

Developing and Employing Distance Education for the Preparation of Future Teacher (The end of XX – The Beginning of XXI Centuries)

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Abstract

The importance of the issue discussed in this article stems from the fact that distance education as well as the preparation of different individuals for participation in it can be viewed as a recurrent theme in the history of pedagogics. Our analysis helps identify the origins of this issue and the contradictions within it that lead to problems in teacher education; discover cause-and-effect relationships and unapparent connections which give an impulse for further explorations in the field of teacher education. The goal of this study is to identify the development patterns and trends in distance education and its role in teacher education. First, we study the background factors that predetermined the development of distance education by examining how the end of the XXth century brought about the intellectualization of all spheres of human activity based on effective work with information (the collection, analysis, storage, transmission and spread of information). The XXth century demonstrated how the intellectual experience accumulated over previous generations can be utilized in completely new ways that are based not on the mere transmission of knowledge but on the organization of independent intellectual development of learners. Distance education technologies hold great potential and future teachers can be effectively prepared by the network of institutions utilizing these technologies. When educational organizations that are geographically distant from one another are joined into a network it ensures unity between educational spaces (including the correspondence of contents and methods). The unity of educational spaces that implies the continuity and appropriateness of managing methods within the network of functional and territorial subsystems can indeed be ensured through adhering to the principles of networking.

Key words: Distance education, Theory, Practice, Learners, Problem, World community

INTRODUCTION

The Importance of the Issue

Distance education objectively supports the development of integration processes in the world's education. In view of its specificity distance education allows to smooth the obvious discontinuities between the levels of education that became apparent between the XXth and XXIst centuries. This helps create a system that prepares a wide range of specialists.

Distance education is the logical outcome of the historical process. The traceable stages of its development over a few

decades indicate that distance education corresponds to the new educational needs of our society. Moreover, along with its practical use distance education as a phenomenon is being theoretically analyzed by both Russian and international academic community. At the same time the development of distance education technologies and their practical explorations (that take place primarily in the most developed countries) outpace its theoretical conceptualization.

The Status of a Problem

In recent years there has been a need to consider distance education not only in isolation focusing on the technical side of its organization and at the expense of its substantive component but also to establish its conceptual foundation and reasonable scope of its applicability in addressing pedagogical issues and how it can be effectively combined with other pedagogical methods. Perhaps in view of this we are witnessing a surge in academic works (in a variety

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of languages) devoted to distance education (Clarín, 1989; Bilgin & Aykac, 2016); to its methodological principles (Lee, 2017; Black, 2013); to new information technologies in distance education (Yousuf, 2007; Moore et al, 2011); to the role of distance education in the process of an education system reformation (Xia & Liitiäinen, 2016; Chronopoulou & Papadopoulos, 2016); to the evolution of distance education characteristics, development patterns and tendencies (Baggaley, 2008; Khuziakhmetov et al, 2016).

MATERIALS AND METHODS

In the course of this study the following set of **methods** were used: the theoretical analysis and synthesis of relevant psychological and pedagogical literature, inductive and deductive methods, experience generalization, historical and pedagogical analysis, systematization and generalization of historical facts, modeling.

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SSSRESULTS

Historical and pedagogical analysis enables us to see that starting from the mid 90s the development of distance education has been connected mostly with the group of network technologies. Network structures at the end of the previous century change their competitive nature – they strive not to monopolization but to increase the number of their partner connections established to ensure the stability of the overall system and its potential for realizing large-scale projects. Marketing techniques become significantly more effective and at the same time they are dependant on the infrastructure collectively created by partners which enables all of them to decrease their expenses on building educational systems. Distance education becomes a tool that facilitates the interconnection of not only knowledge and technologies but also financial capital – it becomes a tool with which it is possible to dominate the global market and address geopolitical issues. Moreover, the network of distance education functions within the humanitarian paradigm and promotes in the minds of everyone involved in it (including future teachers) the importance of continuing education and constant development for satisfying both personal and public needs.

The didactic evolution of distance education as a gradual continuous process of change ensures qualitative development by objectifying the following positions: pedagogical problems in distance education; the

interrelation of all the theoretical conceptions of distance education; models of the local educational systems of distance education; eco-informational conceptions of distance education; the role of computer and the role of participants in distance education; educational collections (module conglomerate).

