

TEACHING AND LEARNING JURIDICAL SCIENCES BY MEANS OF CONCEPTUAL MAPS. A TRIAL WITH CMAPTOOLS

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Abstract

In the European Higher Education Area (EHEA), teachers can organize the resources and material of their courses depending on their own teaching methodology. This is also possible thanks to the neutral character of UCM virtual campus.

Related to this, UCM virtual campus responsables have explored and investigated new tools and means of learning that could be applied to law teaching, especially commercial and civil law. By using them, pupils would be allowed to transform the new information in internal knowledge in a more efficient and easy way.

One of these tools is *cmaptool*, by means of which conceptual maps, can be created. These conceptual maps are a valuable graphic representation for both law teaching and learning, while they allow pupils to share and organize this new knowledge .

Specifically, two different conceptual maps models have been designed:

Model 1. Organization of the subject of Commercial law in the Degree of Law. Author: M^a de la Sierra Flores Doña.

Model 2. Organization for the learning of the conciliation and mediation. Author: Marta Blanco Carrasco.

Keywords - teaching in law (docencia en Derecho), innovation (innovación), *cmaptools* (mapa conceptual), learning (aprendizaje)

1 TEACHING ORIENTED TOWARDS A MEANINGFUL LEARNING IN LEGAL SCIENCE, USING AN INTEGRATED VIRTUAL CAMPUS

Within the policy framework designed for college in the European Higher Education Area (EHEA), the Spanish lawmaker is committed to a "quality education" that provides "scientific knowledge" and is "appropriate to occupation." This is stated in Art. 33.1 of Organic Law University [LOU, 6 / 2001 of 21 December, LOU amended by 4/ 2007 of 12 April) and is implemented in its implementing measures (including Royal Decree 1125/2003 of 5 September, which establishes the European credit and grading system in the official university degrees, valid throughout the whole national territory.

Focusing on the legal science studies, the primary objectives of the harmonized university regulation are the following: (i) to enable students to identify pieces of reality within the different subjects, thus understanding the interests involved and the principles underlying the legal system of disciplines included in the Grade title, (ii) provide students with tools and strategies needed for the meaningful learning of the issues related to the multiple legal institutions that make up the graduate degree in law.

1.1 Knowledge competence and student training for developing specific skills and abilities needed in practice as assumptions *ex lege*

The scientific-technological model chosen for the EHEA, which cognitive-constructive basis is inspired in the theory of education [1], aims at achieving the policy objectives. This university education model is oriented towards a meaningful learning, as, by using the same, the learner "relates what he knows" [2], ie, students internalize the new information the professor provides and/or that they discover and, at the same time, they can relate this information to existing knowledge and ideas they already have. The effectiveness of this meaningful learning requires the following assumptions or conditions: (i) relevant prior knowledge, ie information acquired and (ii) significant material; this is, new knowledge (iii) conscious and deliberate decision by the student to establish a relationship between prior and new knowledge. With all these requirements, the result would be the "integration of new knowledge into the prior knowledge, according to an organized structure [3]". On this basis," the European model focuses on skills, defined as a combination of attributes related to knowledge as well as its applications, aptitudes, skills and responsibilities, which describe the level or degree of proficiency with which a person is able to perform work "[4].

The reflective reading of this legal framework adapted to the field of law, and specifically the subject of Business Law and Civil Law, is determined by the following assumptions and subsequent achievement of competencies: (i) the theoretical teaching approach aimed at achieving that the student knows and understands, that is, that the student identifies and learns how to relate the legal institutions involved in the subject of commercial law (company, employer, Trade Register, Accounting, Unfair Competition, Industrial Property, Alternative Systems of Conflict Resolution) and Civil Law (Obligations, Contract Theory and its classes, Family Law), (ii) the practical teaching approach, which consists of the use of legal skills learned at some real-life situations: in our case, case simulation, for example, steps needed for starting a business, review of forms for a will, contract, create a company or a foundation, evaluative analysis of administrative or judicial decisions, etc. In this way students acquire the skills related to the "know how to act" and "know how to be", by transmitting values as an integral part of how to perceive others and live in a social context [4].

