

DISTANCE EDUCATION COURSES

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The use of the WWW as an information system can reduce average study time by better and more efficient information provision, as well as relieve the instructor of some administrative burdens. Besides an electronic course-organizer site, especially a hyperlinked site can be much more than a source of information. It can become a learning environment for the course itself. WWW-based distance education is a revolutionary leap, which brings out the needs and requirements of a new generation of learners, who wouldn't be reconciled with education operating at the level of delivery of course material [1, 2]. They would rather look for the creation and use of new kinds of learning environments, which reflect in a better way the complexity of the learning process and learner's role in education – that of an explorer and creator rather than of a consumer.

In the paper we try to identify the milestones of a method developed to meet the needs of a new type of learning, which beneficially exploits the domain of the WWW-based distance-learning courses. The distance education course "Management Support Systems" is also presented.

STRUCTURE OF A WWW-BASED DISTANCE COURSE

A typical structure of a WWW-based distance course developed by us contains the core text for the course sessions prepared as HTML files, with Java Script instructions, available on the Web. Each file is a separate session. The courses are accompanied by a list of books, which are required to be used by the learner to prepare for each session, as well as a list of recommended papers, which discuss various issues and elaborate on the topic. The general structure of WWW-based distance education course is given in Figure 1. The lines stand for the links within the session and between the modules and files. A workshop is pointed out as a separate session, where learners are given the opportunity to do some practice work on the basis of assignments. The outcomes are sent to the tutor for assessment using CGI and Perl.

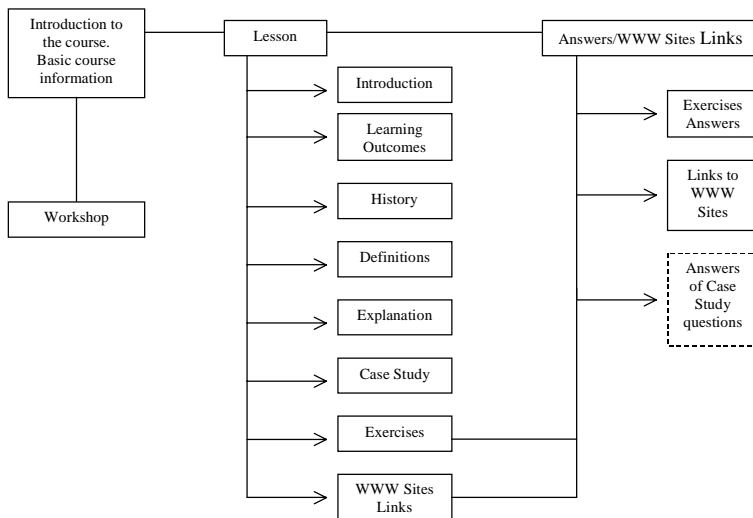


Figure 1: General structure of WWW-based distance education course

Integration of theory into practice has always presented a challenge, particularly, when there is no visual contact between tutor and learner. So the selection of skills-oriented and skills-developing type of exercises is of paramount significance because they contribute to the building up of learner's confidence, and is a real incentive for further practice. Each session is provided with a panel of such exercises including:

- A matching exercise;
- A multiple choice exercise;
- A gap-filling exercise;
- An open question.

Varieties of connections to other web sites provide opportunities for the learner to convert information into knowledge and make it meaningful by applying it to a concrete human activity. During the distance course of education, learners are assessed formally. The formal assessment is a continuous assessment of a learner's contribution. It indicates learners' level of achievement on the course and the standard attained. It is intended to verify how well learners are able to meet the session objectives on the one hand, and the degree of transfer of knowledge they can make, on the other.

The distance course materials include [4]:

- A brief course description and table of contents;
- Instructor's e-mail address, telephone, faxes number, and regular mailing address including office hours;
- A complete course overview including course goals and objectives and a "HOW TO LEARN" module;

- A list of all exercises, assignments and other course tasks;
- Additional activities can be added for students who need remedial or advanced work;
- Explicit information on how students will be graded on assignments, tests, participation;
- A list of required texts, reading materials and other learning resources;
- A clear statement of the roles and responsibilities of the instructor and students;
- A course schedule giving clear deadlines for assignments due. Each assignment should be linked to relevant course documents;
- Another separate schedule should list the tests dates and examination dates;
- Specialized information on the technology used and how to manipulate the online environment, course software or hardware;
- A student course evaluation form and a general student feedback page to take;
- Comments while the course are in progress;
- A roadmap of the hypertext environment showing the structure includes a subject index and if possible a text search facility.

