



**INGA 3D - Creative transfer of competence in 3D footwear  
CAD to VET professionals**

**LLP-LdV-Tol/2013-RO-024**

# **WP5-Test and Implementation**

Piloting Session Report

**Module I & Module II**

**Gheorghe Asachi Technical University of Iasi, TUIASI**

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# 1. INTRODUCTION ON THE PILOT TRAINING

## 1.1. Purpose

The piloting training aims to test, to implement, to evaluate and to validate the project main products: content of the training Handbooks, Multimedia supportive guide and INGA Online Learning Platform.

This report presents the piloting stage of the INGA 3D project that was held in “Gheorghe Asachi” Technical University of Iasi, TUIASI, from 30th of June to 10th of September 2015, in Iasi (Romania), during 4 face-to-face piloting sessions. In each session, participants have attended in courses for 4 days. The learning scenario which was tested is those of blended learning, where the f2f training with tutors was combined with individual study supported by the online tool, namely INGA 3D. During these sessions, the participants, who are mainly VET professionals, made their comments and appreciations on Module I and Module II of the INGA 3D training program. Also, they evaluated the educational tool accessible into a virtual environment. Online feedback questionnaires were applied at the end of each session.

## 1.2. Target group

The target for the first piloting session was the teaching staffs of TUIASI and students that are enrolled in pedagogical courses; both categories were not members of project team. For this session, the INGA training was promoted through direct contacts, and colleagues from Faculty of Leather, Textile and Industrial Management were registered as participants. The next piloting sessions for professionals from other VET organizations were directly promoted by emails toward the own professional networks. The contact lists of the target group available since the project has started (in WP3)

were used. In the preparatory stage, the INGA 3D training course was announced to teachers from Romanian high schools. The targeted institutions were the one with study programs in footwear or related fields, such as textile and clothing. Also, the training course was promoted to footwear companies, based on the fact that there are managers / engineers who are giving in situ training to their own staff. The enrolment in piloting sessions had just one selection criteria – the persons should demonstrate their involvement in teaching/training/tutoring activities within their organizations (VET schools, training centres or footwear companies).

### **1.3. Selection and engagement of participants**

The enrolment in piloting sessions had just one selection criteria – the persons should demonstrate their involvement in teaching/training/tutoring activities within their organizations (VET schools, training centres or footwear companies).

According to the initial proposal, for attending the piloting sessions in TUIASI were estimated 23 participants: teachers/trainers/tutors from high schools and representatives of the stakeholders (training centres, local authorities and footwear companies). Based on the requests received from other teachers after the first three piloting sessions, this number was increased and a supplementary session was organized. By the end, the piloting training gathered 35 participants, those distribution is:

- 4 lecturers who are not members of project team, from TUIASI
- 25 teachers from VET schools;
- 1 teacher from secondary school;
- 2 students enrolled in pedagogical course of TUIASI;
- 1 designer from enterprise, involved in training and tutoring activities in the company;
- 2 stakeholders - 1 expert/researcher from a national research centre (INCDTP, Bucuresti) and 1 inspector from a regional authority involved in technical education (Rom. Inspectoratul Scolar Judetean Iasi).

## 2.METHODOLOGY

### 2.1. Description of the training modules

#### Module I - Footwear CAD by ICAD3D+ Software

This module provides a basic understanding of utilizing the **Icad3D+ software**. Hands-on exercises throughout the units demonstrate techniques that can be applied to the Footwear Design. The primary objective of this module is to provide students with a thorough understanding of all the steps in 3D designing processes as well as skills and competencies necessary for creating accurate virtual prototypes by using the Icad3D+ software. The learning objectives of this module are:

- To initiate learners in the operation of Icad3D+
- To develop skills and competences for creating virtual prototypes on virtual lasts using Icad3D+
- To develop skills and competences for creating virtual models with accessories and components
- To obtain accurate virtual models using the rendering software and to prepare technical sheets

Program units:

- Unit 1-Basics of Footwear CAD
- Unit 2 - Virtual Model
- Unit 3- Presenting Virtual Models: Rendering and Producing Technical Sheets

After completing this course, students will know how to:

- operate with various features of Icad3D+ specific software;

- create footwear prototypes on virtual lasts, including accessories and components;
- obtain accurate virtual models using the rendering software and to prepare technical sheets.

