

**13<sup>TH</sup> INTERNATIONAL CONFERENCE: INVENTICA 2009**  
**4-6 JUNE, 2009 IASI, ROMANIA**

**A- PAPER PRESENTED**

**E-LEARNING MODULES FOR FOOTWEAR INDUSTRY- VIRTUAL  
 TRAINING CENTER FOR SHOE DESIGN**

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**Key words:** e-learning, footwear design, curriculum

**Abstract:** The aim of this paper is to introduce a Leonardo da Vinci project, titled "Virtual Training Centre for Shoe Design", which is a Development of Innovation project. The project's scientific and pedagogic objectives are in tune with the main priority in Lifelong Learning Programme. Project partners have developed training materials for shoe design in their native language. These materials have to be compared between involved partners in order to get common curricula to be share with future users at a European level. The innovative e-content, developed within the VTC-Shoe project, can easily be transferred in many others European countries.

### 1. Introduction

The changing needs in training, in terms of both quantity and quality, calls for promoting competitiveness and employment on the European footwear industry (Com. SW Doc., 2001). In order to foster use of information and communications technologies in footwear industry, the Lifelong Learning Programme can be regarded as an opportunity to overcome the challenges in this field by focusing on the development of innovation and good practice (Decision No: 1720/2006/Ec). One of the major problems of the footwear industry at the moment is that the overall level of skills and qualifications needs to be raised and, therefore, it is also necessary for training modules to respond to the continuous evolution in the workplace so as to confront the problem of unemployment and increased competition. Although the industry is asking for shoe designers as professionals, the lack of training in this area, on various levels, has been detected in some countries.

The scope of the study is the introduction of the steps taken for the construction of a virtual environment for shoe design training as a model, within the framework of a Leonardo da Vinci project, titled "Virtual Training Centre for Shoe Design".

The Virtual Training Centre for Shoe Design is an interactive platform, a meeting point for policy-makers, social-partners, practitioners, researchers and all those with an interest in shoe design field of vocational education and training. Experts in the field can share and exchange knowledge and experience with associates within and outside the European Union.

The study consists of two main parts: a) the curriculum developed for the virtual environment, and (b) the virtual environment itself. The first part deals with the content of the curriculum designed for basic and intermediate level. The second part deals with the methodology and approach fitting to ICT use and some sample lessons constructed so far.

### 2. Features of Virtual Training Centre for Shoe Design

**13<sup>TH</sup> INTERNATIONAL CONFERENCE: INVENTICA 2009**  
**4-6 JUNE, 2009 IASI, ROMANIA**

The content of the e-training modules was developed based on the curriculum designed according to the expectations and needs determined as a result of the data collection process applied in the countries of the project partnership: Romania, Turkey and Greece. The main features of the centre are:

**a) To contribute to the development of quality lifelong learning and to promote high performance, innovation and a European dimension in system and practice in the field.** VTC-Shoe project intends to improve vocational and educational training curricula on shoe design in Romania, Turkey and Greece by focusing on the development of innovation and good practice. The results of partners common developments will be transpose into a virtual centre, making it available on European level. By accessing the new created shoe design training course, trainers and teachers, shoe designers, adult learners, as well as trainees and apprentice will be keeping up to date with skills and knowledge necessary for high performance and innovation, both in training and shoe design. Based on availability into virtual common space of the innovative e-learning materials and training methodologies training materials, the project will make its contribution to development of single European information space ( COM, 2005).

**b) To help promote creativity, competitiveness, employability and the growth of an entrepreneurial spirit.** In a world increasingly based on knowledge and information, education and training are put at the core of the European footwear industry agenda (Com. SW Doc., 2001). The footwear companies need to make learning a lifelong endeavour deal with their employees of all ages continuously developing their skills. By creating a new e-learning content and functional web service the Virtual Training Centre for Shoe Design will help both workers and footwear companies transforming the way they learn, interact and work in order to meet the footwear sector needs for competitiveness, employability and the growth of an entrepreneurial spirit.

