

Chapter 18

Models for Cooperation Continuing Educations of Specialist with Life Cycle of E-Learning Resources and Educational Programs

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ABSTRACT

The concept of continuing education is topical for professionals in every sphere. Processes of continuing training professionals, creation and development of educational programs, support for e-learning resources are closely tied and require complex automation to provide quality and relevant education. We develop the models for life cycles of specialist, e-learning resources and educational programs. Prototype of CALS-system for e-learning resources is developed on the basis of these models. For online synchronization of the developed models it is needed networking environment for creating community of universities and industry. The practical implementation of networking organization of continuing training on the basis of network learning environment with LMS and structure of the information environment for organization of the educational process on joint network programs are proposed.

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INTRODUCTION

The concept of continuing education is topical for professionals in every sphere. So, it is important to improve skills regularly as well as to receive relevant knowledge for working in the rapidly developing areas of industry. The quick obsolescence of information needs constant updates of teaching methods and tools, which is impossible without using the modern information technology.

Processes of continuous training professionals, development of educational programs, support for e-learning resources, that required for teaching are interlinked and require complex automation to provide quality and relevant education. We have analyzed the life cycle of continuing training. We also developed the models of life cycles of specialist, e-learning resources and educational programs. A prototype of CALS- system supporting e-learning resources and their source objects by using a content management system is developed on the basis of these models.

For online synchronization of the models development of the networking environment for creating community of universities and enterprises is needed, which integrates possibilities of modern information and communication technologies. University requirements (Federal state education standards in Russia) and professional standards in many areas have different ontology now. The networking environment will help to improve information interaction and understanding between enterprises and universities.

This article gives an analysis of the life cycle of continuing training of specialists and the models of life cycle specialist, e-learning resources and educational programs as UML state machines are proposed. Developed models are considered in relation to each other in the process of continuing education using information technologies. Synchronization of the developed models is needed for realization of continuing education. Then we propose decision of this problem using networking environment for creating community of universities and enterprises, which integrates possibilities of modern information and communication technologies. Implementation issues - prototype of the information system for support of e-learning resource's life cycle and prototype of the system for networking environment – are considerate for conclusion.

BACKGROUND

The Federal Law N 273-FZ “On Education in the Russian Federation” refers to continuing education (lifelong learning). The education system creates conditions for continuing education through the implementation of major educational programs and a variety of additional educational programs, enabling simultaneous development of several educational programs, as well as taking into consideration existing education, qualifications, experience of practice in education. All educational professional programs of universities in Russia must comply with the federal state educational standards. At formation of the federal state educational standards it is taken into account provisions the relevant professional standards (“On Education in the Russian Federation”, n.d.).

Effective implementation of continuing education, taking into account the employment of adult employees and the needs for students, along with their studies, participation in real projects, is only possible with the wide use modern information and educational technology. The Federal Law N 273-FZ (“On Education in the Russian Federation”, n.d.). extends the use of advanced information technolo-

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