## **Module II: 3D CAD – Applications to Basic Footwear Constructions**

This module introduces practical lessons which are based on the learning outcomes accumulated by students in Module 1. Each lesson is designed as a tutorial which covers the 3D modelling steps and the necessary Icad3D+ tools for completing basic models for women's, men's and children's footwear by: processing the lasts, designing the 3D model lines, transferring and controlling 3D lines with 2D drawings, creating pieces, adding texture, stitches and accessories, modelling the 3D shape of sole and heel, rendering. The main objectives of this module are:

- to apply the 3D CAD technology powered by Icad3D+ software for designing basic footwear constructions types;
- to practice the 3D modelling process to a range of different footwear styles, characteristics and features which are compatible with design requirements and expectations;
- to develop skills and competences in producing detailed virtual models of women's, men's and children's footwear.

Program units:

- Unit 1- 3D CAD – Basic Constructions for Women's Footwear
- Unit 2 - 3D CAD – Basic Constructions for Men's Footwear
- Unit 3 - 3D CAD – Basic Constructions for Children's Footwear

## 2.2. Piloting Sessions schedule

There were four sessions of training:

- Session no. 1: 30 June- 3 July
- Session no. 2: 7- 10 July
- Session no. 3: 28- 31 July
- Session no. 4: 7-10 September

The format of the timetable was the same for each group:

Time	1 <sup>st</sup> Day	2 <sup>nd</sup> Day	3 <sup>rd</sup> Day	4 <sup>th</sup> Day
08.00- 9.00	Welcome. Presenting INGA 3D Project			
9.00-12.00	Module I/Unit 1/ Lesson 1-2 (presentation)  Module I/ Unit 2/ Lesson 1 (presentation and exercises)	Module I/ Unit 2/ Lesson 3 (presentation and exercises)	Module I/ Unit 2/ Lesson 5 (presentation and exercises)	Module I / Unit 3 / Lesson 1 and 2 (presentation)  Module II / Unit 1 / Lesson 1 (presentation and exercises)
12.00-13.00	Lunch break			
13.00-16.00	Module I/ Unit 2/ Lesson 2 (presentation and exercises)	Module I/ Unit 2/ Lesson 4 (presentation and exercises)	Module I/ Unit 2/ Lesson 6 (presentation and exercises)  Assessment quiz	Module II / Unit and Lesson chosen individually by each trainee (exercises and individual study)  Evaluation of the course- feedback Questionnaire



## 2.3. List of Participants for f2f training and registering on INGA OLP

**1<sup>st</sup> Group scheduled for 30 June-3 July**

Nr.crt.	Name and SURNAME	Position in own organization	Organization	Type of organization: VET school/university providing VET/company	email address
1	<b>Daniela Negru</b>	lecturer/trainer	TUIASI	university providing HE and VET programs	dnegru@tex.tuiasi.ro
2	<b>Angela Cerempei</b>	lecturer/trainer	TUIASI	university providing HE and VET programs	angela.cerempei@yahoo.com
3	<b>Adriana Chirila</b>	student, enrolled at pedagogical course	TUIASI	university providing HE and VET programs	adriana8chirila@gmail.com
4	<b>Irina Marin</b>	student, enrolled at pedagogical course	TUIASI	university providing HE and VET programs	irina.marin13@yahoo.com
5	<b>Ramona Budeanu</b>	lecturer/trainer	TUIASI	university providing HE and VET programs	budeanu.ramona.design@gmail.com
6	<b>Ionut Herghiligiu</b>	lecturer/trainer	TUIASI	university providing HE and VET programs	herghiligiunionut@gmail.com