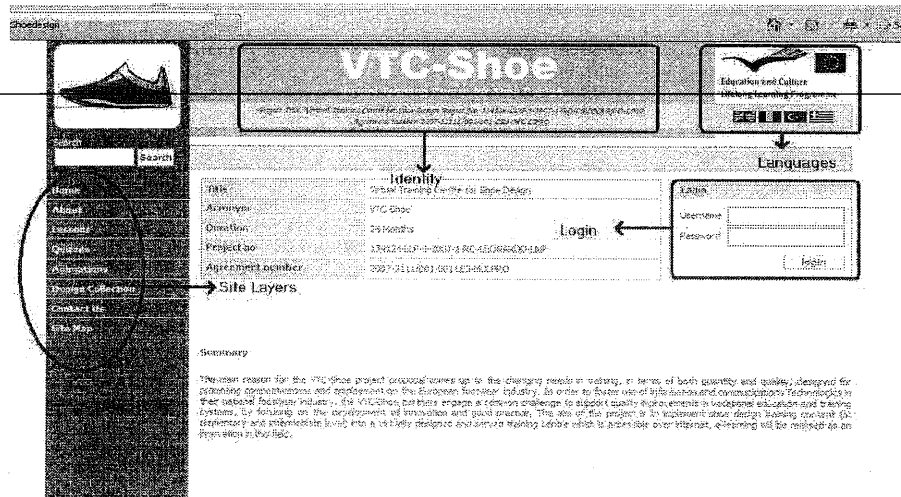
**c) To support the development of innovative ICT-based content, services, pedagogies and practice for lifelong learning.** ICT-related skills in the shoe design are also vital for the competitiveness of the footwear sector from and for increased job opportunities and employment. The concrete aim of the project is to develop a modern virtual training centre in shoe design for: 1) training the trainers, trainees at the college and technicians and apprentices for shoe design; 2) preparing shoe design technicians as intermediates having common measurable qualities the industry is seeking. VTC-Shoe project will create a common ICT-based content and will help for upgrading competences and skills of teaching staff and exchange experiences over the virtual training centre.

**d) Innovative e-learning content.** Through the educational programme and new teaching methods to be developed by implementing shoe design training content into a virtually designed and served training centre which is accessible over internet, e-learning will be realised as an innovation in this field. The project will promote and reinforce the contribution of vocational training to the process of innovation through the virtual training centre to be formed in this field and its application will set up a new and good example for virtual learning in national vocational training systems. Appropriate training/learning materials, including for less qualified workers to improve skills, will be create and new e-learning tools for training and quality management in VET will be developed.

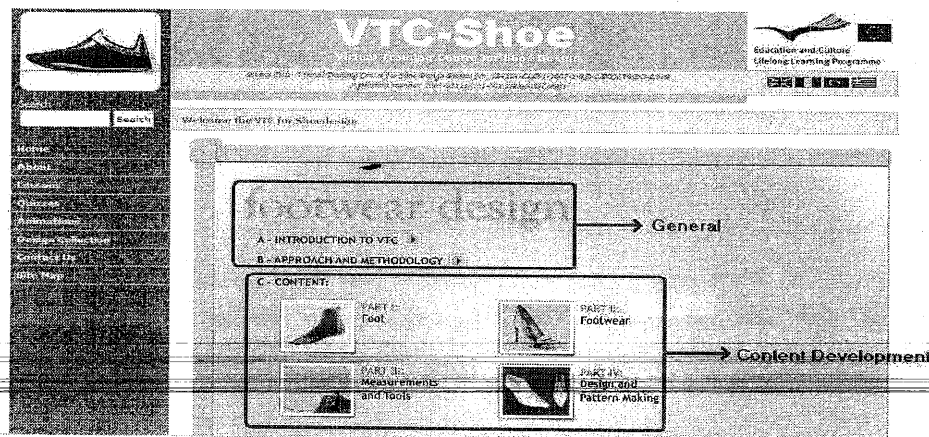
Site Layers have commands for the content of the virtual training centre: Lessons, Quizzes, Animations, Design Collection. Identity gives the title of the virtual training Centre, Agreement Number and Project Number. Flags represent the languages in which

