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**INTERACTION OF EDUCATIONAL PARADIGMS: NEW AP-  
PROACH TO KNOWLEDGE MANAGEMENT**

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*Abstract*

Requirements for engineering education in the field of professional and personal characteristics provide conditions for self-development and self-realization of the individual, as well as rational management of new knowledge. The need for constant updating of knowledge and maintenance of readiness to perform more complex social and professional functions led to the emergence of various types of further additional to higher education. The existing conditions call for addition of the framework of the traditional educational paradigm with the settings of innovative ones for effective implementation of educational programs. The paper shows the interaction of educational paradigms as an innovative way to acquire knowledge at the university by the example of additional education. In the current situation, an appropriate organization of the educational process is necessary, ordering the action of various educational strategies. The role of cognitive management as the organizing factor of a new perception of knowledge that does not reject any of the directions of social transformations and adapts them to a specific situation is highlighted. Conclusions are drawn that when implementing the programs of additional higher education, traditional and innovative educational paradigms are effectively complementary. The simultaneous functioning of various paradigmatic settings is noted at each stage of implementation of the educational program, with the determining role of one of the paradigms. A combination of different educational paradigms is due to the general trend of the cognitive management, involving the preservation and adaptation of any new knowledge for the most effective organization of social processes, including the educational one.

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**Keywords:** Additional education, cognitive management, educational paradigm, innovative paradigm, paradigmatic framework, traditional paradigm.



## 1. Introduction

Not fixed but growing knowledge is acquiring value now due to the high variability of the modern world and the flow rate of social processes caused by the constant appearance and use of new information. Modern society has discovered the problem of the formation of a new human type able to make an adequate choice of the situation on the basis of the available knowledge and ability to analyze. In addition, modern knowledge is more characterized by a focus on interpersonal interaction, which creates the need to address the inner experience of an individual (Stakhovskaya, 2013). Compliance with the requirements imposed on the modern specialist in the field of professionally significant personal characteristics is possible in case of creating conditions for his or her self-development and self-realization in the process of professional training (Vetrov, Mayboroda, 2003). Various types of supplementary education could compensate the shortcomings of the existing education system. Their emergence was conditioned by the need for constant updating of knowledge, maintaining at the required level of readiness to perform more complex social and professional functions (Korytov, 2008). Modern scientists state the transition to a humanistic function and goal of education to create conditions for the comprehensive education of human being as well as formation of the personality of a future specialist and a citizen of society (Zhukova, 2008). To do this transition, the traditional paradigm of education that dominated until recently is not sufficient. It is required to supplement it with other paradigms for effective implementation of educational programs, including additional ones.

In this regard, it is possible to talk about the influence of interaction of educational paradigms on the improvement of practical results in the implementation of pedagogical processes at the university. This was pointed out by S. V. Belova, T. I. Vlasova, O. S. Gazman, I. A. Kolesnikova O. G. Starikova, G. B. Kornetov, V. Ya. Pilipovsky, O. G. Prikot, I. G. Fomicheva, E. N. Shiyarov and others. According to V. Ya. Pilipovsky, no paradigm could be intended without alternative in the reforming of education (Pilipovsky, 1998). The future of Russian education is seen in replacing the universal approach to the formulation of educational problems and their solution. The maximum individualization of the educational process is highlighted to see it (with its subjects, goals, means, results, determinants) from as many positions as possible, recognizing them as mutually complementary but not exclusive (Bondarevskaya, 2004; Kornetov, 2001). E. A. Yamburg, reviewing the personality-centered, competence, cultural as well as cognitive and information paradigms also argues that neither of the above-mentioned paradigms can be absolutely accepted, nor any of them can be excluded from the educational process. Searching for cooperation ways between all pedagogical paradigms is pointed out as the main problem of education (Yamburg, 2004). He considers the existing educational paradigms as complementary and emphasizes the advisability of recognizing the harmonization of approaches, the orientation of both the needs of human being and society as a whole.

The above mentioned approaches to the description of educational systems showed that the paradigm shift is not compulsory as well as the opposition of different pedagogical systems. Most modern scientists allow the simultaneous existence of several paradigms under the same educational conditions, perhaps with the dominant role of one of them at a particular stage. Thus, harmonization of educational paradigms is supposed to be the main strategy for the development of education. Due to the need to solve the problems of personality development oriented to the settings of different paradigms, many scientists

allow the replacement of a single and universal paradigm by several educational approaches. This removes the issue of opposing and changing educational paradigms, and focuses on their combination and complementarity. Competent perception of the simultaneous action of different educational paradigms by both teachers and students, as well as awareness of the complex nature of the changes in the educational process could ensure a better level of the national education (Nordman, 2015).