## 2<sup>nd</sup> Group scheduled for 7 July -10 July

Nr.crt.	Name and SURNAME	Position in own organization	Organization	Type of organization: VET school/university providing VET/company	email address
1	<b>Gabriela Bujoreanu</b>	teacher	Colegiul Tehnic „Al. I. Cuza,, Bârlad	VET school	gabrielabujoreanu@yahoo.com
2	<b>Viorica Artenie</b>	teacher	Liceul Tehnologic "Costache Conachi" Pechea, jud. Galați	VET school	artviorica@yahoo.com
3	<b>Paula-Lorela Iancu</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	ilorela@yahoo.com
4	<b>Oana Ionela Radeanu</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	onutzaradeanu@gmail.com
5	<b>Viorica Manolache</b>	teacher	Liceul Ion Holban / Iasi	VET school	viorica_manolache2006@yahoo.com
6	<b>Adriana Baiceanu</b>	teacher	Liceul Ion Holban / Iasi	VET school	adibai2005@yahoo.com
7	<b>Gianina Popescu</b>	teacher	Liceul Ion Holban / Iasi	VET school	gianinapopescu@yahoo.com
8	<b>Rodica Dumitru</b>	teacher	Inspectoratul Scolar Judetean Iasi	Stakeholder	rodumiro@yahoo.com
9	<b>Tinca Mazarianu</b>	teacher	Colegiul Tehnic “Petru Rares” Bucuresti	VET school	mazarianutincuta@yahoo.com
10	<b>Camelia Varga</b>	teacher	Colegiul Tehnic Napoca, Cluj	VET school	cameliavarga@yahoo.com

### 3<sup>rd</sup> Group scheduled for 28 July -31 July

Nr.crt	Name and SURNAME	Position in own organization	Organization	Type of organization: VET school/university providing VET/company	email address
1	<b>Irina Isabella Savin</b>	teacher	Colegiul Tehnic "Ioan C. Stefanescu" Iasi	VET school	savinisabella@yahoo.com
2	<b>Mihaela Basu</b>	teacher	Liceul Teoretic "Vasile Alecsandri" Iasi	VET school	bsmihaela@yahoo.com
3	<b>Mihaela Cezarina Mihai</b>	teacher	Liceul Tehnologic "Spiru Haret" din Târgoviște, Dâmbovița	VET school	mihaela_cezarina@yahoo.com
4	<b>Monica-Aurora Vulpe</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	vlpmonica@yahoo.com
5	<b>Elena Ursache</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	nutza_ursache@yahoo.com
6	<b>Liviu Unciuleac</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	unciuleac_liviu@yahoo.com
7	<b>Daniela Posisnicu</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	posisnicu.daniela@yahoo.com
8	<b>Carmen Bulciu</b>	trainer	OMNIA PLAST , Bucuresti	company	carmen.bulciu@omniaplast.ro
9	<b>Liliana Nechita</b>	teacher	Liceul Tehnologic Special Ștefan cel Mare, com Ștefan cel Mare, Neamț	VET school	liliana.foltea@yahoo.com
10	<b>Cristina Oprea</b>	teacher	Liceul Tehnologic "Spiru Haret" din Târgoviște, jud. Dâmbovița	VET school	tikicris@yahoo.com

#### 4th Group scheduled for 7 -10 September

Nr.crt.	Name and SURNAME	Position in own organization	Organization	Type of organization: VET school/university providing VET/company	email address
1	<b>Manuela NicoletaComan</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	manuela_coman40@yahoo.com
2	<b>Mirabela Maria Tropan</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	<a href="mailto:mirabela_tropy@yahoo.com">mirabela_tropy@yahoo.com</a>
3	<b>Gabriela Sandu</b>	teacher	Liceul Tehnologic Harlau, Iasi	VET school	<a href="mailto:gabi_sanduleasca@yahoo.com">gabi_sanduleasca@yahoo.com</a>
4	<b>Costeluș Aghion</b>	teacher	Colegiul Tehnic „Al.I.Cuza" Barlad	VET school	c_aghion@yahoo.com
5	<b>Mihaela Munteanu</b>	teacher	Liceul Teoretic "Sfanta Maria" Galati	VET school	memeluta@yahoo.fr
6	<b>Monica Ene</b>	teacher	Liceul Teoretic "Sfanta Maria" Galati	VET school	<a href="mailto:monica.ene38@yahoo.com">monica.ene38@yahoo.com</a>
7	<b>Iuliana Negrea</b>	teacher	Colegiul Tehnic Napoca, ClujNapoca,	VET school	racuiuliana@yahoo.com
8	<b>Ana Maria Vasilescu</b>	trainer	INCDTP, Bucuresti	Research centre	anamariavasilescu@gmail.com
9	<b>Mihaela Miron</b>	teacher	Scoala gimnaziala Chicerea Tomesti, Iasi	Secondary school	mironmihaela2@yahoo.com