**13<sup>TH</sup> INTERNATIONAL CONFERENCE: INVENTICA 2009**  
**4-6 JUNE, 2009 IASI, ROMANIA**

the courses are presented. Access represents Login tools: User Name and Password for the members of the virtual training course (fig. 1).



**Fig. 1.** Virtual Training Centre for Shoe Design site- <http://www.vtcforshoedesign.com>



**Fig. 2.** VTC Shoe site content

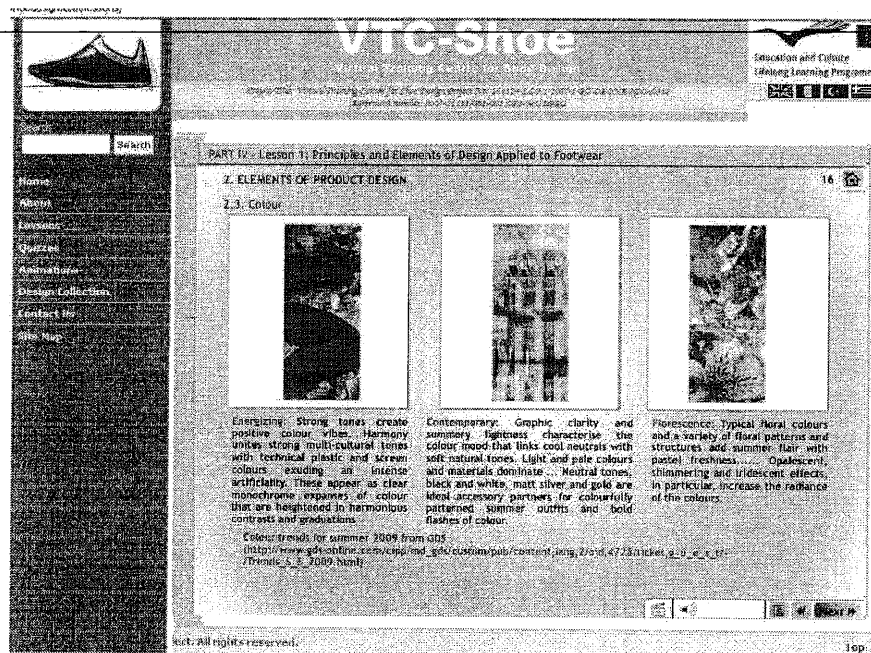
“General” includes an introduction to Virtual Training centre mentioning the design of VTC mainly. It also gives information about the approach, methodology and techniques used in the formation of VTC. “Content Development” covers the dynamic and static materials like texts, animations, pictures, etc. used in the course step by step. It covers theoretical and practical knowledge about Foot, Footwear, Measurements and Tools, and Design and Pattern Making (fig.2). Each part represents a module, with lessons given in a specific order, which follows up a common curriculum.

