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## **Psychological-pedagogical conditions of forming educational and cognitive competence on the basis of information and communication technologies**

The formation of intercultural communicative competence is the main goal of learning a foreign language at different stages of study. In the scientific literature, educational and cognitive component reflects how the student is able to learn a foreign language and culture of the target language. The article discusses psychological and pedagogical conditions of formation of educational-cognitive competence on the basis of information and communication technologies. The means of formation of educational-cognitive competences are described in the article, which are independent cognitive work of the student. In high school, an independent educational-cognitive activity is a required component of educational, educational-research and scientific-research activities of students. To such psychological-pedagogical conditions, the authors include the following: 1) the motivation of the students to use in the process of learning foreign language information and communication technologies; 2) competence formation of students; 3) the system learning of foreign language based on information and communication technologies.

*Keywords:* competence, intercultural communicative competence, educational-cognitive competence, foreign language, independent cognitive work, educational activity, higher education, formation of psychological and pedagogical conditions, information and communication technologies.

In modern society there are considerable changes in all spheres of action of the person including in education. Urgent is a problem of creation of the new concept providing harmonious development of the personality, her abilities, requirements, consciousnesses, an active living and professional position; aspiration to self-development, self-determination and self-improvement. One of the main goals of training of a foreign language is training of pupils for everyday life, and also development of ability to cross-cultural communication.

Competence based approach unites in a whole educational process and its judgment during which there is a formation of a personal position of future teacher, his relations to a subject of the activity. The analysis of literature on problems of competence-based approach to training allowed making idea of the maintenance of the concepts "competence" and the related concept "competency".

Competence is a readiness (ability) of the pupil to use the acquired knowledge, educational skills, and also ways of activity in life for the solution of practical and theoretical tasks.

Competency – constant, theoretical and practical readiness of the student to solve problems with skill, and also continuous updating of knowledge in concrete area of educational activity, possession of new information for successful use of this knowledge in specific conditions. The integral criterion of competence is ability of students to confirm its existence repeatedly and in different situations.

According to A.V.Khutorskoy educational and informative competence is a set of competency of the student in the sphere of the independent informative activity including elements of the logical, methodological, heuristic, all educational activity correlated to real cognizable objects [1;58-64]. To this competency relates knowledge and abilities of the organization of a goal-setting, planning, generation of the ideas, the analysis, and a reflection, a self-assessment of educational and informative activities.

E.G. Tareva treats educational competence as "ability and readiness of pupils for effective implementation of educational activity at acquisition of a foreign language as a subject" [2; 92, 93]. According to the scientist, educational competence is designed to rationalize process of mastering foreign language communication. It is directed to overcoming limited opportunities of the individual for assimilation of considerable volume of information, on formation of ways of communicative activity at interaction of the person with foreign culture reality. N.V. Elashkina adheres to the similar point of view [3; 78]. She considers educational competence as "ability and readiness of the student for effective educational activities for assimilation of a foreign language as means of cross-cultural and intercivilization communication" [3; 85].

Work as N.V. Kuzovleva represents educational competence as culture of mental labor, and offer the list of means for rationalization of training of younger school students [4; 97]. The culture of mental labor is not a simple set of the qualities of the personality which are shown in abilities to use rational methods and ways of mental work, this qualitatively new personal education characterizing style of study of pupils.

In relation to the studied objects the student seizes creative skills of productive activity getting of knowledge directly from reality, possession of receptions of action in unusual situations, heuristic methods of results of problems. Within this competence demand of the corresponding functional literacy is defined ability to distinguish the facts from conjectures, possession measuring abilities, use of probabilistic, statistical and other methods of knowledge.

The basic technologies supporting competency-oriented training are such modern technologies as research technology of problem training; technology of design training, interactive technologies, design method.

Students successfully create various papers, bench reports, conduct virtual tours and interactive lessons. The most successful means, the assistant in this case is the method of projects. By preparation of any project the student needs to learn independently, to find the material necessary for work, to make the plan, to estimate and analyze, draw conclusions and to study on own mistakes and mistakes of companions.

Important component of educational competence is educational and informative competence which formation – a necessary condition of efficiency of educational activity. It allows considering formation of educational and informative competence as a priority task of any modern educational institution and as the urgent direction of scientific research.

After A.N. Dakhin, I.A. Zimnyaya, T.V. Osenchugova we define educational and informative competence as a presence set of the interconnected knowledge, abilities and qualities of the personality which allow it to carry out independent educational cognitive activity effectively. Educational and cognitive competence includes the set of competences of the student in the sphere of independent cognitive activity including elements of the logical, methodological, all-educational activity correlated to real cognizable objects. Formation of educational and informative competence is necessary condition of formation of the comprehensive identity of the student [5; 35].