In the current situation, an appropriate organization of the educational process is necessary, ordering the action of various educational strategies. Cognitive management could be such ordering factor. This knowledge management system does not reject but adapts to a specific situation any direction of social transformation, integrating it into the overall development process (Petrova, Stakhovskaya, 2010). Cognitive management reveals itself as a management that is directed towards the methodological and methodical organization of the learning process, focused on the formation of the individual active and rapidly reacting to changes in the professional world that constantly generates new knowledge (Petrova, 2014).

## **2. Problem Statement**

In the given paper, the functioning of traditional and innovative educational paradigms in the implementation of additional education programs at the university will be considered, in particular, using the example of the further additional to the higher education program "Translator in the field of professional communication".

The reasons for the introduction and implementation of the mentioned program are the above mentioned changed requirements for modern specialists. Recently, a low quality of education in the discipline "Foreign Language" is noted in a number of the papers of modern scientists. They noted the regularity of the emergence of the competence educational paradigm as a correspondence to the continuously developing needs of the society (Meshcherskaya, 2010) and the need to create the most favorable conditions for self-realization of the student's personality (Matienko, 2008). As the main reasons, they noted an insufficient number of training hours and a discrepancy between the training period for Foreign Language and the main specialty (Popova, 2008). The possibility to receive additional to the basic education qualification "Translator in the field of professional communication" at Tyumen Industrial University (TIU) successfully solves these problems. Many years of experience in the implementation of this educational program proved the impossibility of using only the traditional approach of transferring and acquisition of knowledge. A new knowledge management system is needed that regulates the use of frameworks of traditional and innovative educational concepts.

## **3. Methods**

The action of traditional and innovative educational paradigms in the implementation of the above mentioned additional education program is analyzed in its initial, middle and final stages, with a view to more clearly demonstrate the dominance of a certain educational strategy at a particular stage of education. The determining effect of traditional, cognitive, and innovative, competence and personality-centered educational paradigms is considered at the level of the components of the educational paradigm,

namely, goals, motivation, roles of the participants in the educational process, norms of responsibility, forms, methods, means of teaching, evaluation and control as well as the way of communication with the aim to create the most complete picture of the preferences of the traditional or innovative direction.

## **4. Findings**

### **4.1. Initial Stage**

At the initial stage of training, which includes general disciplines and the foundations of the theory of the studied language, the supplementary education program "Translator in the field of professional communication" shows basically the functioning of the traditional, cognitive educational paradigm. At the level of the roles of participants in the educational process, the teacher is given a leading role with the task of transferring knowledge to students. The norms of responsibility of the specified training period implies the full responsibility of the teacher for the learning outcomes. Concerning the forms and methods of teaching, it is possible to mention the constant, compulsory educational disciplines provided in the curriculum (Practical Course of Foreign Language, Introduction to Linguistics, Stylistics of the Russian Language and the Speech Culture), the approved schedule of classes as well as implementation of training mainly during classroom lectures by teacher. The educational process is carried out in the form of lectures and practical exercises with the subsequent renewal and revision of studied material in seminars and practical exercises. In the field of training methods it is noted the predominance of the methods of the traditional, cognitive educational paradigm used in the classes in the disciplines. Information and receptive as well as reproductive methods are used in teaching the disciplines "Introduction to Linguistics", "Stylistics of the Russian Language and the Speech Culture", "Practical Course of the Foreign Language". Evaluation and control of the acquired knowledge is carried out primarily by the teacher in the form of traditional tests and examinations, involving the correct reproduction of the material from textbooks, practical lessons, lectures or seminars.

But, along with the functioning of the traditional paradigm, elements of innovative educational paradigms are already present at the initial stage of the program implementation. The main teaching means is a textbook (traditional paradigm), which is increasingly supplemented by modern information resources such as electronic audio and video applications, interactive exercises, specialized sites as well as electronic dictionaries. This is characteristic of the innovative, information educational paradigm. At the level of educational goals, the general orientation of training to acquire and accumulate a certain amount of knowledge is typical in accordance with the traditional paradigm. On the other hand, the choice of the additional education program determines the goal of the education as received continuing throughout life. This is typical of innovative educational paradigms (personality-centered one, if the choice of additional education is determined by the desire for personal growth and competence one, if the program is chosen to acquire or improve professional qualities). In the field of motivation for obtaining additional education, the activity of the teacher is regarded as the fulfillment of his professional functions according to the traditional paradigm. The choice of additional education programs by students indicates their interest in the gained knowledge, which is a sign of an innovative (competence, personality-centered) educational paradigm. The communication mode is both traditional (announcements on stands,

getting information in class, through group tutors) and innovative ones (the transfer of necessary information for the group or flow via e-mail), which is characteristic of the information educational paradigm. In the field of goals, motives and the communication mode, such balance of paradigmatic attitudes is maintained during all study periods.