1.2 Platforms used in order to design the subject within the Virtual Campus of the Universidad Complutense de Madrid

This model of teaching has been implemented in the private law area, specifically in the design of Commercial Law and Civil Law subjects, which are developed in the Virtual Campus of the UCM (CV-UCM) and taught by the authors of this paper.

The Virtual Campus of the UCM follows a professor-centered model as it serves the needs required by the professors in order to develop their teaching and research activities[5]. This reference model centred in the professor implies: (i) Neutrality, as the professor can decide on which platform or platforms to use in order to develop the courses, seminars and web pages, (ii) Flexibility of the model to accommodate the different designs and internal structures of the material and resources organized by each professor to develop or manage their teaching and research activity. Among other possibilities, the professor can create closed or open spaces on the campus, so that the course has a restricted visibility to registered profiles or remain open in the Internet. Furthermore, by means of different profiles or roles such as professor, assistant, visitor or student, professors can choose several course management levels, either in an individual or group way (sharing the course administration with several professors and an assistant) [5] . With this model, the UCM professor is the main actor within the virtual campus, since he assumes the responsibility for designing and managing his courses and spaces [6].

2 CMAPTOOLS IMPLEMENTATION DESIGN IN LEGAL SCIENCES. TWO TESTED CASES

The neutral character of the virtual campus UCM allows the professor to organize resources and materials of any of the courses, according to his methodology and way of teaching. This technological flexibility has allowed law professors to explore tools and applications to multiply the intellectual potential of the students, as well as to study programs, select, innovate and apply these tools to the field of commercial and civil law. This has been done in order to optimize teaching activities that allow students to increase their knowledge, to discover "new knowledge" and integrate it with the information already stored and acquired through the speech of the professor or other readings, and, as a result, rearrange, modify and link all the cognitive structure.