## **2.4. Particular ways for organizing and performing training activities**

In the first day of each training session, Professor Aura Mihai, the project coordinator has provided an introductory session in order to outline the aims of the project and the learning objectives of the course. The training content and the supportive tools were presented to participants. The participants were invited to express their first impressions upon the necessity of increasing the number of ICT based courses in VET curricula of their schools. Through open discussions, all of them have appreciated the INGA 3D project because it allows for a dialog and for a modern learning environment in accordance with the training needs in footwear CAD. Also, all participants noticed that the training content developed by INGA 3D project covers a wide range of learners: students, trainers and teachers, as well as tutors from footwear companies.

The project partners TUASI, IED, Univ of Salford and Virtual Campus received from the owner partners (INESCOP and RED 21) the necessary Icad3d+ software licences to achieve the project objectives. A network of 10 computers was prepared for this training in the Footwear CAD Laboratory of TUIASI. On each computer, the trainees were able to work on ICad3D+software and also to be connected to the INGA 3D Online Learning Platform in order to follow the content of lessons both for class exercising and individual study.

Two tutors from TUIASI (Mariana Costea and Bogdan Sarghie) provided face-to-face teaching for all four groups. Online meetings with the tutor from RED 21 (Manolo Gomez) have been organized for each group through video conference via Skype. During these online meetings, participants appreciated the course and asked specific questions about the Icad3d+ software.

All the participants in piloting sessions passed the Assessment Quiz and based on their results they received Certificates of course attendance.

## **3.FINDINGS OF PILOT TRAINING SESSIONS**

### **3.1. Evaluation provided by Tutors**

Some of the time on the first day of each session was used for introducing the supportive tools. Thus, all participants used their given login and passwords and they became familiar with various guides and training modules by navigating through the available content on the Online Learning Platform. The training course was quite intense because in a limited period of time the trainees had to accumulate an extended amount of knowledge and skills. In some cases, the trainers provided one-to-one instruction in order to get some of the participants to the same level as the others. The groups were quite heterogenic in terms of previous knowledge on either footwear design or CAD. It was reinforced the need for successful completion of Module I before starting Module II, as the entire INGA 3D course was initially designed.

### **3.2. Evaluation provided by Trainees**

All participants were asked to express their feedback on this course and to submit the Evaluation Form at the end of the training program. Based on the results of this evaluation, corrective measures were undertaken and the final results of the project were released. The questionnaire is available to each trainee on INGA 3D platform, under Module 1, Footwear CAD by ICAD3D+ Software.

**Question 1**  
Not yet answered  
Marked out of 1.00  
Flag question

The navigation through the course (easy to locate and move within the course/units) is easy to understand.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally Agree

**Question 2**  
Not yet answered  
Marked out of 1.00  
Flag question

The contents are clear, accessible and properly ordered.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 3**  
Not yet answered  
Marked out of 1.00  
Flag question

The contents support the learning objectives.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 4**  
Not yet answered  
Marked out of 1.00  
Flag question

The practical exercises are intuitive and well explained.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 5**  
Not yet answered  
Marked out of 1.00  
Flag question

The assessment covers an adequate amount of contents.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 6**  
Not yet answered  
Marked out of 1.00  
Flag question

The text and images were well distributed on the slides.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 7**  
Not yet answered  
Marked out of 1.00  
Flag question

The media (video, images) used are understandable and well displayed.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 8**  
Not yet answered  
Marked out of 1.00  
Flag question

The visual and graphical aspects (readability, colours, icons, sizes, arrows) are correct.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 9**  
Not yet answered  
Marked out of 1.00  
Flag question

I would rate the skills acquired in the course as very useful.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 10**  
Not yet answered  
Marked out of 1.00  
Flag question

The overall layout of the course makes the learning process easy.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 11**  
Not yet answered  
Marked out of 1.00  
Flag question

I feel satisfied after completing the course.