The use of modern telecommunication networks in distance education highlights the necessity of special methodologies and didactics specifically developed for different purposes including for the purpose of teacher education. The substantial foundation of this idea can be specified through the methodological integration of philosophical, educational, psycho-andragogical, cultural and technological perspectives that in their aggregation define the direction of teacher education. This view is currently being formed and enhanced in particular in the context of gaining more experience in educational and professional contacts, in the cooperation and interaction with different subjects of educational processes and their means. This view can be represented through three basic subsystems, each of which consists of specific components (Figure 1).

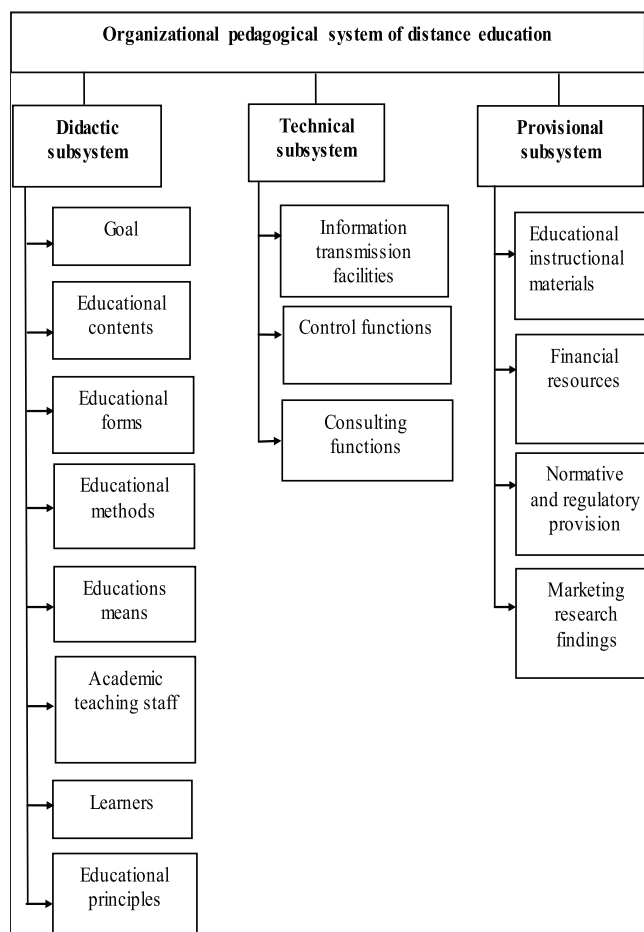


Figure 1: Organizational pedagogical system of distance education

The didactic subsystem consists of the components that are characteristic of traditional education: educational goals and contents, forms, methods, means and principles. However, each aforementioned component has specific nature in the context of distance education.

The didactic subsystem comprises:

- Long-term and short-term educational goals. The multilevel structure of educational processes can be achieved through the use of variable-based software that among other things facilitates the individualization of student academic work;
- Educational contents: potential informational overload; variable-based contents that vary in volume, difficulty and subject depending on educational goals;
- Methodology and organizational forms of education. In distance education it is possible to apply a whole range of general didactic methods (from informational to research) along with all the organizational forms used in traditional education. However the distance between the educator and learners, non-linear informational structures and processes as well as the specificity of the tools and means that shape the nature of distance education have specific implications for the organization of the educational process;
- Academic teaching staff plays the role of an additional information resource and also functions as a control agent;
- Learners are conditionally engaged in self-education because their educational actions (their actions aimed at receiving and analyzing information, at solving educational problems, at reflecting and questioning the materials, etc.) influence their progress to the educational goal more than the actions of educators.
- Additional principles: 1) the priority of the pedagogical approach in designing the educational process in distance education; 2) flexibility and dynamism; 3) pedagogical relevance and appropriateness in the use of information technologies; 4) consideration of the prior knowledge of learners; 5) correspondence of the chosen technology to the chosen models and types of distance education (chosen by teachers themselves or by their educational institutions etc.).

The second subsystem of distance education is technical. Through this subsystem the functions of control and consultation get realized. In contrast to traditional face-to-face education where this subsystem is additional (auxiliary), it plays a central role in distance education. Specific for a particular didactic system educational means comprise this subsystem (including printable materials, software as well as telecommunication technologies).

The third subsystem of distance education is provisional. It is comprised of educational instructional materials,

financial resources, normative and regulatory provision and marketing research findings.

All of the subsystems ensure that distance education fulfills its main functions: goal-defining, informational, technological, organizational, controlling, instructional, normative, marketing, financial and other functions. The three subsystems and their elements interact with one another in educational processes in a variety of ways which depend on educators, learners, their educational goals and other factors.