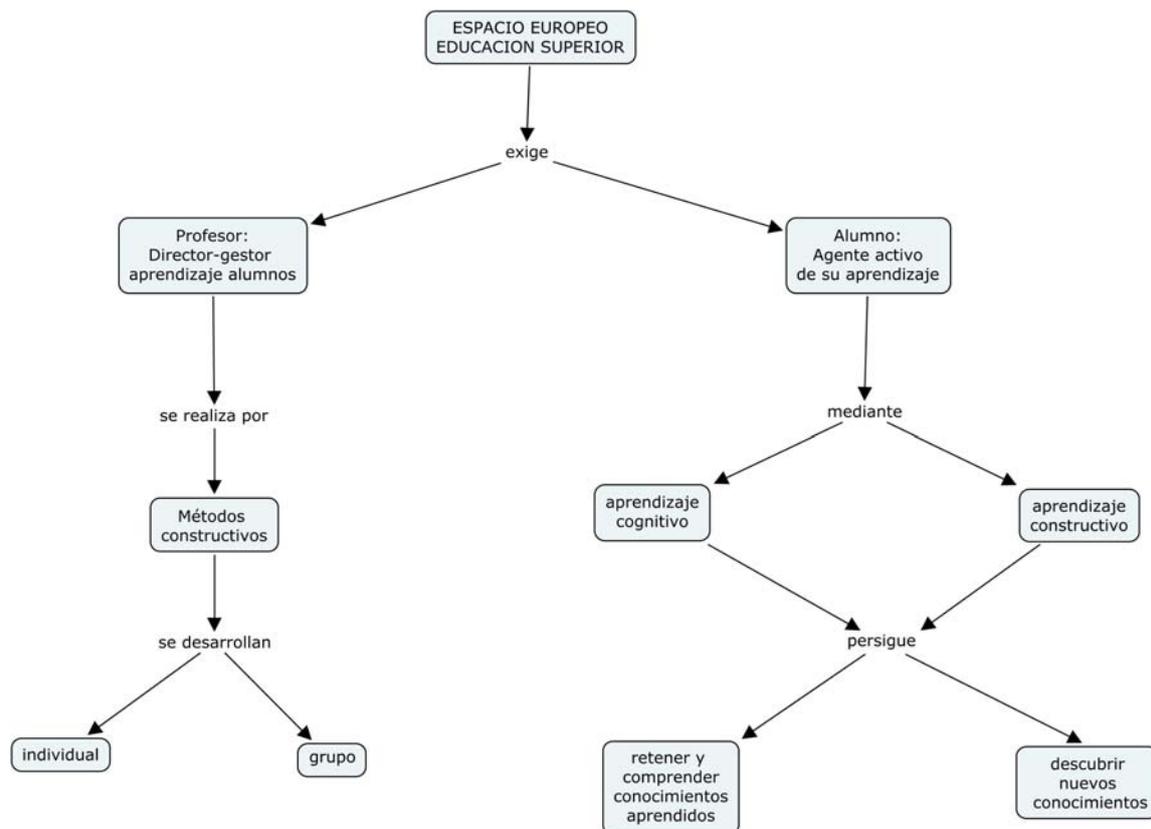


Fig.1, "Concept map, representative of the organization of the subject of Law degree adapted to the EHEA"

2.1 Teaching modeling and educational dimensions

The teaching and learning of Business Law and Civil Law follows a blended-learning model (b-learning), which consists of coordinating and combining both face teaching (teaching, learning, activities) and distance activities. The flexible configuration of open spaces for the above mentioned subjects in the CV-UCM facilitates the interaction of all elements involved in the training (professor-student-material-resource-assessment), through an integrated process for "educational events" concatenated in order to lead the student in the training and understanding of these knowledge areas, in order to provide all the needed skills for professional performance, as required by university regulations.

The cognitive model is followed in the main program for each subject, which are explained by the professor in the classroom. This teaching method is primarily used in the first weeks of the course in order to provide the knowledge and methodology, in an organized manner, about the whole discipline or a particular legal institution. It consists basically of the theoretical explanation of the contents that

make up the different lessons of the program: contextual framework for analysis (Entrepreneur, Business Register, competition in regard to the Trade Law), development of the legal system, referring to practical applications and paying special attention to the case studies in which groups of students work. Both learning this issues and the use of open space for the subjects in the CV-UCM are used at the same time.

The rest of teaching activities follow a model that emphasizes the interactive construction of knowledge through open spaces for the aforementioned subjects, so that students apply the acquired knowledge, discuss among them about issues they discover, solve problems they find and participate and succeed in pilot activities. For this reason, there are many tools available for students at E-Trade that enable them to access and share bibliographic information they require (through institutional and corporate links) as well as to interact among themselves by means of continuous communication, synchronous or asynchronous (skype, forum, etc); these tools also allow students to structure the tasks and organize the final information results to be submitted (forms for summary judgments and other commercial documentation, conceptual paintings, glossary using database).