Select one:

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Don't know
- ☐ Agree
- ☐ Totally agree

**Question 12**  
Not yet answered  
Marked out of 1.00  
Flag question

Did you have a pleasant experience while completing the course? Please, explain your answer.

**Question 13**  
Not yet answered  
Marked out of 1.00  
Flag question

Where you confused about any aspect of the course?

**Question 14**  
Not yet answered  
Marked out of 1.00  
Flag question

Would you like to see any improvement in the training course? If so, please specify.

**Question 15**  
Not yet answered  
Marked out of 1.00  
Flag question

What is the most positive aspect that you would like to emphasize about the course?

All 35 cumulated answers are available in the table below:

No	Question	Strongly disagree	Disagree	Don't know	Agree	Totally agree
1	The navigation through the course (easy to locate and move within the course/units) is easy to understand.	0	0	0	12	23

2	The contents are clear, accessible and properly ordered.	0	0	0	6	29
3	The contents support the learning objectives.	0	0	0	8	27
4	The practical exercises are intuitive and well explained.	0	0	0	9	26
5	The assessment covers an adequate amount of contents.	0	0	0	9	26
6	The text and images were well distributed on the slides.	0	0	0	8	27
7	The media (video, images) used are understandable and well displayed.	0	0	0	11	24
8	The visual and graphical aspects (readability, colours, icons, sizes, arrows) are correct.	0	0	0	9	26
9	I would rate the skills acquired in the course as very useful.	0	0	1	11	23
10	The overall layout of the course makes the learning process easy.	0	0	0	11	24
11	I feel satisfied after completing the course.	0	0	0	8	27

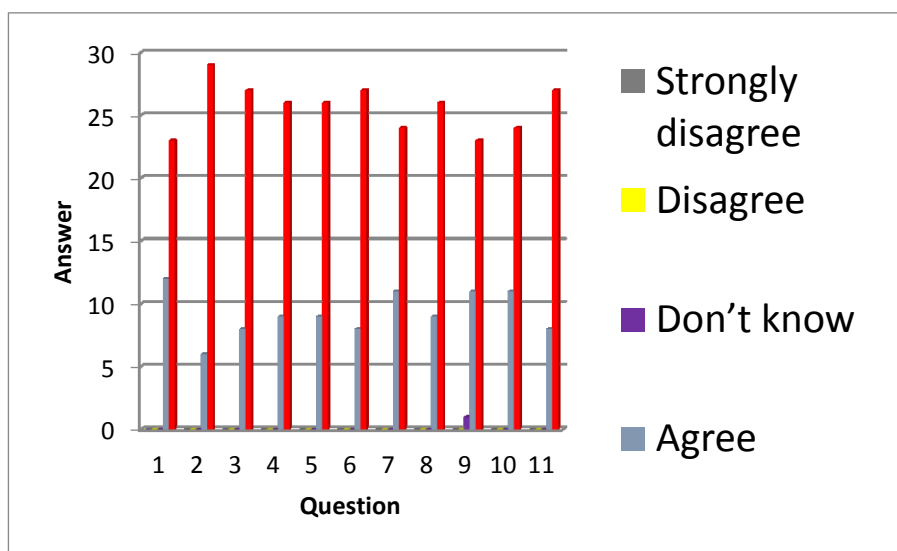
A selection of answers to the direct questions (Q12- Q15) are presented in the table below:

No	Question	Trainee's answer
12	Did you have a pleasant experience while completing the course? Please, explain your answer.	<p>The course is important for me from professional point of view.</p> <p>I consider the course to be extremely important, the trainers well prepared. I conclude that I am very satisfied and hope to participate to more of this kind of courses.</p> <p>The experience was pleasant. The content was interesting and attractive.</p> <p>Yes. I've learned interesting things that I want to share with my students.</p> <p>Yes. After learning INGA 3D, I can understand the importance of introducing CAD for footwear in high-school.</p> <p>Yes. The course contributes to my professional development.</p> <p>The trainers have demonstrated professionalism and dedication to this area, so attending this course was a pleasant experience. Both the content and the educational platform are presented in a good way, being interesting and accessible.</p> <p>An interesting and attractive course. The trainers were well informed.</p> <p>The course was useful for us, the teachers from schools and we will use it in our IT classes.</p> <p>Yes, I enjoyed every moment spent during the training session. It was amazing to see how some lines, commands and well-structured courses could help me learn so quick a software I never experienced before and also gave me the ability to create my very first 3D footwear.</p> <p>I did have a pleasant experience.</p> <p>Yes I have a pleasant experience, I really liked to know more about the shoes and how important is the process of making a specific model.</p>