At this stage of its development distance education is often considered in the context of the new educational paradigm – open education. Open education is based on purposeful, autonomous and assessable work of learners aimed at achieving particular educational levels through interacting with educators in a regulated way and through using appropriate educational means. Studying international experience in the field of distance education (over the XXth and XXIth centuries) leads us to see that the main tendencies in the development of open education currently are:

- The evolution of didactics in distance education;
- The enhancement of both moral and intellectual components – moral and intellectual development of learners comes along with acquiring subject knowledge;
- Effective management methods are being introduced in distance education;
- Normative and regulatory issues (level and growth assessment, effectiveness control etc.) are being looked into.

The ever increasing informatization, interconnectedness and globalization of our society imposes new intellectual and moral requirements to all spheres of human activity including distance education: encouraging the development of educational independence, responsible attitude towards the learning process and all of its participants; the formation of competencies and knowledge that are necessary for purposeful thoughtful educational progress.

When examining the system of professional education it is necessary to take into account that the organization of distance education calls for compensatory measures – the system of these measures involves the design of special instructional materials, the training of specialized tutors capable of mediating the subject field with the virtual nature of the educational process. This all is necessary to ensure that the educational process is person-orientated, that it encourages students' engagement with what is happening on their screens and that it helps sustain students' educational motivation. The development of tutors as a profession will provide not only organizational but also psycho-pedagogical

support of the educational process in higher education. It is the tutor who on the one hand personifies the chosen professional field for the student and on the other hand facilitates the learning process and makes it individualized. Tutors have to be well-versed in their subjects – they can not expect students to learn without fully understanding the subject they are offering.

Moreover, analyzing the historical development of distance education gave us an insight into a range of problems that need to be addressed. For example, convoluted legal regulatory issues are holding distance education back in Russia. In view of this distance education cannot be fully recognized as a legitimate form that facilitates quality education. Before this could be achieved a lot needs to be done: legal regulation adjustment, assessment practices, teaching methodology, contents and other components of distance education need to be looked into.

The second group of problems that stand in the way of distance education development has to do with the existing standards. State educational standards cannot provide enough differentiation and flexibility within the process of engaging in distance education. Moreover, the current system of educational standards does not and cannot take into account rapid changes that are taking place in the global market including the dynamic technological transformations.

New theories need to be devised in the field of interactive distance education, assessment and the use of educational materials. The introduction and spread of distance education in Russia is happening chaotically. Those educational organizations that have powerful intellectual and financial potential are working on designing effective systems of distance education. But the scale of their actions is limited by their professional interests and potentials.

In academic circles people are arguing about the quality of distance education. The main difficulty in this issue is the development of assessment criterion. There are four criterion that are used most commonly in distance education: time that students spend to complete their studies; the percentage of students who successfully completed their studies; if the number of those who completed their studies successfully and their educational level corresponds to the expectations of their educational organization and the needs of society; economic and social effectiveness (Mishra & Panda, 2007; Tekinarslan, 2008).

DISCUSSION

The most important issue in the field of distance education right now is staffing. The lack of adequately prepared

specialists in this field became apparent between the XXth and XXIst centuries when computer science was taught at a very low level which meant that educators did not have even the basic level of computer competence and could not use computers to enhance their practices in traditional educational settings. Coordinators, tutors, educators-technicians need to be specifically educated in order to become competent in distance education. Apart from subject knowledge educators-technicians need to be well-versed in pedagogics, sociology, psychology, interpersonal communication, teaching methodology and computer science. One way to address this problem is through organizing CPD courses (with different courses being offered in accordance with the educator's role in organizing distance education).

CONCLUSION

Studying the history of distance education allows to see the main tendencies in its development and how to make a transition to a new level. Within the paradigm of open education these tendencies deepen the didactic purpose of distance education, broaden the orientation to include moral and intellectual student development as priorities, build new culture of effective management, establish an infrastructure that ensures normative, material, technological, conceptual and other kind of support for distance education.

CLOSING REMARKS

When distance education models first started being introduced into the Russian system of higher education (in the beginning of the XXIst century) it became apparent that the following organizational pedagogical conditions need to be fulfilled in order to ensure overall effectiveness: the integration of different organizational systems aimed at increasing the effectiveness of the educational process; the creation of a specific educational space, that enables all students regardless of their major subject to use telecommunication technologies, computers and software in order to achieve their educational goals; the preparation of all possible participants to engage in distance education effectively, the design of the new models of distance education that integrate both general didactic and specific educational principles.

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