LECTURER'S WEB-SITE AND ITS ROLE IN DISTANCE LEARNING

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Abstract: Structure of University lecturer's web-site is suggested. A need for higher education system hyperspace is demonstrated.

Keywords: Internet, web-site, information, electric machines.

ACM Classification Keywords: K.3.1 Computer Uses in Education: Distance learning

Introduction

Complete information availability for students and entrants is one of the aspects of distance learning [1]. For the range of considered subject, information is a combination of the details required for the specialization selection and educational learning, viz. state standard of specialization, educational plan, working program, multimedia books and school books, audiovisual course books, virtual lab equipment, etc.

An access to information is provided by means of Internet and computer technologies. Interactive TV will also contribute into distance learning development in the forthcoming future.

Information is located on the Web-sites of Russian Ministry of Education, University, Faculty, Department and Professor (Lecturer). It's required to develop typical structure of the listed Web-sites. This helps universities to actively participate in practical distance education, whereas students are involved into educational process.

Suggested structure (model) of lecturer's Web-site realized by the author is given below (http://zei.narod.ru).

Lecturer's Web-site: Typical Structure

1. Brief details of place of employment, position, academic degrees and scientific titles (Curriculum Vitae), contact information.

1.1. Scientific specialization and performed science projects.

1.1.1. Scientific specialization.

1.1.2. Performed science projects. Titles of main scientific research works, customers, etc are listed. Summary with photos is given for each work is given in html-form.

1.2. Lecture courses and publications.

1.2.1. Lecture courses. Lecture courses titles are listed. Working program is given for each course. It's necessary for distance learning to represent tutorial and methodological suite of the discipline on the Web-site.

1.2.2. Publications. The following lists are given as separate sheets (html-pages): monographs and course books for universities; sets of registered computer programs; certificates of recognition and patens; scientific articles; reports on science and technical conferences; reports on science and methodological conferences, methodological notes and manuals. Each list includes only major publications. Full text is given for resulting scientific papers and reports (html- or pdf-files).

To increase contacts with foreign colleagues its worth translating the Web-site into (http://zei.narod.ru/engl/index.html).

Publication of course texts, labs and equipment descriptions is a further development of lecturer's Web-site [4]. All texts and descriptions should be developed with multimedia features: hypertext, sound, animation, etc. Use of different colors and fonts is also an important methodological tool. Multimedia capabilities allow transforming manuals and course books to new quality level that is much deeper than traditional ones. An illustrating example follows. Course books on Electrical Machine (represented by author) could be written on the basis of Field Theory [3, 5] rather than Circuit Theory [2] that is a current forced choice. Magnetic field is a 'working body' of electrical machines and transformers. For its understanding well developed abstract thinking technique is required. Most listeners don't possess such a technique (at least on the beginning stage of education). Multimedia features allow

visual representing of magnetic field creation in the given devices as well as filed existence through spatial-temporal continuum [1, 6].

Thus, no matter how far listeners are located from the university, they have an access to almost all materials required for successful studying of any discipline via Internet.

It's evident that professors', departments', faculties' or universities' Web-sites as well as Russian Ministry's of Education and some other industrial Ministries' Web-sites should be integrated into unique *Higher Education System Hyperspace*.

It was already done a lot to realize this. Particularly Web-site http://informika.ru contains hyper-textual lists of Russian universities and other useful information. However it's still necessary to do much more.

Department's Web-site should contain the following initial information: history of department; contact details; characteristics of specialization that is offered by the department (it's practicably to put together hyper-textual links to Web-pages of companies and organizations that finally employ department's graduates; State Standard of specialization; educational plan of specialization; hyper-textual list of staff members with their positions, etc).

Faculty Web-site's information could be as follows: history of faculty; hyper-textual list of Faculty Scientific Board members; contact details; hyper-textual lists of specializations with their State Standards; hyper-textual list of departments involved into educational process, etc.

University Web-site (http://www.msau.ru/) should contain the following basic information: university history; university top-staffers and hyper-textual list of chancellor's sub-organizations; hyper-textual list of University Scientific Board members; contact details; hyper-textual lists of faculties, departments, etc.

It will be useful for entrants to include URL-addresses of Russian Universities into periodically published Entrants Hand-Books.

Basic information provided by *Russian Ministry of Education* should be as follows: brief history of Russian educational system development; hyper-textual list of Ministry's and sub-divisions' top-staffers; hyper-textual lists of State and Private Universities in Russia; hyper-textual lists of specializations available for students in Russia, etc.

It's also necessary to create material and resource pre-conditions to solve the task. University lecturer should have an opportunity to use Internet's information collection working with a computer set up at his working space (university department). Moreover if lecturers' home PC's are global network connected that'd be even more effective. Actual experience with Internet opens unlimited net capabilities in terms of access to global information resources, contacts development among colleagues, relations management with manufacturers, organizations, etc.

Conclusion

Lecturers', departments' and faculties' Web-sites are less developed for the time being. Community initiative is of primary importance for higher education united hyper-system development. Internet development in Russia goes fast due to such an initiative though our country faces well-known difficulties and problems.

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E-COURSE OF THEORETICAL MECHANICS [5]

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Abstract: The concept, structure and contents of the Internet textbook on classical mechanics intended for Higher Technical Institutions are presented in this work. Aspects of program realization of textbook applications and the technology of elaborating the textbook in the "Hecadem" Internet-teaching environment are given too.

Keywords: distant education, electronic textbook, Internet, mechanism.

Introduction

The achievements in the field of information technology help to work out and use computer learning systems (CLS) in the course of teaching process, aimed at performing various types of teaching activity. The main principles of new CLS are the following:

- interactiveness;
- dynamics;
- integrativeness (program compatibility with other products);
- Web-compatibility;
- work providing in the off-line mode and distance mode;
- updating, replenishing with new material by subject teachers;
- modeling and simulation of examined processes and phenomena;
- visualization of educational information;
- illustration by sound aids;
- various services;
- control of knowledge with error diagnostics and feedback.

CLS is a more advanced means as it not only intensify non-textual parts (graphics, animation, video, sound) and various services, as well as, wide opportunities of Internet network.

Such systems we will name hereinafter as distance teaching systems (DTS). Now we consider the most common opportunities of DTS (Fig.1).

The first type (semantic elements): helps to study theoretical material of a subject, consolidate the know- ledge of the material covered by solving problems and performing calculations, carrying out computer experiments and

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