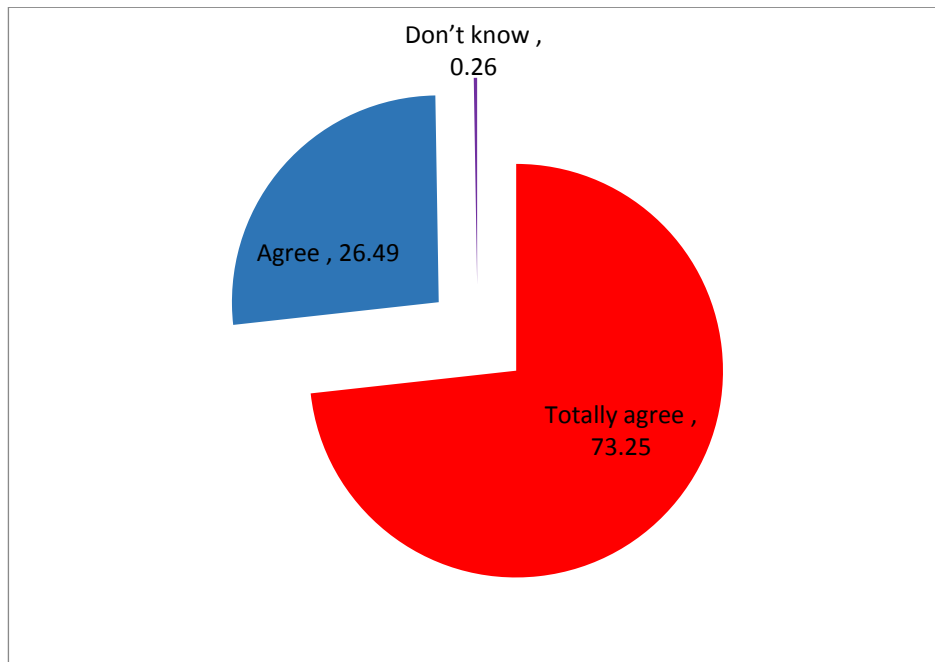
No	Question	Trainee's answer
		<p>Yes. I had a very pleasant experience during the development of this course; this fact is due to (a) the novelty of the information that I had received, (b) the professionalism of the trainers who explained very well the course information.</p> <p>For me this course presented an interesting experience. Even my field of interest is completely different from footwear design, it was quite easy to follow this course. The contents support the learning objectives and the media used are understandable and well displayed.</p> <p>Yes! The course was very interesting and I've learned new things! Best regards!</p> <p>This course was very interesting to me because I've learned to work with a 3D software.</p> <p>The course has represented a very good opportunity to find out new things in CAD for footwear, being hard to get this information as a VET teacher.</p>
13	Where you confused about any aspect of the course?	<p>No</p> <p>No, never</p> <p>No, all things are clear.</p> <p>Absolutely not.</p> <p>There were some moments when I had difficulty in finding the right icons. It was mostly because of the quality of YouTube videos and the complexity of the program. The course itself was comprehensible and the trainers were opened to questions and very knowledgeable of the subject.</p> <p>It is a well-structured course and I have not any confusion.</p> <p>Yes; because some submenus of 3D simulation software are in Spanish.</p> <p>I haven't encountered difficulties in attending the lessons as they were explained in logical and clear manner.</p>
14	Would you like to see any improvement in the training course? If so, please specify.	<p>I consider that this course doesn't need improvements.</p> <p>Both the content and the trainers had a positive impact to all of the trainees.</p> <p>I think the training course was just proper for my beginner stage, but I would like to see how to create and attach a zipper to any type of footwear.</p> <p>It would be wonderful to have a version of the program for home use. To practice the lessons beforehand, to prepare in any way possible for the class. The time available for the course is limited and any opportunity to experience more from the INGA3D footwear solutions is a welcomed treat.</p> <p>No, the course is very good for learning.</p> <p>No.</p> <p>From my point of view the course don't need any improvements. Course objectives were clear, slides used were helpful and activities were varied and enhanced my learning.</p> <p>Everything is well structured, organized and presented.</p> <p>Yes, a larger number of hours.</p>
15	What is the most positive aspect that you would like to emphasize about the course?	<p>The fact that I've collaborated with colleagues from the country and that I've learned new contents, will determine my individual study and the disseminations of information during the school meetings.</p> <p>The interactivity.</p> <p>I've discovered a new field, I've learned its importance and complexity, and I will share it with my students.</p> <p>The clarity of explanation, the friendly to use platform.</p>



