

DISTANCE EDUCATIONAL TECHNOLOGIES AS A FACILITATOR OF STUDENTS' COGNITIVE FLEXIBILITY: RISKS AND PROSPECTS

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INTRODUCTION

"The best teachers are the ones who show you where to look, but don't tell you what you'll see there"

(Alexandra K. Trenfor)

Significant changes in the requirements for specialists increase the relevance of the problem of distance education development because the central place is taken not by the demonstration of acquired knowledge, but by the generation of new ideas. Now advances in information technology and telecommunications allow the development of distance learning as a type of continuing education, which accompanies the information society, forming a comprehensively developed personality. The relevance of facilitation in distance education is due to the need to make fundamental changes in the process of training specialists. Preparation of future specialists for professional communication by forming their communicative competence and cognitive flexibility takes place in the process of interaction of subjects of educational process in the conditions of their cooperation in accordance with equal conditions. According to this point of view, the phenomenon of facilitation discovered in pedagogy and psychology (facilitate - to facilitate, contribute, create favorable conditions) becomes interesting (FISUN, 2017).

LITERATURE REVIEW

At the present stage of higher education development, the issues of distance education as a modern technology with extensive use of computer technology and the latest educational programs are quite urgent. The relevance of introducing distance education as an equivalent form of education is determined not only by the students' demand for modern education, but also by the intensified epidemiological issues (TRINDADE, 2000). Distance education - the technology of distance learning, allows providing quality knowledge to a large audience of students regardless of time and place of residence and creates the latest educational environment using modern telecommunications technology (KOKHANSKAY, KLYUCHNIKOVA 2013). About 30% of educational institutions in Ukraine implement distance education, although more in the form of distance learning. The main difference between distance education is the presence of active interaction between teachers and students exactly with the help of modern multimedia technologies (TRINDADE, 2000).

The basis of the investigated form of the educational process organization - controlled but independent work of students with the use of information communication technologies, aimed at achieving the main goal of distance education - education of personality with developed skills of communication, self-organization, and self-education (DATSENKO, SUZANSKA, 2017).

The fundamental feature, it is distance education is a high level of professionalism and communication of teachers, self-development, and self-education. That is, distance learning technologies consist of pedagogical and information technologies (ANDRUSENKO, 2017). The works of ANDRUSENKO (2017) focus on the key advantages of distance learning, such as flexibility, modularity, parallelism, cost-effectiveness, technology, internationality, and quality not inferior to other forms of learning. Particular attention is paid to social equity. The main advantage of distance education is the new role of the teacher and the positive impact on the student (ANDRUSENKO, 2017). To better understand the difference between distance learning and traditional learning, it is necessary to look in more detail at the forms of interaction between the teacher and students.

The basis of traditional learning consists of lectures, seminars, laboratory work, independent work of students, occasionally game classes, with the basis of learning are books and the teacher - the interpreter of knowledge. The distance form, in turn, is fundamentally different learning models, as it actively uses such types of work as trainings, projects and conferences involving computer technology and non-traditional methods. One of the characteristic features of distance learning is the communication between teacher and student on the principle of "one to one", in fact - individual consultation, also the principle of "one to many" is implemented, when the teacher, according to the established schedule, works with a large number of students. In addition to these principles, the principle of traditional teaching "many to many" is also used, that is, simultaneous communication of a group of students, discussing issues, sharing experiences and impressions is possible.

Distance learning technologies in the learning process are aimed at in-depth understanding and analysis of educational material; formation of competencies necessary in modern society: communicative - direct communication with the help of a network, information, due to the search for information from various sources and the possibility of critical reflection on the received knowledge, self-education. Practice confirmed that the inability of students to make decisions independently, determine the content of learning activities and find ways of its implementation, prevents the quality of the educational process. Distance learning performs another one of the leading functions of education - educational, thus contributing to the formation of activity, independence, self-improvement, creativity - the leading qualities of personality (DATSENKO, SUZANSKA, 2017).

Analyzing the current state of distance learning in domestic institutions of higher education, among the important disadvantages of the distance form of education should be identified the lack of direct contact between the teacher and the distance student for the professional workload of domestic educators and imperfect information tools. When taking foreign distance learning courses, students get answers to their questions within a few hours. In Ukraine, unfortunately, there is now a situation in which there are many people who want to get distance education, but few experienced teachers who are familiar with the latest technologies of distance communication (TRINDADE, 2000). The issue of facilitation, which is part of the general problem of teachers' qualification, is the subject of a scientific paper (TSEKHMISTER, 2018).