### **3. Presentation of Content in the Virtual Environment**

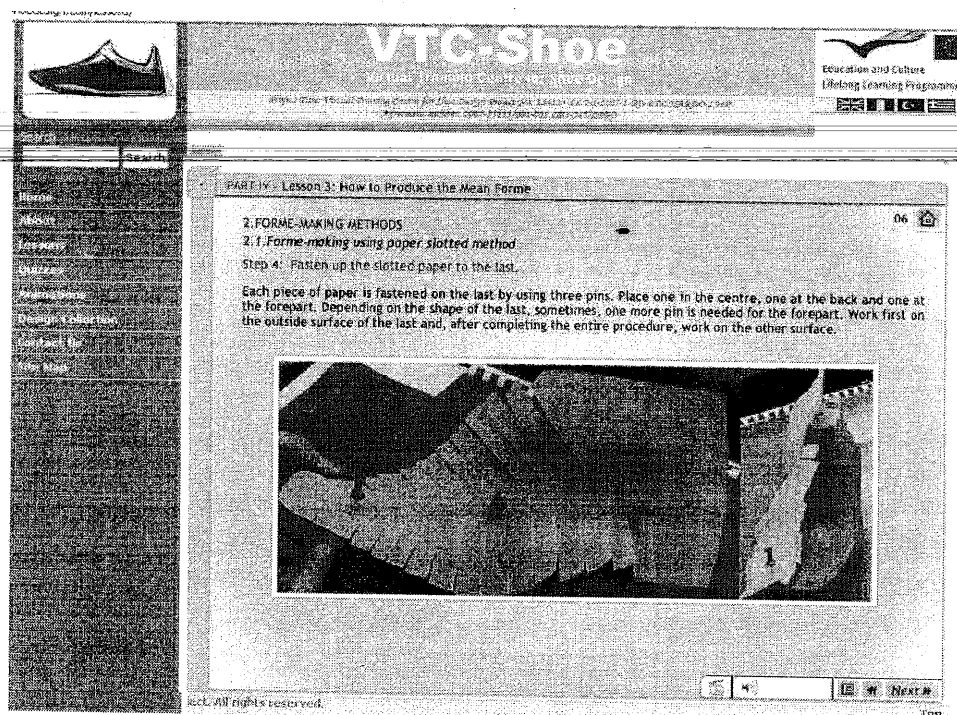
Considering the expectations of the target groups who are already engaged in IT use, the VTC-Shoe for footwear design will provide innovative technologies to enhance teaching and learning in shoe design field. With engaging content that increases students’ retention, VTC-Shoe courses can be accessed anywhere, anytime to develop individual skills in this field. The VTC-Shoe will train and develop successful designers by offering quality curricula and programs, technology support and optimal practices in footwear design field. The VTC-Shoe will provide footwear business with practical training under guidance and experience.

**13<sup>TH</sup> INTERNATIONAL CONFERENCE: INVENTICA 2009**  
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The lessons are presented in the virtual environment with the help of audio-visual aids. While the theoretical lessons are presented with the text accompanied by pictures for description, the practical ones has animations, videos and some other magnifying features in addition to the texts and pictures. The following are selected steps (from lessons) to demonstrate how the content is presented in the virtual environment (fig.3-9).



*Fig. 3. Example from lesson Principles and Elements of Design Applied to Footwear*



