ПЕДАГОГИЧЕСКИЕ ИССЛЕДОВАНИЯ

EDUCATIONAL AND PEDAGOGICAL STUDIES

THE ISSUE OF NETWORK INTERACTION IN THE EDUCATIONAL PROCESS

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Purpose. *The article discusses the issues related to the organization of network interaction in the educational process. The purpose of the work is to study the concepts of "interaction" and "network interaction" provided by scientists who have studied this topic, as well as to determine authors' definition.*

Methods. *The authors conduct a review of the literature sources on the issue under study as well as use methods of comparative analysis.*

Results. *The network interaction between teachers and students is a social, psychological and pedagogical phenomenon. It improves students' skills of self-consciousness, self-organization and self-assessment. Being a collaborative educational activity, it is a tool for students' development and self-development. The use of remote technologies and possibilities of communication resources contributes to the growth of students' informational culture.*

Keywords: interaction; network interaction; educational process; distance technologies

ПРОБЛЕМА СЕТЕВОГО ВЗАИМОДЕЙСТВИЯ В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ

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Цель. *В статье рассматриваются проблемы, связанные с организацией сетевого взаимодействия в образовательном процессе.*

Целью работы является исследование понятий «взаимодействия» и/или «сетевого взаимодействия», предлагаемых учеными, занимающимися данными вопросами, а также определение собственной авторской позиции.

Методы. *Авторами проводится обзор литературных источников по изучаемому вопросу, а также сравнительный анализ.*

Результаты. *Сетевое взаимодействие между педагогами и обучающимися представляет собой социальное, психолого-педагогическое явление. Навыки самосознания, самоорганизации и самооценки студентов улучшаются в процессе активного взаимодействия. Возможности сетевого взаимодействия как совместной образовательной деятельности способствуют формированию у студентов навыков развития и саморазвития, самосознания, самоорганизации и самооценки, а также росту информационной культуры при использовании дистанционных технологий и коммуникационных возможностей.*

Ключевые слова: *взаимодействие; сетевое взаимодействие; образовательный процесс; дистанционные технологии*

Introduction

The need for qualified specialists is still the urgent problem for our society. At the same time, the degree of readiness of graduates to solve professional tasks does not coincide with employers' expectations. The curriculum of educational establishments is not always in time to match rapidly developing technologies. The gap between theoretical knowledge and professional skills is rather substantial. Thus, contemporary society demands different ways of professional development of students' skills. A qualified specialist is expected to make decisions and take responsibility for these decisions [10].

Alongside the introduction of new educational standards, the teachers face the necessity to plan and work out educational environment, motivate students' cognitive skills development, and organize educational process with reference to requirements of innovative technologies use. Besides educational process should include different means of effect upon students' cognitive capabilities activation.

At present, we have plenty of communication and interaction possibilities of teachers with their colleagues, teachers and students, and students with each other. The students' self-development is actual in the conditions of network interaction. The aim of our investigation is to analyze the notions ''interaction''; ''network interaction'' suggested by different scientists and formulate our own definition to the concept under study. We apply the methods of analysis of literature sources on the research topic and the comparative analysis.

Literature review
The idea of network interaction between the participants of the educational process goes back to the end of the last century. Aleksandr Adamskii created the educational network "Evrika" and defined it as the totality of subjects of educational activity willing to share resources in order to increase the quality of educational results. The development of the network interaction issues was followed by I.S. Aleksanina, N.S. Bugrova, B.A. Grishchuk, Z.M. Zaripova, O.V. Kaigorodova, L.I. Mukhina, E.V. Riabysheva, A.N. Tomazova, A.D. Tsedrinskii, A.G. SHepilo and others. The number of scientific works are devoted to the networking in the system of teachers' professional development namely to the educational institutions integration in the system of professional pedagogical education [5]. Alongside the contemporary ideas of information society in the networking arrangements are examined from the point of view of synergetic and andragogical approaches [3]. In this connection, the network interaction is considered as the mechanism of teachers' professional development. Some scientists analyze this problem with reference to the role of networking in the training of preschool teachers [4].

The network interaction is considered within the theoretical and methodological aspect of universities association for specialized and profile training (V.A. Grishchuk, Iu.A. Burdelnaia, M.L. Kondakova, E.Ia. Podgornaia, A.G. Shepilo, A.N. Tomazova). In addition, it is viewed as a part of a university complex [11] as well as under the conditions of reorganization of the professional institutions chain [1]. Innovation aspects of educational network and organizational difficulties of its interaction

with the education management body are analyzed in some research [13].

The notion "interaction" may be defined as the concept that reflects the effects of objects on each other, their mutual conditionality as universal form of movement and development. Moreover, "interaction" is regarded as social phenomenon of direct or indirect impact of objects on each other with cyclic dependence of interacting parties. Besides, being a special kind of connection, interaction represents the integration of actions, functional coordination of consequences, the system of actions. Interaction appears from the joint participation in the complex social relationships in accordance with collaborative activity.

The concept "pedagogical interaction" is discussed as random or purposeful, private or public, verbal or nonverbal personal contact between teachers and students followed by mutual changes in behavior, activity, relations and goals. The interaction may be realized as collaboration when mutual understanding and solidarity are reached in understanding of aims of joint activity. Hoverer, on the other hand it is also realized as competition when productive and purposeful activity motivates some students and demotivates the others.