No	Question	Trainee's answer
		I'm mostly satisfied that I had the chance to be a part of the training session, that I learned how to use a 3D modelling software and most of all, that I created my second 3D footwear model without following the slides step by step.
		This course and the Inga solutions come as a great help to those less talented in graphic design. During this class I had the chance to visualize my ideas more clearly and create footwear according to my planning using only tools given by the program. The accuracy of the lessons allows students to develop designs with finesse and attention to detail.
		The most positive aspect of the course is the media used (video) to make the process of learning more easy and understandable.
		* the professionalism of the trainers; * the accuracy of the 3D simulation software.
		Contents met my learning needs.
		Well prepared trainers.
		I consider this course to be extremely attractive to high school students, no matter what is their field of study.
		The possibility of introducing this course in extracurricular activities.
		For me this course was awesome!
		The software is easy to use and it reduces the working time.
		I've liked the graphical aspect and the way that you can create a footwear product.



Distribution of answers for questions 1-11



Level of Satisfaction, in %

### 3.3. Impact of the pilot training

The pilot of Module I and II in TUIASI, Romania has been helpful in relation to further development of the resources and the pre-learning. Overall the participants achieved a lot in a little time and all completed the design of at least 2 footwear models.

- According to the previous information all the participants report a positive opinion about the course.
- About the 66% of the participants totally agree and 34% agree that the course is easy to follow and to understand.
- About the 83% of the participants totally agree and 17% agree to the content given by the course; also consider that the contents are clear, accessible and properly ordered.

- About the 77% of the participants totally agree and 23% agree that the content of the course support the learning objectives.
- About 74% of the participants totally agree and 26% agree that the practical exercises are intuitive and well explained.
- About the 77% of the participants totally agree and 23% agree that the assessment covers and adequate amount of contents.
- About 69% of the participants totally agree and 31% agree with the distribution of image on the slides.
- About 74% of the participants totally agree and 26% agree the videos and images from the course are understandable and well displayer all along the course.
- About 66% of the participants totally agree and 31% agree that the visual and graphical aspect are correct, and about 3% of the participants doesn't know.
- About 69% of the participants totally agree and 31% agree that the skills their acquired in the course will be very useful for them.
- The entire participants fell satisfied after completing the course.

## 4. CONCLUSIONS. RECOMMENDATIONS & SUGGESTIONS

For the better transfer of knowledge, skills and competences in footwear CAD VET professionals have been selected based on individual commitment to follow a course in a field which is relatively new for most of them. It ensures the necessity and the premises for quality of training. Another objective of the piloting sessions, apart from involving the target group (teachers, tutors and trainers) in the developing process of the INGA 3D training content, was to demonstrate how the modern ICT technologies based on footwear CAD could be integrated in their teaching/training classes on regular basis.

Overall the feedback from the participants was good with the better responses being from those who had experience of CAD/ footwear or both. This indicates that for those who have no experience of either, the time it takes to complete the module needs to be increased.