*Fig. 4. Example from lesson How to Produce the Mean Forme*

13<sup>TH</sup> INTERNATIONAL CONFERENCE: INVENTICA 2009  
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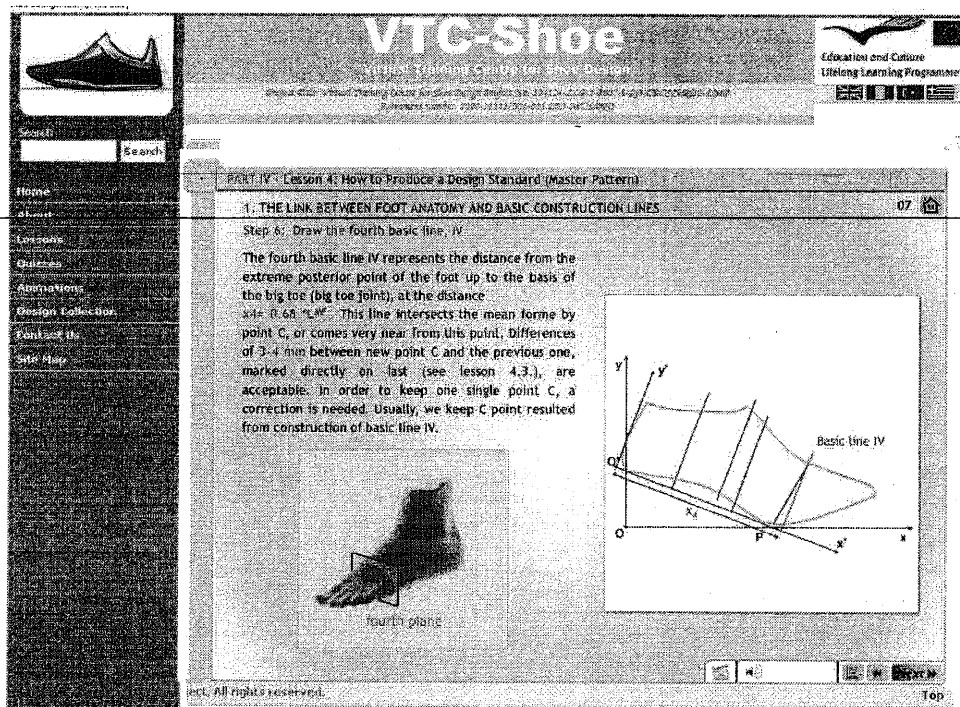


Fig. 5. Example from lesson How to Produce a Design Standard (Master Pattern)