Successful training is impossible without hard independent work of pupils, and its efficiency substantially determines the level of formation of educational and informative competence and as a result of quality vocational training.

One of ways of formation of educational and informative competence is nonconventional lessons:

– lessons – lectures, lessons – seminars, lessons – business and role-playing games, lessons – a press – conferences, lessons – courts, lessons – meetings of experts, lessons – fairs.

Especially favorite lessons of pupils are lessons – business games and lessons - role-playing games. At such lessons it is possible to see extent of possession of pupils of educational and informative competence, ability not only to find and process material, but also to formulate own point of view and to reason it.

Now the higher school works in the conditions of unlimited access to information that results in need of use for it of information and communication technologies as the tool allowing to change radically the informational environment of any educational institution and to turn students into active participants of educational process. These are the effective remedies of optimization of conditions of mental labor promoting successful assimilation of a training material. Products of information - communication technologies are electronic editions and resources [6; 50]. Educational and informative competence performs backbone function in aspect of consideration of relationship and interactions of components of elementary communicative competence.

The periodic appeal to conditions of formation of educational and cognitive competence defined needs of identification, theoretical justification and experimental check of set of the conditions providing its efficiency in the course of training. Complexity of process of formation of educational and informative competence defines need of performance of set of certain general requirements, didactic, psychology and pedagogical, organizational and pedagogical conditions. At the same time allocate several types of conditions:

1. Conditions of educational activity are a set of circumstances in which it is carried out, and social circumstances of activity of her subject. They are considered as the factors promoting its success;
2. Pedagogical conditions are those which are consciously created in educational process and which have to provide the most effective formation and course of this process;
3. Psychology and pedagogical conditions promote formation of personal, psychological development mechanisms.

External conditions exert impact on formation of internal conditions. To the most important subjective conditions of formation of educational and informative competence researchers carry aspiration to creative search, creative ability, to project own activity, flexibility of thinking, recognition of the personality, level of intellectual abilities; conceptual experience, met cognitive experience, imagination, intuition, informative independence, openness of an informative position, criticality of thinking and others.

Process of formation of educational and informative competence of students on the basis of modern information and communication technologies depends on psychology and pedagogical conditions to which we suggest to carry the following: 1) the motivation of the students to use in the process of learning foreign language information and communication technologies; 2) competence formation of students; 3) the system learning of foreign language based on information and communication technologies.

Conditions are internal characteristics and the external reasons which in total define formation of educational and informative competence of process of training in a foreign language.

The motivation of students acts as the first psycho-pedagogical condition of formation educational and cognitive competence in learning course on the basis of information - communication technologies. The problem of motivation of students always remains at all grade levels to a foreign language. The situation when in educational group someone shows interest in a foreign-language training material is well-known, and some take a passive position at all, being discharged of educational process and to feel apathy and hostility to study.

At the present stage of development of information society by means of modern information communicative technologies the main objective of training in a foreign language is carried out. It is increase in efficiency of the developing training within which the main accent is put on formation of educational and informative competence at students. In this regard the student is engaged in continuous self-education and formation of skills of work with arrays of information which we face on the Internet.

The second psycho-pedagogical condition of formation educational and informative competence is the formation of competence of students. In modern scientific literature quite large number of terms which are often used as synonyms meets. On the basis of this research in our work we will use the term "Information and communication Competence" as it according to A.V.Khutorskoy reflects the level of formation of the corresponding competence, namely assumes a-level categorization at the studying knowledge, skills in the field of use of modern information and communication technologies [1;59, 60].

According to A.V.Khutorskoy information and communication technology competence takes an important position concerning other key competences and is with information and foreign language communicative competences in close proximity. It defines the concept "Information and communication Competence" how ability independently carry out search, the analysis, selection, storage and information transfer by means of information technologies [1; 60, 61]. Authors of other researches also in definitions list the operations made over information.

For example, refers reception, processing and issue of information, mass media technologies to information and communication technology of competence I.A.Zimnyaya, and also possession of skills of work with Internet resources [5; 61]. Besides components which were listed in definition by I.A.Zimnyaya, A.A.Yelizarov in the work [7] includes set of certain knowledge and abilities in contents of the term "Information and communication technology Competence». Thus, all presented definitions display component structure of information and communication technology competence.

