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Using Information Technology in Legal Education: Two Examples

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Introduction

The use of information technology in teaching law at universities in the Netherlands is still in its infancy. In this paper we argue that computer assisted instruction as well as the use of internet, more specific electronic mail, could be of additional value in the teaching of law.

Computer assisted learning already has a history of research, development and actual use. In a number of disciplines the use of computer assisted learning material in the curriculum is accepted and evaluated positively. However, this is not the case within the faculties of law in the Netherlands. One of the reasons for this is that faculties are not able or willing to structurally plan the development and introduction of computer assisted learning. As a consequence there is no time and no money available for developing applications and for introducing these new learning devices in the practice of teaching. A well guided introduction is of major importance to be able to handle the lack of knowledge and the scepticism law teachers have regarding these programs.

At the department of Computer Science & Law, research is carried out in the field of (intelligent) computer assisted instruction (Muntjewerff, 1993b; Muntjewerff, 1994). However, this research project is primarily concerned with theoretical questions regarding computer assisted instruction and intelligent tutoring systems. Only when hypotheses stated in the research are tested by means of an implementation will it result in an application. This application will need to be developed further, to be of use as an application in legal education. A project directed towards developing working systems that can actually be used in teaching law is necessary. In particular, this project should include consultation of, and co-operation with, the teachers who are to use the application in the future.

A project proposed by a number of law faculties from different universities in the Netherlands is described. This project is concerned with the development of computer assisted instructional applications to teach law students methods of legal case-solving. This project may be of major importance to introduce computer assisted learning to the law faculties in the Netherlands.

Although computer assisted instructional applications already have some history, the introduction the Internet to a wider audience has only just started. In the Netherlands the Internet is very popular at the moment, although not many people know quite what it is and what the possibilities are. It is important to provide law teachers with examples of how they may use the Internet for teaching and learning. Otherwise teachers will certainly be disappointed after the first enthusiasm, and leave the tool for what it is. To be more than just a new toy, it is important that these tools are used functionally in the course of teaching. Experience with using electronic mail in a course on legal knowledge based systems is described. This way of electronic communication appears to add value to the standard ways of communication between teacher and students.

The project on computer assisted case solving in law

The project is a proposal within the theme "Information technology in higher education". Given the fact that the use of information technology within legal education is running behind compared to other disciplines, extra attention will be given to proposals from the field of law. For the first time there seems to be support from the Ministry of Education and Science, the governing bodies of the universities and the co-operating faculties of law to start a project on information technology and law, more specifically, the development and introduction of computer assisted applications for legal education. The project proposal is made by four law faculties in the Netherlands and the educational technology innovation centre of the Open University in the Netherlands. The title of the project is "Computer Assisted Case Solving in Law". The proposed duration of the project is three years. The project should result in two applications for case-solving within two different legal domains and a general environment to be able to develop more applications in other legal domains after the project is finished.

Aims of the project

The main idea behind the project is to introduce and use information technology in legal education in a functional way. With the development of specific computer assisted learning applications the project aims at improving the quality of education, the attractiveness of the education and the efficiency of teaching. The project aims to increase the quality and quantity of training opportunities for legal case-solving by law students. To give law students a computer based case-solving application is a way of offering them extra individual training opportunities. During a training session on the computer the student gets information and explanations about the mistakes made and about the specific difficulties experienced. By solving cases using the application, the student can work at the time it suits her and in a pace that suits her. The proposed applications offer a systematic approach to solving a legal case and the entire case-solving process is included.

Some preconditions for success with regard to the project and the introduction of computer assisted instruction in the law faculty are formulated within the project proposal. These preconditions are very important for the success of introducing this technology structurally and permanently. If there is no commitment on these preconditions the project is doomed to fail. The most important precondition is that the applications should be included in the regular law curriculum in such a way that the applications are part of the course. Just as important is the requirement that the law teachers conerned are involved in the project as (teaching) experts in their discipline. To be able to develop more specific applications in other legal domains, it is necessary to develop a kind of environment to be able to develop more applications in various legal domains. The applications proposed are concerned with solving legal cases, it is important that the applications offer a case-solving method, a structured approach to solving cases. Research shows (Crombag et al, 1972; Crombag et al, 1977; Muntjewerff, 1993a) that there is a lack of such a method in teaching case solving in legal education at present. To construct such a method would certainly add something to the quality of teaching.