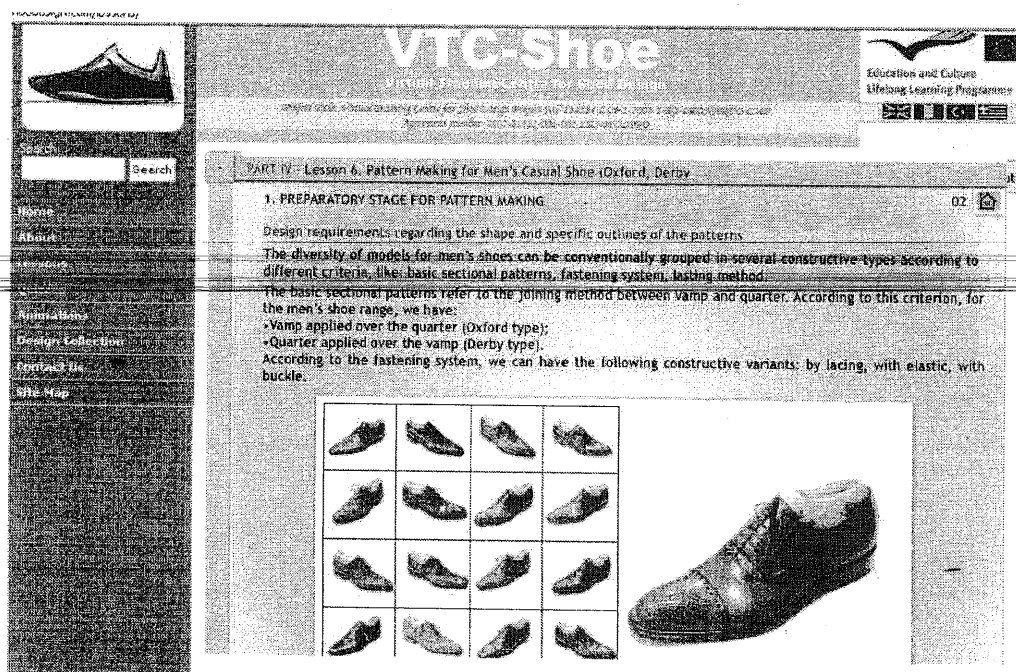


Fig. 6. Example from lesson Pattern Making for Men's Casual Shoe- Step 2



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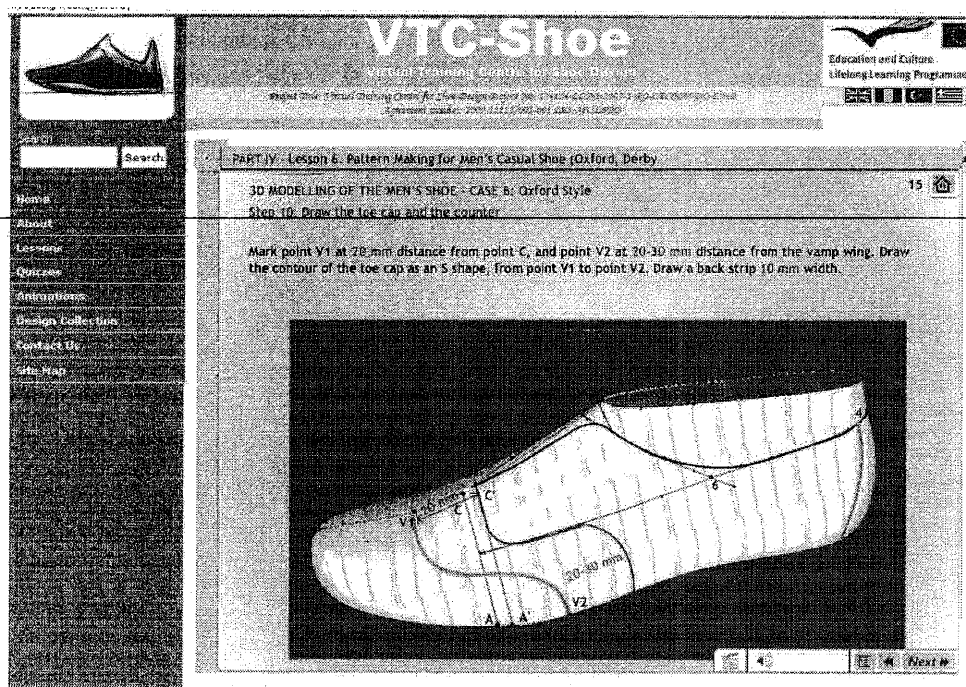