STUDY METHODOLOGY

To achieve the goal in the article were used such general scientific methods of research: theoretical: the method of comparative analysis of the pedagogical literature to study the current state of the problem, comparison and comparison of different views on it, analysis and synthesis to clarify the influence of the teacher-facilitator and directly methods of distance education, as a facilitator of the process of formation of cognitive flexibility of students.

STUDY RESULTS AND DISCUSSION

Distance education fully reveals and updates the role of the teacher, bringing to the forefront the function of facilitation. In the conditions of distance learning, the teacher should be a mentor, consultant, and coordinator, constantly improve their courses, to develop creativity, activity, and qualification in accordance with modern innovations, also an important direction of the teacher - increasing the intellectual and creative potential of students by improving

their self-organization, independent decision-making, self-determination, striving for knowledge and use of the latest information technologies. Thus, in a distance learning environment, the active role of the teacher is not reduced in any way, because he/she has to determine the level of knowledge of the applicant and make informed decisions on adjusting in the curriculum in order to achieve better assimilation of the program (VLASENKO, 2017). The facilitator's role is to create a specific field for sharing experiences, transforming thoughts, and improving skills (DYADUSHINA, 2020). To act as a facilitator has a person with an active, but not directive position. The main task of the direction of the educational process is the organization of the learning space, precisely the disclosure of the potential of the group and support participants in the implementation of learning objectives.

The teacher-facilitator helps the student to form a personal opinion about a particular situation, promotes the desire for self-development, self-realization, and self-improvement. An important function is to create a situation of success in a particular moment. The following principles of facilitation are distinguished: neutrality preservation, that is the teacher-facilitator does not have to express his own opinion, but must hear every participant of the process; observance of the announced agenda of the meeting and together with participants create rules and support their fulfillment; containment of indignation, because participants do not have to allow criticism about each other and direct their negative and critical attitude towards the facilitator, so neutrality is very important. Also, an important rule is to respect the wisdom of the group and to pay attention to each member.

We propose to consider the rules of a lecture by a facilitator. First of all, the rule of respect for the speaker is established and controlled, the prohibition of interruptions and interference in the process of expressing the opinions of each of the participants. Then there is the formation of the main idea or the generation of ideas through the system of notes. An important rule is the observance of "self-expression" - respecting every thought expressed and ensuring confidentiality. At the same time, the facilitator and participants can stop statements that have an aggressive or offensive context. The methods of facilitation for classical educational institutions specified by I. Dyadyushkina and designated as: creativity - "going beyond", the use of all available innovations for fixing ideas; graphic expression of facilitation - giving simple forms to complex ideas; involvement of group intelligence; use of hindsight to build strategies for applying information and acquired skills in future focused conversation, a particularly effective method for actualizing knowledge; exchange of ideas using the "world café" method.

Scientific publications distinguish two directions of facilitation - social and pedagogical. Social - aimed at increasing the speed and productivity of personal activity by actualizing the image of the outsider (in the mind), which should act as a competitor or an observer of the actions of this person. Pedagogical facilitation is aimed at increasing the productivity of the educational process and development of the subjects of the pedagogical process, by applying a special style of communication and personality of the teacher-facilitator. Both types are aimed at increasing the productivity of the relevant activity, the difference is that in the social sphere facilitation is carried out by observing the actions of the subject, while in the pedagogical one by applying a special communication style of the teacher with students and influencing the listeners through the personality of the facilitator.

It was found that social facilitation within the educational process is a tool that activates students' learning activities during the class and makes it easier to perform tasks that do not involve generating complex creative ideas, or activities related to the presentation of complex tasks prepared in advance to the audience in the presence of outsiders in the class. Improvement of students' performance occurs due to the expectation of evaluation of the work by other people. Since the effect of social facilitation is observed when performing relatively simple or well-learned activities, the organization of social presence should be done at the stage of improvement rather than the formation of certain skills. Social facilitation in the educational process, through such methodological techniques as "Abstract Drawing", "Style Analysis", activates students' learning work during classes, by enhancing the dominant reactions of students: expressive language, expression of own considerations, associations, generation of critical ideas. When implementing facilitation methods, the teacher remains a researcher, not giving unambiguous answers to all curriculum questions without exception,

stimulating conditions for increasing students' interest and cognitive activity, optimizing the process of developing their professional self-consciousness. Implementation of the concept of pedagogical facilitation implies certain conditions: importance of learning for students, teacher congruence, psychological safety, and freedom.