Project description

Cases, (either hypothetical or based on real cases) are frequently used in Dutch legal education. A common method in teaching areas of law is to make use of (hypothetical) cases that need to be solved by the student. However, law professors have difficulties with teaching case-solving and students experience difficulties solving these legal cases. The main problem appears to be the lack of an explicit, teachable and learnable method for legal case-solving. Another problem is the lack of training possibilities for students, combined with the unrealistic nature of the cases presented to them. The main educational goals of solving cases are (for a student) to learn to handle the theoretical concepts in a specific field of law; to learn to find and apply rules; to learn to plan the courses of action and to learn to construct a justifiable solution. Students have to learn how to apply the abstract theoretical knowledge in a concrete situation.

The way cases are used in legal education at the moment leaves out a number of issues that are important for students to learn (Crombag et al, 1972, Crombag et al, 1977). For example:

- the search for facts. The case is tailor made, all the facts needed for the solution are already in the presented case and are stated as facts not to be questioned. In reality, the case has to be (re)constructed first. Facts have to be gathered and proved.
- the assessment of facts. The case as it is presented is stated as true, the student is not allowed to doubt the case and the facts stated within.
- the selection of the applicable rules. The case is set within a specific field of law which restricts the set of rules that are applicable. In reality choosing the applicable area of law is a necessary step in the case solving process.
- balancing alternatives. Handling a legal problem allows different ways towards a solution. The tailor made cases however do not allow the student to provide alternatives.
- the construction of a plan to proceed. Even when the facts and rules are clear, it has to be sorted out how the goals stated can be achieved. Possible moves of the adversary have to be taken into account; alternative plans should be constructed on the basis of possible moves of the other parties.
- a written elaboration of the plan chosen. The handling of a legal case involves writing letters, designing contracts and documents relating to the case (case files) and memos.

All these aspects should be taken into account if more realistic cases are to be presented.

In the Netherlands little research has been done on legal case solving (Crombag et al, 1972; Crombag et al, 1977; Abas & Broekers-Knol, 1985). Confronted with the lack of an explicit method to be used in legal education to instruct law students on how to solve a legal case, Crombag et al (1972) emphasized the need for such an explicit method and started research to develop a method for solving legal cases. The problem solving process of legal practitioners (judges in the field of civil law) was studied. Thinking aloud protocols were gathered and a rational reconstruction of the problem solving process was performed. Crombag et al (1977) proposed a theory on decision making by judges. The way this

process was modelled was the point of departure for constructing a method to be used in education.

This method consists of a series of steps to be taken by the student in the course of case solving. The main steps are:

- schematize the case;
- determine main problem;
- translate claim;
- select legal rules that apply to the legal situation;
- determine the conditions under which the claim is awarded;
- apply rule, determine consequences;
- determine if the result is acceptable;
- formulate result.

The method described by Abas & Broekers-Knol (1985) is mainly based on Crombag et al (1977).

The project proposes to develop two applications with which a law student may practice legal case-solving in a specific legal domain. The application will support the student in solving the case systematically and provides explanation and information to the student about her performance. To enhance the realistic quality of case solving and to increase the motivation of the students, multi-media techniques will be used.

Project organization

The most important aspect in the organization of the project is the need for co-operation and consultation of the teachers. Teachers should be informed about the project from the start and they should be invited to participate. Without their co-operation the project will fail. The fact that the project is a collaboration of four different faculties and the Open University, makes is necessary to have a contact within each faculty and at the Open University. The appointment of an 'ambassador' who should try to organize support from the teachers and the faculties, is another option. In the project team content experts (legal practitioners, law teachers), information technologists as well as educational technologists should work together. It is important that faculties and teachers are convinced of the fact that a team of qualified experts is needed to develop the proposed applications.