Fig. 7. Example from lesson Pattern Making for Men's Casual Shoe- Step 15

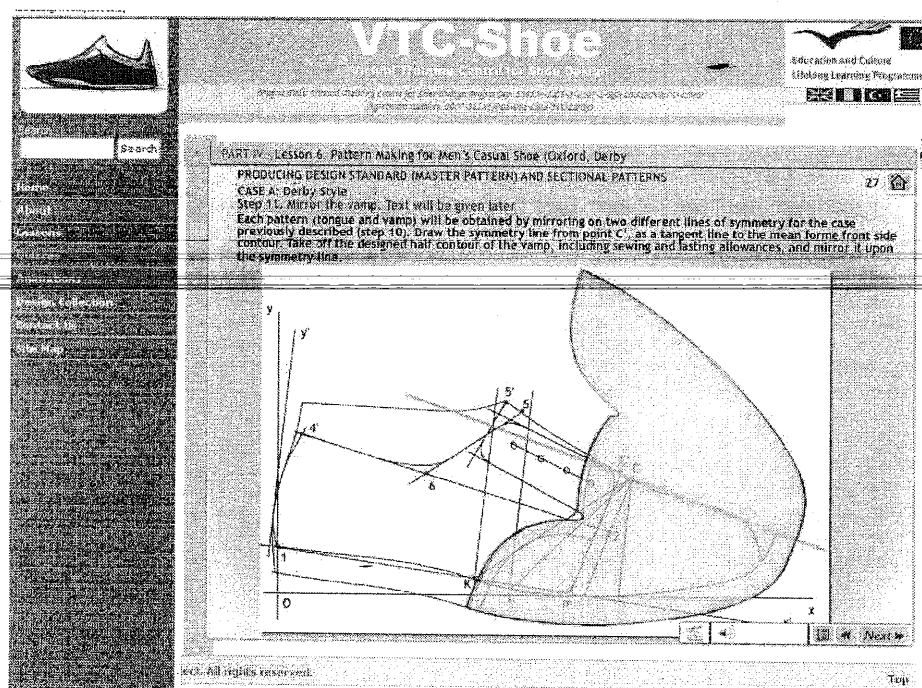
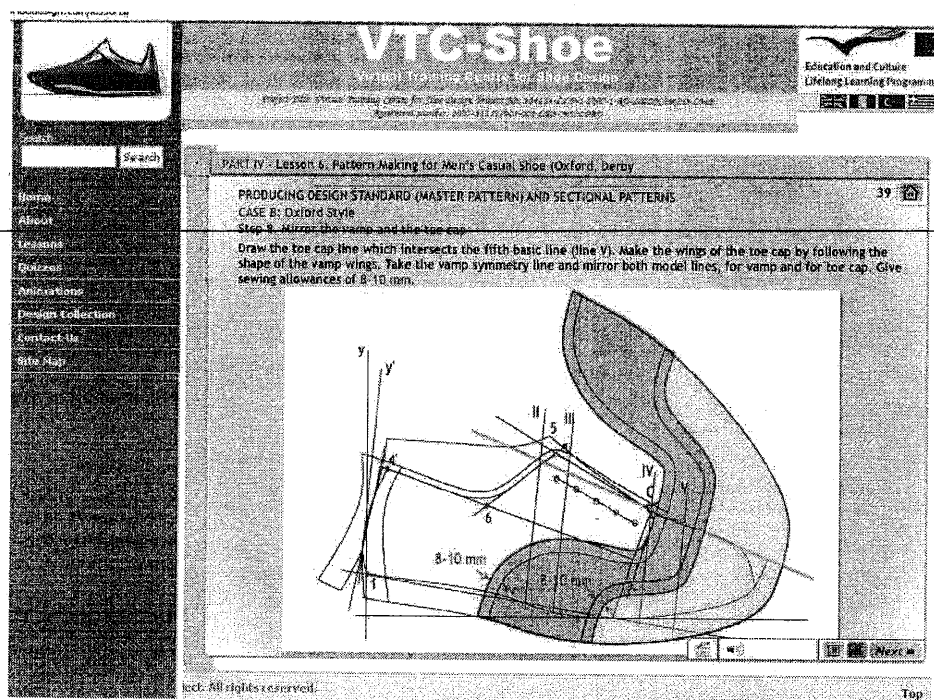


Fig. 8. Example from lesson Pattern Making for Men's Casual Shoe- Step 27



*Fig. 9. Example from lesson Pattern Making for Men's Casual Shoe- Step 39*

## 4. Conclusions

The VTC-Shoe will establish networks of people who are engaged in footwear business and training. Thus, it will support the entrepreneurial community, including small and medium businesses, through collaboration and community support. The mission of the VTC-Shoe should be to support economic development by facilitating footwear design training that empowers socially and economically diverse people to strengthen and sustain growth opportunities in existing businesses or in the planning and marketing of a start-up business.

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**MODULE E-LEARNING PENTRU INDUSTRIA DE INCALTAMINTE DEZVOLTATE IN  
CADRUL CENTRULUI VIRTUAL PENTRU PROIECTAREA INCALTAMINTEI**

**(Rezumat)**

Scopul lucrării consta in introducerea rezultatelor parțiale ale proiectului Leonardo da Vinci , cu titlul “ Centru Virtual pentru Proiectarea Incaltamintei” . Obiectivele științifice și tehnice ale proiectului sunt in concordanta cu prioritatile programului Lifelong Learning. Partenerii proiectului din Romania, Grecia și Turcia au dezvoltat module de instruire specifice domeniului . Aceste materiale au fost comparate astfel incat s-a putut formula o programa curriculara comuna, arondata spatiului European. Continutul inovator al centrului poate fi usor transferat și in alte tari Europene, prin proiecte viitoare.

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