The most productive is the learning process, which implies not a simple assimilation of knowledge, but precisely the change of students' inner sensory and cognitive experience. The congruence of the teacher-facilitator is expressed in the awareness of his/her attitude toward students and people in general, reflection, understanding and acceptance of his/her feelings, allows being frank in relations with students. An indication of the facilitator's work is to convey to the student that the main result of learning in a higher education institution is the ability to seek knowledge intensively and competently (FISUN, 2017). The facilitator's recognition of the unconditional value of the individual and the creation of conditions in which there is no external evaluation is the basis of psychological safety, in this way conditions for development and creativity are provided, because the belief that any person is distinctive and unique in all its manifestations, regardless of the state and behavior in a particular moment. Psychological freedom involves the formation of creativity and self-expression of students. Facilitation allows the disclosure of innermost thoughts, feelings, and states.

It is through the use of facilitation methods and preferences of distance learning that one can promote the development of cognitive flexibility in students, that is, the ability to adapt to change, while mental or cognitive change is the process by which this adaptation occurs. Cognitive flexibility plays an important role in the learning process, the formation of the ability to solve complex problems, contributes to the choice of strategy, ways to adapt to different circumstances. Due to the developed cognitive flexibility, it becomes possible to obtain information from the environment and react to it accordingly, to adjust behavior in accordance with changes and requirements of the situation.

So, traditional teaching methods are based on almost complete absence of the process of facilitation because the transfer of knowledge is one-way "teacher-audience", while in the online form the teacher acts as a facilitator. Distance learning creates conditions conducive to the process of facilitation. The teacher-facilitator contributes to the effectiveness of learning by optimizing the process of joint work in the groups "teacher-student" and "student-student". Among particular importance there are forms of intragroup interaction - conversation between students, finding ways of common understanding, decision-making, conflict resolution. The analysis of psychological and pedagogical studies on the problems of pedagogical facilitation, showed that the essence of this concept is often considered as a qualitative characteristic of the teacher.

The emergence of the term allows us to argue that facilitation, at its core, is a process of interaction between the teacher and students, which corresponds to certain characteristics. The main point of facilitation in distance learning is the atmosphere, namely: ease with respect to the educational process, the perception of tasks as simple, getting help at all stages of learning at any time and positive support. A distinctive feature of distance learning as a process of facilitation is the constant support of interest in the events, a complete disconnection from the problems that are outside the learning process. The tasks for distance learning instill in students a sense of class structure and time, the definition of each student in the performance of the project, the balance of participation in the group task, friendliness, openness to questions. An important feature of distance learning classes is the tolerance for mistakes, the absence of emotional struggle with students while clearly marking the psychological boundaries of behavior.

A fundamental feature of distance education that is characteristic of facilitation is acceptance of reality, readiness to change the task in accordance with the specific situation, creativity, and the possibility of making spontaneous changes. When developing assignments, the instructor calculates all possible issues and problematic moments in the assimilation of the material, orienting students to feedback. Creating distance lectures and seminars, the teacher uses the maximum variety of pedagogical technologies, creative approach, in order to provide beauty and novelty of the space and process. Reading through the options of

feedback attention is directed to the recognition of any achievement or marks the way to new real successes. Working remotely with the development of the assignment, students should feel the sincerity of the instructor, a positive attitude; when processing errors, attention is directed precisely to the problematic issue and the way it is processed, not actually to the error itself.

Readiness to perceive phenomena not familiar to the individual from previous experience, refusal to try to squeeze new experience into the rigid framework of one's own perceptions, recognition of the right of representatives of another worldview, the ability to overcome stereotypes - cognitive flexibility (LEONTOVICH, 2002). The development of the above-mentioned quality should be based on the principles: sociocultural (social), professionally oriented and interactive, and at the expense of training. Thus, learning considering the above-mentioned principles has to develop cognitive flexibility in future specialists, which will allow them to painlessly adapt to the system of meanings and productively perform professional communication (KOCHAROVSKAYA, 2015).

A surprisingly interesting facilitation tool in distance learning are online boards that allow expressing ideas, grouping them, and discussing them regardless of the time and the actual availability of the group and the instructor at a certain time. The use of online whiteboards stimulates creativity, reveals abilities, and allows different solution vectors to be identified and different perspectives on a particular dilemma to be characterized. Accordingly, the development of cognitive flexibility, one of the basic higher cognitive abilities, is stimulated. Developed cognitive flexibility allows one to consider other beliefs, values, ideas, or ways of thinking, helping one understand other people's perspectives and evaluate options other than one's own. Thus, it is closely related to empathy and ways of social interaction.