2.2 Organization model for the course on Law in the Bachelor of Law. Case "Our company"

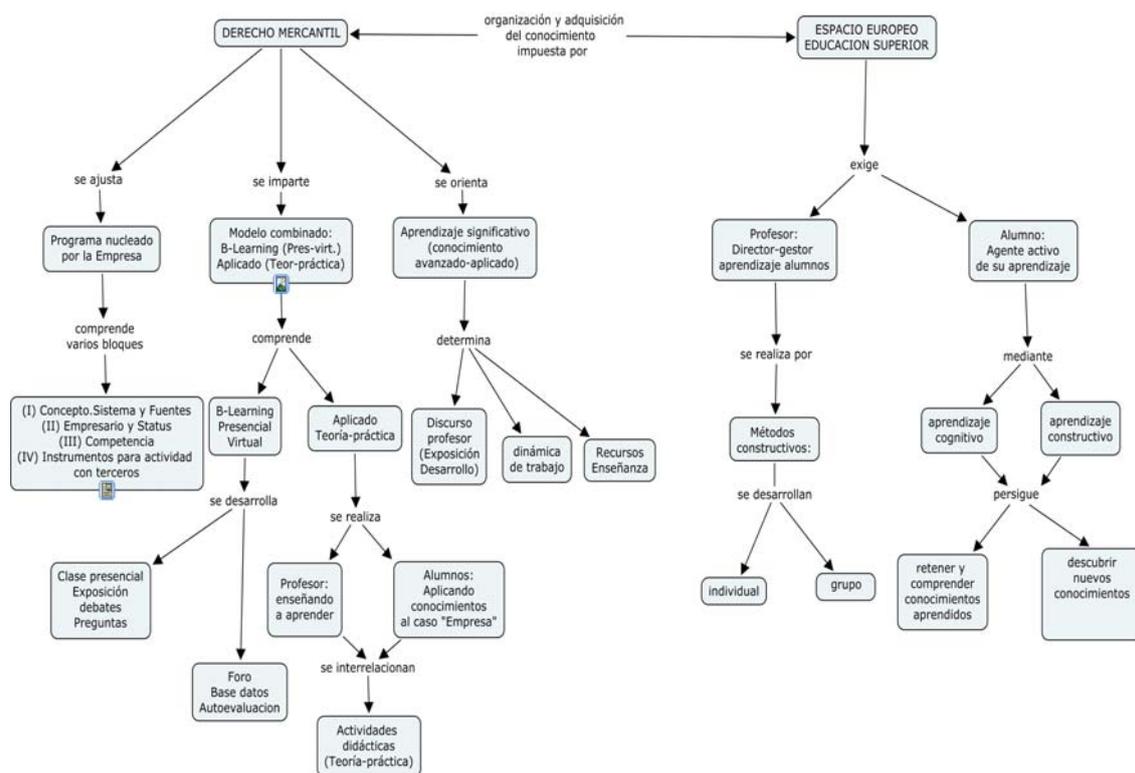


Fig. 2, "Organization model of the course on company Law in the Bachelor of Law. Author: M^a de la Sierra Flores Doña

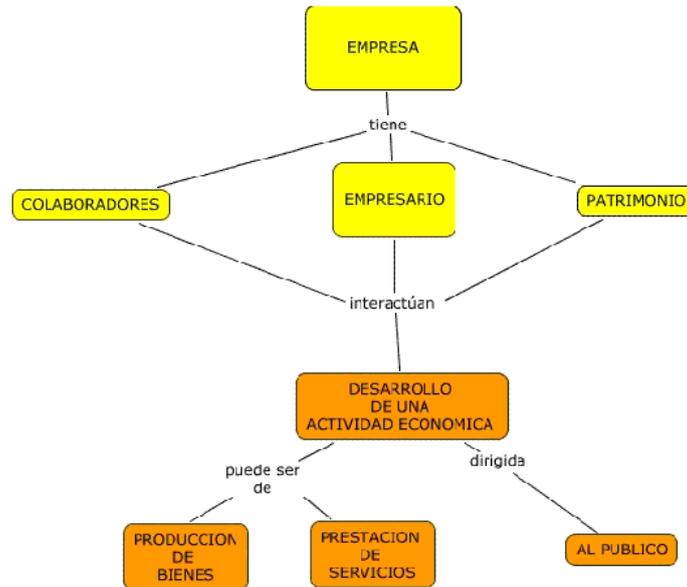


Fig 3, "representation model of the "company"" meaning, made with the *CmapTools* program that serves as common reference for students to organize the knowledge of their "company ", directly obtained from the *Website* and contrasted with commercial law. Author: M^a de la Sierra Flores Doña