#### **4.2. Middle Stage**

At the second stage of training, the complementation of traditional and innovative paradigms at the level of all components of the educational paradigm is observed. The dominant effect of the traditional educational paradigm is traced at the level of forms and methods of the educational process. It is possible to note the compulsory educational disciplines provided in the curriculum (Country Studies, Fundamentals of Lexicology, Functional Stylistics, Theoretical Grammar, Practical Course of a Foreign Language), an approved schedule, emphasis on classroom activities under the guidance of a teacher. The complementation of traditional training methods with the methods of innovative educational paradigms is traced in the partial introduction of problem lectures, method of discussion and working in small groups. These are methods of personality-centered paradigm. Methods of project and contextual learning are also used. They provide for greater self-reliance and include solutions of problem situations. Such methods belong to competency education paradigm. In the field of the roles in the educational process, the teacher still has a leading role with the task of transferring knowledge to students in accordance with traditional paradigm. But with respect to particular subjects requiring more independent preparation, the teacher begins to create conditions for independent learning (working in small groups, discussions, mini-projects), which corresponds to the setting of an innovative personality-centered education paradigm). Norms of responsibility for this training period assume both the responsibility of the teacher for the learning outcomes according to the traditional paradigm and the partial acceptance of the responsibility by students. It is compulsory awareness with the work program for discipline in order to fulfill the norms and requirements specified therein, which is typical of innovative educational paradigms. The evaluation and control of the acquired knowledge are carried out both by the teacher in the form of traditional tests and exams, involving the correct reproduction of the material from textbooks, practical lessons, lectures or seminars (traditional paradigm), and students in the form of collective discussion of reports, presentations, presentations and joint assessment of the results of small groups, projects and solving problem situations, which is typical for innovative educational paradigms. The textbook continues to be the main learning means according to the traditional paradigm, but none of the studied subjects can do without active involvement of information resources. There are electronic audio and video applications, interactive exercises, specialized sites, electronic dictionaries. It is characteristic of innovative educational paradigms.

#### **4.3. Final Stage**

At the final training stage, the balance of the settings of traditional and innovative paradigms is as follows. The complementary effect of the traditional, cognitive educational paradigm is traced at the level of forms and methods of implementing the educational process. The priority is given to the independent work of students in the study of all disciplines. This is typical for the innovative educational para-

digim, in this case, personality-centered. Along with general texts that train translation skill techniques on the example of social and political texts according to the traditional paradigm, the curriculum includes also highly specialized texts from the future professional activity of the translator in accordance with the innovative competence paradigm. At the same time, all trained directions and specialties in the students' group are taken into account. Individual selection of texts for each student, depending on his main specialty according to the personality-centered and competence paradigm allows full recreation of the work content of a future translator. In this regard, one can talk about the use of methods of productive learning, implying the simulation and modeling of tasks, as well as the resolution of socially and professionally significant situations. Thus, innovative educational paradigms play a dominate role at the level of forms and teaching methods. In the field of the distribution of the roles in the educational process, the teacher creates the conditions for independent training, which corresponds to the setting of innovative educational paradigms. The attitude of the teacher and students is transferred to the subject-subject category. The responsibility norms of the specified training period imply both the responsibility of the teacher for the learning outcomes and taking the responsibility by students for their education. It includes compulsory awareness of students with the work program on the discipline in order to fulfill the norms and requirements stipulated therein, as well as the terms of control activities – tests, course paper and state exam. In addition, the individual selection of training material, particularly, in the discipline Practical course of professional translation, stimulates the development of qualities necessary for the future specialist such as responsibility and self-discipline since in each specific case, the student is fully responsible for a certain amount of work, having no opportunity to take advantage of the labor results or help of other students. This corresponds to the settings of the competence educational paradigm. The evaluation and control of the acquired knowledge are carried out by teacher in accordance with the traditional paradigm in teaching such disciplines as Fundamentals of Translation Theory. Control and evaluation can be conducted in conjunction with students in teaching such disciplines as Practical Course of Professional Translation as well as Translation and Editing of Specialized Texts. The opinion of the employer can be taken into account during the field period. This is typical of competence paradigm. The textbook continues to be the primary training means on the discipline Fundamentals of Translation Theory according to the traditional paradigm. But it is actively complemented with information resources, which are in this case the primary means of practical training in the disciplines Practical Course of Professional Translation, Translation and Editing of Specialized Texts, which is typical of the innovative educational paradigms (competence, personality-centered and information ones).