As the third psycho-pedagogical condition of formation educational and cognitive component of foreign language communicative competence of students occurs on the basis of modern information communication technologies system. One of the fundamental approaches in a modern technique of learning foreign language is considered system approach. On the essence of this approach supposed integrity of pedagogical process training that allows to consider it as uniform methodical system.

Enough importance at realization of system approach plays a role of the teacher who in fact, operates cognitive activity of students. System training at a basis of an information and communication technology has the greatest value in respect of the organization of educational process. Planning of educational process consists in adequate use of means information and communication technologies for the purpose of formation of aspects of language and development of communicative abilities in types of speech activity. Use of tasks for the solution of communicative tasks with a support on information and communication technologies at least two-three times a week is recommended.

Use of information and communication technologies on classes in a foreign language can change radically traditional perception of process of training. Quite often on the basis of information and communication technologies teachers use the modular training promoting formation of students.

Proceeding from this it is possible to draw a conclusion on what an important role in effective obtaining the expected results of training plays psychological-pedagogical conditions of formation educational and cognitive competence of students on the basis of modern information and communication technologies.

Information and communication technologies are set of modern means of digital equipment and the software, information resources, methods and models of their use. In "The dictionary of methodical terms" of A.N. Shchukin, understands system of methods and ways of collecting, accumulation, storage, search, transfer, processing and issue of information by means of computers as information technologies and computer communication lines [8; 401].

Information technologies, as a rule, call the technologies using such technical means of training as audio, video, the computer and the Internet. Main objective of training in foreign languages is formation and development of communicative culture of students, training in practical acquisition of a foreign language. An important task of the teacher is creation of the real and imagined communication situations at a lesson of a foreign language, using for this purpose various methods and working methods (role-playing games, discussions, creative projects). Use of modern means such as computer programs and Internet technologies, and also training in cooperation and a design technique allow solving this problem.

Independent creative work of pupils on creation of the presentations expands a stock of active lexicon. Power Point is known to all and the presentations created in widely use, but the Prezi service gains popularity now. Prezi.com is a web service by means of which it is possible to create the interactive multimedia presentations with nonlinear structure.

Use of information and communication technologies at lessons of a foreign language attracts great interest of pupils, increases the general level of educational process, increases informative activity of school students, allows carrying out individual approach and promotes increase in motivation to learning of foreign language. In other words, educational technologies can enrich training in educational conditions. If to consider the field of language education, the potential of new technologies is boundless. Materials which are included in the main education guidance, books, abstracts of lectures and a manipulative material generally static. Use of information and communication technologies in particular loudspeakers and interactivities can add the Web 2.0 of tools to teaching language.

The Web 2.0 is the platform of social services and services allowing a wide range of Internet users to be not only recipients of information, but that is especially important, her creators and coauthors. The word "social" is represents the distinctive characteristic. Using templates of the Web 2.0 services, teachers and pupils can create thematic forums, blogs, to write down audio-and video records and to place them on the Internet for general or limited access. In order that it is correct to define the place and a role of the Internet in training in language, first of all it is necessary to find for it definite answers on questions: for whom, for what, when in what volume it has to be used.

The Internet and its resources, in particular, social services of the Web 2.0 can actively be used at a lesson and give help in the solution of a number of didactic tasks among which there is a replenishment of a lexicon pupils, formation at school students of steady motivation to studying of English, expansion of an outlook of school students, and also allows to increase significantly quality of training, to make it more productive, interesting and personally focused. However it is impossible to forget that the Internet – only the supportive technical tool of training and for achievement of optimum results it is necessary to integrate its use into process of a lesson competently.

On the global Internet there is a set of services providing productive cooperation. In this article it would be desirable to dwell upon those from them which, in my opinion, are the most convenient in application in educational process and stimulate pupils to communication in a foreign language that is especially valuable to creation of natural communicative situations.

*Starfall* (<http://www.starfall.com>)

It is an excellent website for younger school students. There is a possibility of working off of lexicon, a pronunciation, and skills of reading, there is an excellent sounded library. The teacher can organize work on a pronunciation of the studied lexicon in English. Pupils can do marks in a calendar, decorate it with the picture at own will. The calendar can be unpacked.

*ToonDoo* (<http://www.toondoo.com>)

The service for creation of comics allowing to construct training of the dialogical speech, realizing communication situations in compliance with communicative tasks of students and different types of interpersonal communication. The teacher can offer pupils different types of tasks:

1. To play the offered dialogue on roles;
2. To restore the past remarks in dialogue;
3. To make dialogue on a sample;
4. Sostavit own dialogue according to the speech situation presented by a series of pictures.