From pedagogical point of view, "interaction" may be interpreted as the existed relationship between students and teachers; as the relationship between students' and teachers' activity; as collaborative activity of students and teachers; as special kind of collaborative activity; as special way of its organizing as a communication component. All these approaches have two important elements, activity and communication. In our investigation, we follow the definition of E.V. Korotaevoi and N.F. Radionovoi and consider the notion "interaction" to be social, psychological and pedagogical phenomenon. Social interaction is characterized by a great number of processes with the help of which the connections between people and with the surroundings are realized [7]. Psychological interaction unites the processes of mutual understanding, empathy and compassion. Pedagogical interaction combines specially organized social goals, directed processes, during which the interaction participants and conditions of its emergence are positively transformed [14].

Research description

Educational process interaction represents the mutual influence of social, psychological and pedagogical components. Social component predetermines the results of educational interaction while psychological component provides the mechanism of its functioning. Pedagogical component in its turn ensures the environment within which the process of educational interaction becomes possible and essential [7].

We believe that the concept "interaction" possesses interdisciplinary nature with the wide use of new information technologies applied in pedagogy. Educational and administrative possibilities of network interaction should be mentioned among which expanding of information field, participation in different projects in the suitable mode, satisfaction of individual educational needs, conditions for life-long learning [9].

As new approaches to interpretation of pedagogical interaction through the Internet arise as well as the definition "network interaction" appears. Network interaction of educational process implies the participation not only teachers and students but also learning tools that provide interactive dialog, computer visualization, processing a large amount of information and others. Such interaction in information and communication environment supposes active participation from parties and their mutual influence on each other. It is said to be a kind of interaction between traditional information environment and virtual network reality [2]. The participants are included in the activity without creating additional conditions for their work directed to mastering, consolidation and applying knowledge, skills and abilities. It helps in information communication, independent search of information, self-assessment of academic achievements, awareness of the social significance of cultural values and human experience using the Internet resources. Some scientists define network interaction as a kind of activity of collaborative resources usage. Nowadays these resources are mostly information ones and they may change during the process of interaction. Network interaction is considered a kind of collaborative information activity connected with getting, storing and processing information [8]. However, we suppose that networking is not restricted by information activity mentioned above. It should be

noted that it also includes network projects, webinars, online communication, distance competitions and other educational capabilities that promote students' skills and abilities development.

Model of network interaction based on the remote technologies is likely to become the effective educational tool, as it possesses certain didactic qualities. Among these qualities we should underlined the following:

– educational process individualization gives the students possibility to organize academic activity in accordance with their individual needs and psychological traits;

– self-study orientation aims at development of independent work skills and at promotion of independent work level;

– flexibility of organizational educational structure allows institutions to develop a curriculum using distance technologies, various means for mastering educational programs taking into consideration students' individual needs;

– leaning process intensification promotes learning material mastering according to students' abilities;

– multi-level training of an educational resource enables the students to learn subjects at basic or advanced level;

– on-line and off-line assessment, teachers' support, individual and group reflection of educational activity as well as interaction with parents make it possible to observe the progress of the training and correct mistakes is necessary;

– psychological and pedagogical support is being implemented while students are exploring the new educational environment alongside an individually focused approach motivates them to study.

Nowadays network interaction and communication demanding the search and introduction of new forms and methods contribute students' individual needs realization, ongoing exchange of information and experience, moral formation and socialization, self-realization and self-development [12]. The role of self-development lays in learning results improvement at the expense not only of a school opportunity but also of resources of a number of other educational institutions. It is necessary to mention some conditions under which students' self-development is im-

proved. Firstly, multi-level of the content of the training allows realizing knowledge, skills and abilities at basic and advanced levels. Then, implementing individual strategies encourages self-consciousness forming. In addition, individual educational needs when taking into account individual psychological and pedagogical traits promote self-organization. Wide possibilities of objective and quick evaluation, individual and group reflection, observing the training process, finding mistakes and correcting them, estimating self-progress facilitate students' self-assessment.

Conclusion

Summing up, we note that we consider the network interaction between teachers and students as social, psychological and pedagogical phenomenon being simultaneously developing and developed. This phenomenon is regarded to be collaborative educational activity alongside a multipurpose tool for students' development as well as self-development. At the same time, it is a tool for communication between participants of the interaction united common professional and educational needs. It encourages mutual understanding, involvement and empathy between parties.

Network interaction potential is realized in students' self-consciousness, self-organization and self-assessment along with growth of their informational culture, remote technologies usage and communication resources possibilities. The range of participants is increasing and the results are becoming more productive and qualitative at the network organization of interaction. Then every participant is getting the unique trajectory of universal skills development and improvement [6].

Network interaction promotes students' self-development what reflects in immersion into science with constant teachers' support, motivation to study and effective knowledge application. It is important to differentiate learning material submission taking into account each student's individual traits and expected level of success. Thus, for effective students' self-development in the network interaction there is the need in purposeful management of educational and informative, searching and productive activity of students.

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