2.3 Model for Learning organization of court settlements to resolve conflicts. Case "Conciliation and Mediation"

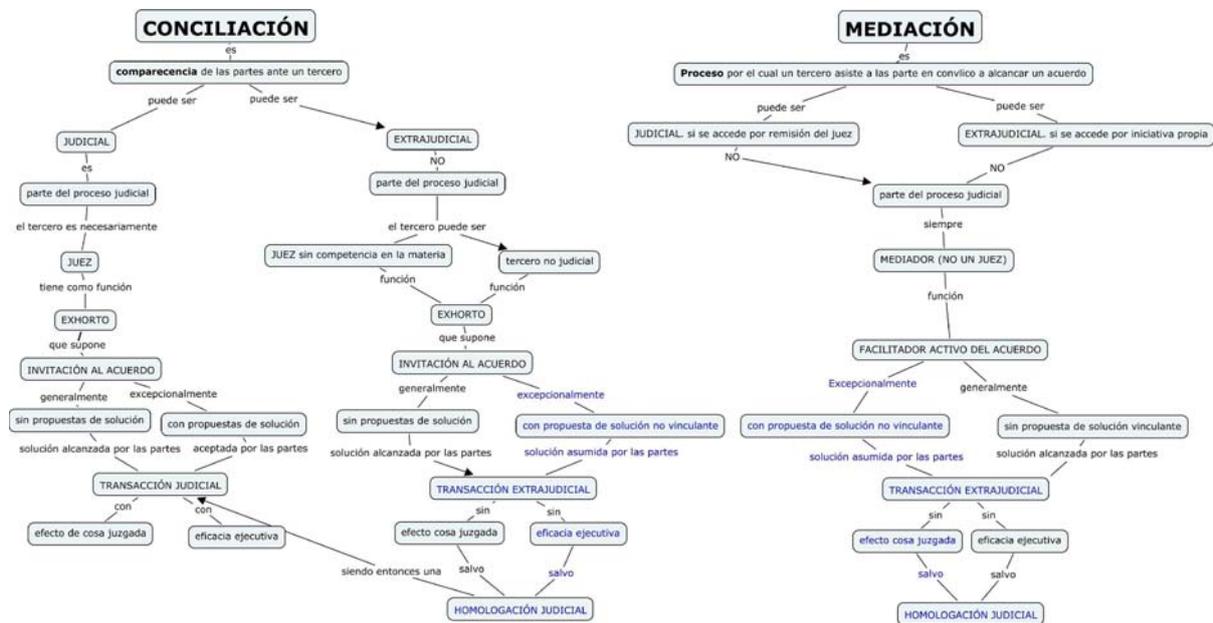


Fig.4, "Model for organizing the study of conciliation and mediation. Author: Marta Blanco Carrasco"

3 PLANNING AND IMPLEMENTATION OF DIDACTIC ACTIVITIES MODELING: SCENARIOS, RESOURCES

3.1 Logical Development using *CmapTools*

Student involvement is central to a teaching model which, like the EHEA, emphasizes the constructive learning model. The exploration of instruments and tools with successive groups of students enrolled in Business Law and Civil Law has led us to integrate conceptual maps as a mean of graphic representation of knowledge. With this method, learning of a legal matter is discovered by the student from the conjunction of the different concepts and propositions that make up each of the terms, which are the propositions and links that make up the respective conceptual maps.

The free and open access tool "CmapTools" has been chosen for students to develop, individually or collaboratively different "terms, concepts and relationships" involved in the subjects studied. The subsequent realization of "concept maps" facilitates the construction of knowledge models. This method of "constructive partner" contributes to meaningful learning simplifying thus the "assimilation and understanding process of the issues involved in the subjects of Commercial Law and Civil Law.