Cognitive flexibility allows in unexpected situations, to mentally go through a number of alternatives and choose the most effective or optimal one. Based on the analysis of distance education teachers' methods of work, ways of interaction with students and presentation of educational information, we can see that facilitation is largely qualitatively implemented in this form of learning. According to distance learning has a number of advantages, unlike traditional training.

CONCLUSION

Thus, the analysis of scientific literature and practical experience, indicates that at the present stage of classical, full-time education is subject to dogmatic principles, while distance education is a facilitator of cognitive flexibility of students. Distance education as a facilitation technology is a system-synergetic design of creative educational process, the basis of which is the purpose, content, regularities, principles, organizational forms, methods of creative search and means of learning with practical implementation. The use of distance technologies and facilitation methods guarantees a high level of efficiency, purposefulness, conceptuality, consistency, and diagnostics - guarantees a high quality of education at the modern level. The purpose of facilitation in the development of distant classes is an actualization of the creativity of the teacher, stimulation of bringing in, inherent only to him attitude to certain issues. The core target orientation of the principle of distance education facilitation is the reliance on the teacher's potential for self-actualization, self-expression, creativity, and pedagogical mastery.

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Distance educational technologies as a facilitator of students' cognitive flexibility: risks and prospects

Tecnologias educacionais a distância como um facilitador da flexibilidade cognitiva dos alunos: riscos e perspectivas

Las tecnologías educativas a distancia como facilitadoras de la flexibilidad cognitiva de los estudiantes: riesgos y perspectivas

Resumo

O artigo se dedica à análise de métodos de formação em instituições de ensino superior, à comparação das principais características do processo educacional em instituições de ensino a distância e em tempo integral, às suas desvantagens em condições modernas, às principais vantagens do ensino a distância. São descritas as direções de influência do ensino a distância no processo de formação da criatividade e liberdade de opiniões dos alunos, capacidade de buscar soluções e aspiração à autoavaliação. Revela-se a relação entre os métodos de facilitação e formação de flexibilidade cognitiva na formação dos alunos. São descritas as principais direções de autoaperfeiçoamento e características peculiares dos professores que podem desempenhar as funções de facilitador do processo educacional. Considera-se a influência dos métodos de formação docente-facilitadora e a distância diretamente como facilitadora do processo de formação da flexibilidade cognitiva dos alunos.

Palavras-chave: Facilitador. Educação a distância. Facilitação social. Direções sociais e pedagógicas de facilitação.

Abstract

The article is devoted to the analysis of training methods in higher educational institutions, the comparison of the main characteristics of the educational process in institutions of full-time and distance learning, their disadvantages in modern conditions are identified, the main advantages of distance learning, compared to the ways of providing and processing information, the interaction of teachers and students of different forms of education, the application of methods of facilitation and development of cognitive flexibility in modern distance education are considered. The directions of distance learning influence on the process of formation of students' creativity and freedom of opinions, ability to search for solutions, and aspiration to self-education are described. The relationship between the methods of facilitation and formation of cognitive flexibility in students' education is revealed. The main directions of self-improvement and peculiar characteristics of teachers who can perform the functions of a facilitator of the educational process are described. The influence of the teacher-facilitator and distance education methods directly as a facilitator of the process of formation of cognitive flexibility of students is considered.

Keywords: Facilitator. Distance education. Social facilitation. Social and pedagogical directions of facilitation.

Resumen

El artículo está dedicado al análisis de los métodos de formación en las instituciones de educación superior, la comparación de las principales características del proceso educativo en las instituciones de enseñanza a tiempo completo y a distancia. Se describen las direcciones del aprendizaje a distancia en el proceso de formación de la creatividad y la libertad de opiniones de los estudiantes, la capacidad de búsqueda de soluciones y la aspiración a la autoevaluación. Se revela la relación entre los métodos de facilitación y formación de la flexibilidad cognitiva en la educación de los estudiantes. Se describen las principales direcciones de superación personal y las características peculiares de los maestros que pueden realizar las funciones de un facilitador del proceso educativo. Se considera la influencia del profesor-facilitador y de los métodos de educación a distancia directamente como facilitador del proceso de formación de la flexibilidad cognitiva de los estudiantes.

Palabras-clave: Facilitador. Educación a distancia. Facilitación social. Direcciones sociales y pedagógicas de la facilitación.