This service promotes formation of speech competence, development of ability to plan the speech behavior and to increase in motivation to acquisition of a foreign language.

*Ego4you* (<https://www.ego4u.com>)

On this website it is possible to find many interesting quizzes for control of knowledge of lexicon, grammar, and also regional geographic material. Here many virtual travels are presented. Also users can find material on working off of sounds. Examples of a pronunciation of the most difficult sounds for training are given.

*Glogster.edu* (<http://edu.glogster.com>)

This website is free public service which is used in the educational purposes by many foreign teachers and pupils. Through this network of the teacher and pupils can create free interactive posters or glogs, so-called interactive multimedia images with which contents readers interact. Users can create the interactive poster on which in a certain order depending on the purpose and tasks hyperlinks, the text, video records, photos and illustrative material are located. Glogster opens new opportunities for individual and group work in creation of various projects, allowing systematizing and presenting the received product.

*Learning Apps* (<http://learningapps.org>)

LearningApps.org allows creating conveniently and easily electronic interactive exercises. Any teacher having the most minimum skills of work with information and communication technology can create the resource – small exercise for an explanation of new material, fixing and control. This service contains a big collection of the exercises which are already created by other teachers.

Thus, leaning on psychology and pedagogical conditions it is possible to form educational and informative competence of students on the basis of information and communication technologies. Use of information and communication technologies on classes in a foreign language radically can change traditional perception of process of training. Proceeding from it, it is possible to draw a conclusion that an important role in effective obtaining the expected results of training is played by allocation of psychology and pedagogical conditions of formation of an educational and informative component of foreign-language communicative competence of students on the basis of modern information and communication technologies.

Information and communication technologies held a firm place in the course of training in a foreign language. Practice shows that they have many advantages before traditional methods of training. It is possible to distinguish individualization of training and features of each student, increase in informative activity from them. Use of information and communication technologies in the course of training in a foreign language considerably will increase efficiency of formation of educational and cognitive competence.

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## Ақпараттық-коммуникациялық технологиялар негізінде оқу-танымдық құзыреттілік қалыптасуының психологиялық-педагогикалық шарттары

Мәдениетаралық-коммуникативтік құзыреттілікті қалыптастыру шет тілін оқытудың негізгі мақсаты болып саналады. Ғылыми әдебиеттерде оқу-танымдық компонент әрбір білім алушының шет тілі мен мәдениетін қаншалықты үйренгенін көрсетеді. Мақалада ақпараттық-коммуникациялық технологиялар негізінде оқу-танымдық құзыреттілік қалыптасуының психологиялық-педагогикалық шарттары қарастырылған. Студенттің өзіндік-танымдық жұмысы болып саналатын оқу-танымдық құзыреттілік сипатталған. Жоғарғы оқу орындарында оқу-танымдық жұмыс әрбір білім алушының оқу-зерттеу және ғылыми зерттеулеріндегі басты міндет болып саналады. Авторлар психологиялық-педагогикалық шарттарына: 1) шет тілін оқыту барысында студенттердің ақпараттық-коммуникациялық технологияларды қолдану; 2) студенттердің құзыреттілігі; 3) ақпараттық-коммуникациялық технологиялар негізінде шет тілін жүйелік оқытылуы кіреді деп анықтаған.

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## Психолого-педагогические условия формирования учебно-познавательной компетенции на основе информационно-коммуникационных технологий

Формирование межкультурно-коммуникативной компетенции выступает основной целью обучения иностранному языку на разных этапах обучения. В научной литературе учебно-познавательный компонент отражает, насколько обучающийся способен самостоятельно овладеть иностранным языком и культурой страны изучаемого языка. В статье проанализированы психолого-педагогические условия формирования учебно-познавательной компетенции студентов на основе информационно-коммуникационных технологий. К таким психолого-педагогическим условиям авторы относят следующие: 1) мотивация студентов использовать в процессе обучения иностранному языку информационно-коммуникационные технологии; 2) сформированность компетентности студентов; 3) системное обучение иностранному языку на основе информационно-коммуникационных технологий. Описаны средства формирования учебно-познавательной компетенции, которые являются самостоятельной познавательной работой студента. В высшей школе самостоятельная учебно-познавательная деятельность является обязательным компонентом учебной, учебно-исследовательской и научно-исследовательской деятельности студентов.

*Ключевые слова:* компетенция, межкультурно-коммуникативная компетенция, учебно-познавательная компетенция, иностранный язык, самостоятельная познавательная работа, учебная деятельность, высшая школа, формирование, психолого-педагогические условия, информационно-коммуникационные технологии.

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Репозиторий Қарғу