## 5. Discussion

It follows from the above-mentioned findings that at the initial stage of the implementation of the supplementary education program, settings of the traditional, cognitive educational paradigm played the dominant role, complemented by settings of innovative educational paradigms (competence, personality-centered and information ones). The determining role of the traditional educational paradigm can be explained first of all by the need to acquire and assimilate a large amount of information necessary for the further implementation of the program since additional education, in essence, implies the mastery of a new area of knowledge, albeit close to the main specialty (Nordman, 2016). This is also due to the spe-

cifics of the set of disciplines for a given study period, presupposing a set of both the forms and methods of teaching, as well as assessments and controls characteristic of the traditional educational paradigm to most effectively acquire a large volume of learning material. An important role is played also by the psychological factors such as lack of discipline and self-control among students at the initial stage of additional specialty training, difficulties in solving organizational learning issues and insufficient skills of self-organization when training in two specialties.

At the middle stage of training, the functioning of various paradigm settings at all levels of the educational program is displayed, as before with the defining role of the traditional educational paradigm. The increasing role of innovative educational paradigms is due to the specific set of disciplines for a given period of study, assuming a greater share of students' independent work, in particular, independent search for information that requires certain skills in working with it. Teaching methods of innovative educational paradigms are used due to the specific of the studied disciplines, to assimilate a particular subject or separate topics more effectively. A significant role belongs also to psychological factors such as the developed discipline and self-control among students over a long period of training, the acquisition of skills of self-organization when training in two specialties at once. They determine a new distribution of the roles of the participants in the educational process and the responsibility of both teachers and students for the learning outcomes at this stage.

At the final stage of training, the functioning of various paradigm settings at all levels of the educational program is indicated, with the defining role of innovative educational paradigms. The increasing importance of innovative educational paradigms is due to the specifics of the disciplines for this study period, which presuppose mostly students' independent work, as well as psychological factors (improved students' discipline and self-control, development of skills of self-organization during training in two specialties at once). The balance of the settings of traditional and innovative educational paradigms is shown in the table below.

**Table 01.** The presence of the paradigmatic settings of the traditional and innovative directions

	<b>traditional</b>	<b>innovative</b>	<b>traditional</b>	<b>innovative</b>	<b>traditional</b>	<b>innovative</b>
	<b>Initial stage</b>		<b>Middle stage</b>		<b>Final stage</b>	
Forms and methods	+		+	+		+
Role of participants	+		+	+		+
Norms of responsibility	+		+	+	+	+
Evaluation and control	+		+	+	+	+
Motivation	+	+	+	+		+
Means of training	+	+	+	+	+	+
Goals	+	+	+	+		+
Way of communication	+	+	+	+	+	+

Summing up, it can be argued that the above described organization of the training is in line with the main direction of reforming the content of higher education, which consists in humanizing educational paradigms, where higher education is increasingly oriented toward expanding the possibilities for a person's competent choice of the life path and self-development. In this regard, it is possible to talk about

the possibility of interaction of several educational paradigms, namely cognitive, competence, information and personality-centered once, under the same educational conditions.

## 6. Conclusion

The considered type of students' activity at the university, namely, the implementation of programs of additional higher education, combines effectively the traditional and innovative educational paradigms by the complementary principle. The dominant role of various simultaneous functioning paradigmatic settings is specific at each stage of the educational program, with the determining role of one of the paradigms. So, the traditional, cognitive educational paradigm prevails at the initial stage of training. At the next stage of training, the functioning of the various paradigm settings at all levels of the educational program is indicated, still with the defining role of the traditional educational paradigm. At the final stage, the dominant role of innovative educational paradigms with preservation of elements of the traditional educational paradigm can be proved. A combination of various educational paradigms is caused by the general trend of cognitive management, involving the preservation and adaptation of any new knowledge for the most effective organization of social processes, including the educational one.

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