METHODOLOGICAL ASPECTS

There are some basic requirements applied to the effective use of any learning environment, which we are not forget in the case of WWW-based distance learning either [7]. It includes:

- Clearly supportive to the learning objectives;
- One that learners find attractive to learn;
- Available to the learners – where and when they need it;
- Convenient for the learners to use and to control the timing and their own pace of learning.

The learning in the new hyperlinked environment contributes to the building up of a number of skills, which are to become inherent in the educational practices of the new generation of learners, such as:

- To quickly orient oneself, locate and pick the needed information in the WWW environment;
- To communicate critically by e-mail (e.g. to back up one's ideas, ask for advice, etc.);
- To learn how to do project work;
- To select, process and summarize information in the form of essay (portfolios);

- To apply knowledge to a problem-solving situation (case study).

COURSE DESIGN

While there is considerable experience with the design of courses involving television-type (tele-learning and video-conferencing) as well as computer conferencing, a relatively new design area is that of courses entirely conducted via a computer network primarily the Internet [3, 5]. This sort of course design must take account of the specific character of the hyperlinked medium with a number of key design issues:

- The balance between links and references to external sources and locally available materials;
- The extent to which communication and information should be integrated in the course;
- The design of the WWW site as an interactive learning site;
- The learning materials in the course site are hyperlinked so that the learner is encouraged to search and move about as she/he wishes;
- Proper choice of the background color and the lettering color – psychologically recommended color combinations must be used for the total design of the site so that the learner can make the most of the supplied information;
- Proper choice of letter type – the text can be made best readable for the learner if the letters are middle-sized;
- Organizing the text content related to the use of hyperlinks. When structuring the text, it is advisable to use the pseudo-linear method, where at the beginning of the session the learner is given the content of the main items and by means of hyperlinks she/he can easily refer to any topic she/he wishes to go. Apart from references to each content item, links can be formed, if necessary within paragraphs themselves;
- Proper choice of visuals, which to be included in the text. It will be for the length of the site if color pictures are included in the total design. Beware for graphic drawings and formats, which will burden and delay the loading of the WWW site;
- Use of graphs and charts in the texts to visualize the content. Perception and apprehension of the learning content is enhanced in the cases within graphs and charts are used;
- Observing uniform design in the making of each session. Uniform graphic and color design of the sessions should be observed throughout the course. Different size or color type, different background color or different layout of the information should not be admitted. The same relates to the web sites with the right

answers of the lessons' exercises as well as the references to other WWW pages;

- Consistency in the content structure. Each session should be compiled of one and the same parts. It is advisable all correct answers to be supplied in another file. The same file may provide the hyperlinks to sites with related to the topic information;
- Links to other WWW sites related to the learning material. Learners can visit other listed sites related to the session so as to enrich their knowledge and gain experience with practice examples. They can automatically get access to the places and from there they can access further information, which, in actual facts, augments the accessible sources of information and makes them infinite;
- Students evaluate all developed courses materials and then they are rewrite.

THE DISTANCE EDUCATION COURSE “MANAGEMENT SUPPORT SYSTEMS”

The course was design and realize for the students in the Faculty of Economics and Business Administration, Sofia University. Milena Dumanova made part of the realization. The course design include [6]:

- Identify the significant features of a decision environment;
- Distinguish between quantitative and qualitative decision making;
- Understand the modeling process and how it can be enhanced with the use of mathematical and other models;
- Describe the characteristics, features and structure of Decision Support Systems, Group Decision Support Systems, and Expert Systems;
- Use Management Support Systems tools and build small demonstrators of Management Support Systems;
- Participate in structured and semi-structured approaches to problem solving;
- Select appropriate tools and techniques for application to a range of problem types;
- Comprehend the various implementation issues and strategies for successful implementation and appreciate the organizational, technological, legal and social impacts of Management Support Systems.

CONCLUSIONS

Like the development of good textbooks, the development of good educational software is a long-term process of trial and error that will need continuously to draw on the experience of the best tutors, those who are responding to the needs of individual learners. As the experience of the application of the new technologies grows, tutors are likely to exert a stronger influence than they have had up to now on the development of these technologies into effective teaching and learning tools. Let's hope that in the very near future both learners and tutors will have the expertise to endlessly surf the Internet without getting lost on the "information superhighway".

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