Project activities

The project activities arranged will conform to standard design and development approaches regarding information technological applications (i.e. analysis, design, implementation, testing and maintenance). It is emphasized that the activities concerning the project organization are important right from the start of the project, activities such as informing the faculties, and especially the teachers. Another major activity will be the analysis of the literature on legal case-solving and the analysis of the legal domains that will be chosen as the content domains of the applications to be. The construction of a method for legal case-solving that can be performed by the computer is also a major activity.

At this moment the project proposal is evaluated and assessed for the final decision for financing. For the introduction of computer assisted instruction in legal education, moreover for information technology in general, it is of major importance that the project is financed. Part of the project is the commitment of the faculties of law to structurally introduce computer assisted instructional material in the curriculum. Without this project making it possible to finance the development of computer assisted applications, the introduction of computer assisted programmes will certainly be out of the picture for a while. It is important that the faculties agree to the fact that developing computer assisted software is time and money consuming and needs to be carried out by a team of experts. It is also important that teachers experience that computer assisted learning materials add something to their teaching and is not intended to replace them as teachers. Applications of good quality may improve the quality of education.

An example of using electronic mail in teaching

The department of Computer Science and Law at the faculty of law of the University of Amsterdam offers law students a course on legal knowledge based systems. The course has a theoretical and a practical component. In working groups the students get an introduction to Artificial Intelligence & Law. This research field is concerned with representing law in computer programs using Artificial Intelligence techniques. Subjects such as legal knowledge based systems, automated legal reasoning, legal knowledge representation and legal knowledge engineering are part of this introduction. In the course much time is spent on hands on experience. Students need to design and implement a legal knowledge based system themselves. In this part of the course the students are asked to apply the theoretical knowledge. The students use a simple knowledge engineering shell programme called KES. They have to analyse a legal domain and then represent the knowledge using production rules as a formalism. Although many students have no computer experience at all, let alone

programming experience, all of them are able to finish a small programme. The hands-on experience is highly valuable to the students: they learn how to handle the computer and they experience the difficulties analysing law and representing it in a computer programme (subjects that are introduced to them in the theoretical lessons). The practical experience results in more insight because they have actually experienced the problems as stated in the literature and therefore are better able to comprehend the solutions. They also discover that the computer is a programmable machine.

Electronic mail

The computers that are used in this course have a connection to internet. Electronic mail has been used in the course for six years now as a communication device. The students work on their assignments and their programming task individually, some working at home where they have a computer and a modem. Assignments are mailed to the students and they mail their work back to the teacher as well as their questions. Students are also stimulated to discuss issues with each other via electronic mail. They mail to students at other faculties and universities in the Netherlands and abroad. Beside the pleasure they experience in mailing (it is easy, cheap and fast) it also leads to a more active approach to their work. Interaction between the teacher and the student is increased, without the disadvantage of a student having to make an appointment or being afraid to disturb the teacher. The student can mail the problem at any moment, the teacher can mail back whenever she has time. Also parts of the programming code can be mailed so that the teacher can see what is wrong and can easily run the program herself and mail it back with comments.

Because many of the problems that students experience in the course are standard, or are reappearing through the years, a standard answer framework was formulated. When a student has a problem, most of the time an answer is already available and the teacher only has to mail it to the student. A kind of database of answers has evolved. Electronic mail is used as a means to send lessons, literature, assignments, programmes, examinations, questions, difficulties, answers and solutions back and forth.

Summary

The use of information technology in legal education in the Netherlands is still in its infancy. Computer assisted instruction may be of use in legal education. However a structural approach towards developing, introducing and maintaining these applications is required. Universities, as well as faculties, should delineate a policy concerning the use of computer assisted instruction. Part of this policy should be the financing of projects that develop suitable applications. The project proposal that is discussed above could be the start of a more structural approach towards introducing computer assisted instruction into legal education.

It is emphasized that law teachers should be convinced of the added value of using information technology in their teaching by becoming involved in information technology projects from the start. The need for examples of the use of information technology in teaching is also important. An example of using electronic mail in a course on legal knowledge based systems offered to law students is described. It is a simple but effective application of electronic mail.

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