in the organization of the natural or artificially created socio-cultural environment of students, including various kinds of tools and educational content that can provide them with productive activities (Lunev & Pugacheva, 2013).

3) Competence-based, providing accumulation of educational, social, professional experience (Andreev, 2005). This function ensures the formation of students' readiness to self-actualization, career building. In practice, the implementation of this function is associated with the choice of forms, methods and means of education, organization of control system for the acquisition of knowledge and competencies formation. All work performed by students are issued in the form of reports and gathered in personal achievements folder (portfolio), which in addition contains the characteristics, the results of examinations and tests. Portfolio displays the amount of work performed, the level of formation of competences, diligence and self-esteem of students (Pugacheva, Lunev & Stukolova, 2014).

Experimental verification of the effectiveness of individual educational paths

In the experimental study took part 200 teachers, 350 students of Kazan State Architectural University, who took part in the identification of criteria performance of individual educational paths. Experimental verification was carried out from 2013 to 2016 in three stages: the ascertaining, forming and controlling. At the ascertaining stage the stages of implementation of individual educational paths were identified. 1) Diagnostic. The preparatory stage for a successful learning environment's creation. The leading role is given to the teacher who helps students navigate in the educational material and to select the optimal form for work with the students and they acquire basic knowledge, abilities and skills. 2) goal-setting. It assumes the active cooperation of the student and teacher. The student creates an individual path in the form of a graph indicating the desired level of disciplines' mastering after completing the course, but not below the level inherent in the state educational standards. Together with the teacher results are projected, time frame is determined, algorithm of independent work and forms of interaction with a mentor are selected. 3) motivating. This is a stage of active student activities, when he works with a teacher, attending classes, reports on the work done for a certain period of time work. Depending on the results, the teacher corrects the educational trajectory. At the same time, as a motivational tool such methods as the preparation of a report or presentation can be used, presentation at the conference, participation in multidisciplinary projects, participation in the competition, exemption from routine tests or consultations, offset slice across multiple disciplines can be used. 4) познавательный. Informative. A stage of coherent self-realization of individual educational path by performing individual tasks using a variety of resources. Interaction with the teacher takes the form of group sessions of interactive nature (role-playing, case studies, projects, simulation of professional communicative situations). 5) controlling (evaluation). Monitoring and evaluation of tasks and the degree of individual educational path's implementation is carried out as by the teacher and so by the student that promotes the development of self-control and adequate perception of personal achievement. During the analysis of this work the typical errors are revealed, the causes of failures and successes are analyzed. At the forming stage individual educational paths of 350 students were tested.

At the control stage the performance criteria of individual educational paths were identified: 1) knowledge-based - assimilation of subject knowledge, general cultural and professional competences; 2) the activity-based - possession of skills a) analytical (the ability to analyze their cognitive activity and the results of cognitive activity carried out on its basis), b) projective (skill of goal setting and decision making to perform problems of self-development, find ways and means to solve them), c) organizational (ability to organize active and independent cognitive activity), g), communicative (the ability to interact with teachers and fellow students in the process of teaching and learning activities); 3) motivational - cognitive interest, learning needs (focus on the mastery of new knowledge, learning the ways of self-knowledge acquisition); 4) reflexive (self-esteem, self-control and self-correction in the exercise of cognitive activity; awareness of the situation and the setting (reformulation) of tasks, moving from the stereotypical type of action, inadequate to the situation, to the development and finding new ways).

Discussions

Analysis of the literature shows that the problems of informative activity of students and the formation of individual educational paths are the subject of many

studies. However, none of these studies are interrelated problems. All authors consider them separately, isolated from each other. The problem of the development of cognitive activity is one of the priorities in pedagogy. Informative activity of students is seen, firstly, as a condition of formation of need in knowledge, mastery of skills of intellectual activity, independence, providing the depth and strength of knowledge (Astakhova, 2000; Popkov & Korzhuev, 2007; Manesheva, 2010). Second, cognitive activity is seen as a dynamic process of didactic interaction of the student with the objects of cognition aimed at mastering the experience of social culture and the expansion of personal value system (Vergasov, 1985; Egorshin & Pryanichkov, 2002; Davydova, 2005; Stroganova, 2011). Individual educational path of students is understood as an individual style of educational activity, the sequence of educational steps, corresponding to the level of the student, his or her abilities, interests, realized and coordinated by a teacher (Surtaeva, 1998; Labunskaya, 2002; Kemerova, 2010, Goncharova & Chumicheva 2012; Zaitsev, 2013; Zeer & Symanyuk 2014, Gert, 2014). We believe that cognitive activity is a kind of educational activity, which assumes a certain level of independence of students in all of its structural components from the problem statement to monitoring, self-monitoring and correction, with the transition from the implementation of the simplest kinds of work to more complex and wearing searching nature. The significance of individual educational path is that the use of this learning format provides development of skills, values that create the motivation for the development of cognitive activity. Construction of individual educational path is a multi-faceted process that can ensure the development of learner's autonomy and initiative, the ability to the fullest realization of his personal and educational potential in the educational process. The student formulates the goals of the forthcoming activities, setting priorities in the organization of activities and carries out self-assessment of personal growth.

Conclusion and Recommendations

It is found that the decisive role in the knowledge economy belongs to knowledge and the production of knowledge is a source of growth. Currently, investments in knowledge are growing faster than investment in fixed assets. This updates the society's need for the cognitive development of students' activity. Four major types of cognitive activity of students are revealed: the starting, situational, performing and creative. Identified types of cognitive activity, allow us to say that the division of students into the gifted and "the other" is impossible. Each student has a right to express themselves in the process of cognitive activity. The realization of this right is conditioned by the type of student cognitive activity. Types of cognitive activity cause the selection of adequate methods for their learning activities to strengthen students' subject position and to move to the individualization of educational paths. It is found that the efficiency of the development of students' cognitive activity increases, in case of providing the construction of individual educational paths. The functions of individual educational paths are found (target-based, content-based, competence-based), which contribute to the development of creative potential of students, their personal and professional skills needed in the modern conditions of life and professional activities.

The study results allow outlining of prospects for further research of the problem that are associated with the development of training and methodological support of construction of individual educational paths. Paper Submissions can be useful for university professors; staff of continuous professional training and retraining centers for the selection and structuring of the content for continuous professional training of the teaching staff in the universities.

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No potential conflict of interest was reported by the authors.

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