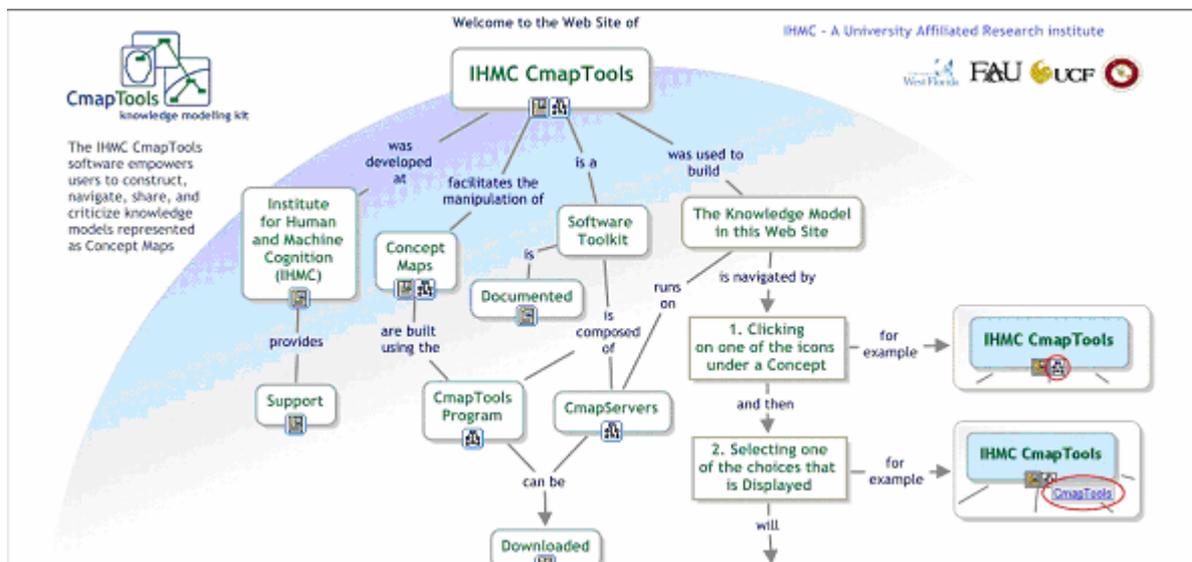


Fig.5, "Home website of the *Institute for Human and Machine Cognition (IHMC)*, from which *CmapTools* program can be downloaded. [Http://cmap.ihmc.us/conceptmap.html](http://cmap.ihmc.us/conceptmap.html).

3.2 Educational activities: scenarios and resources

Under this approach the professor must plan instructional activities, together with their respective sites and resources. In summary, taking as example the entrepreneur, its construction is done through: (i) a theoretical foundation of knowledge provided by the professor and (ii) an applied basis, through the knowledge extracted from the *website* of the company assigned to each group of students (among those studied such as Bimbo, Mango, Ing Direct, Iberia), the work system would develop in the following phases with their respective activities and teaching resources.

First Phase: the discourse of the professor as a lesson that would be about: the concept and modalities of the employer, the legal consequences of employer status, relationship between the employer and its employees. During this phase, the professor assumes the main role and students can participate by asking questions or expressing an opinion. This information would provide the students with essential theoretical knowledge.

Phase Two: Application of the acquired knowledge to the case study assigned to each group and construction of specific knowledge. The professor will instruct students about the information data that each group must extract about the entrepreneur who appears on the *website* of your company. During this phase, the student has a leading role and there is no need to attend classes. The student will have different multimedia material, such as audiovisual presentation of the lesson, links to legal databases and specific articles on the subject.

Phase Three: Communication and interaction among students, through the Forum. The communication of the information requested is published in the Forum. With the completion of this activity, the student extracts the information from the web and transform it into legal language, hence it somehow "build their own knowledge". As the owner of the company could be, for example "a limited liability company, whose characteristics and legal status are different to the "knowledge" general concept of employer transmitted by the professor, it then adds and integrates the knowledge received. Teaching and other activities are optimized with the use of communicative spaces such as forum, chat or electronic whiteboard. By using these tools, interactivity between students and professor take place, so that students can discover "new knowledge", "change the grandfathering", "strengthen" in short, reorganize, consolidate and link all the cognitive structure around the entrepreneur.

Phase Four: Presentation and oral defense of the results. The oral presentation is made by a "Powerpoint presentation, the content must conform to the model pre-designed by the professor.. Each group member orally defends the part that is responsible for, thereby facilitating the formulation of questions by other students and the individual assessment of each student.

The "company study" involves learning as well as interactive personal and social development. The other school activities follow a similar teaching and learning process. They have in common to combine legal learning, with personal and social development of students. The study of Business Law by starting a business is a method that encourages students to: (i) apply the knowledge acquired, (ii) make it easier to discover other knowledge through the information in the *Website* of the company itself (for example, business model, a multinational, family-owned, codes of conduct and court procedures). This "relevant information" gives the student knowledge that is essential and necessary to go on with the study of the company and to solve problems that could arise in the real life. And all this through a combination of four ideas: "learning"-the company-"how to learn to cooperate and work," "where to learn"-class CV-UCM and website of the company "and" what to learn" in order to use the knowledge in a proper way [4].

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