Being modular structured, INGA 3D training program and its content allow for adapting the learning activities for being suitable to the students' needs as much possible. The practical lessons for Module I and Module II provide opportunities for adopting the pedagogical method of „learning by doing“. Based on a face-to-face approach, the trainer can engage students in both class and online activities that address a variety of learning styles and preferences. Repeating the steps in producing CAD models whatever is necessary, in an individual approach of learning, is very useful where the group of learners have different background and level of understanding. The course is adapted to the student own rhythm.

The structure of modules is given in units and lessons. The process of learning is progressive, one lesson after other, in a logical sequence. Each lesson contains

introductory slides that give from the beginning the module's objectives, its topics (units/lessons) and the learning outcomes expected to be acquired by student (knowledge, skills and competences).

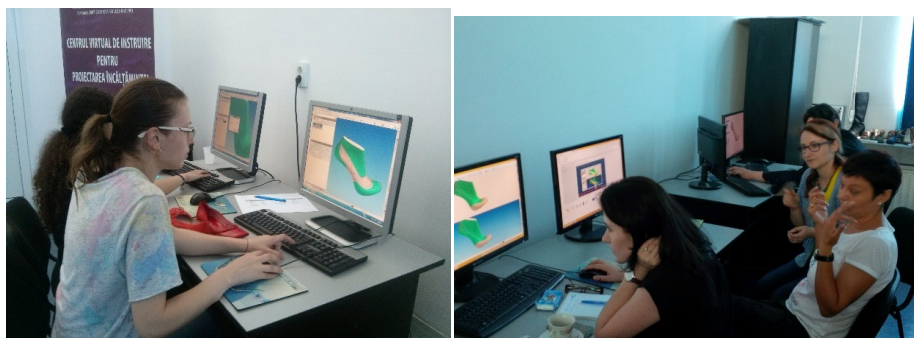
The text is readable and the videos and pictures explain very clear what must be done at each step. The trainer explains and visualizes first the entire lesson and the learners are becoming familiar with what have to solve as practical application (a specific design). Then the lesson is started again from the beginning and the learners are learning by doing. At the end they can get very accurate models for a specific design of footwear, without having knowledge to a very extend level. As the learner became experimented, the teaching and the learning process are faster. In this manner the trainer can insist to those aspects that make any difference from the previous lessons.

All project results, namely the Online Learning Platform, the supportive media resources and the training content of modules (I and II) have a high quality and all of them meet the needs of training in this field. The evaluated training material for each module is appreciated by all participants as being „good” and „very good”. Some specific remarks and corrections have been noticed with few slides only. These corrections will be made while the entire content should be revised. The participants appreciated to a very extend level the quality and the idea of combining the classical presentation for each lesson with related demonstrations by video. They appreciated also how important is for learners to access in the same time two resources: simulations/videos that show how to use various software sequences for CAD and the theoretical content that describes step by step the theoretical knowledge necessary for applying the CAD procedures. The training content is going to be revised for realising the final version of the project results and following recommendation made by participants will be included: The text has to be revised due with translations into Romanian. Some drawings should be zooming out and few pictures have to be replaced due with their accuracy.

## 5.ANNEXES

Pictures from the training sessions are presented below.

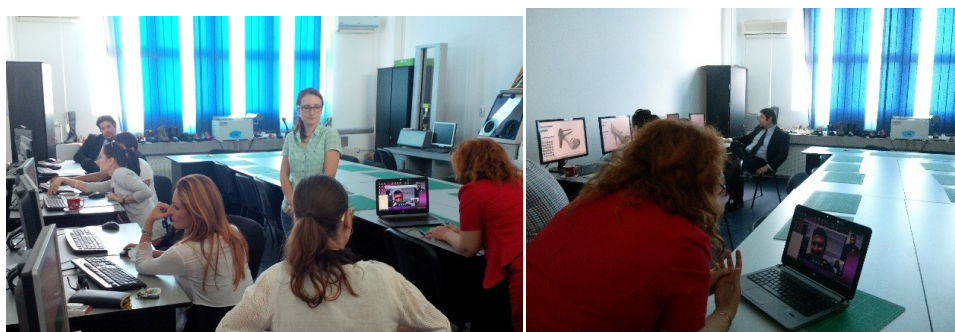
*First group*



Mariana Costea supporting the participants



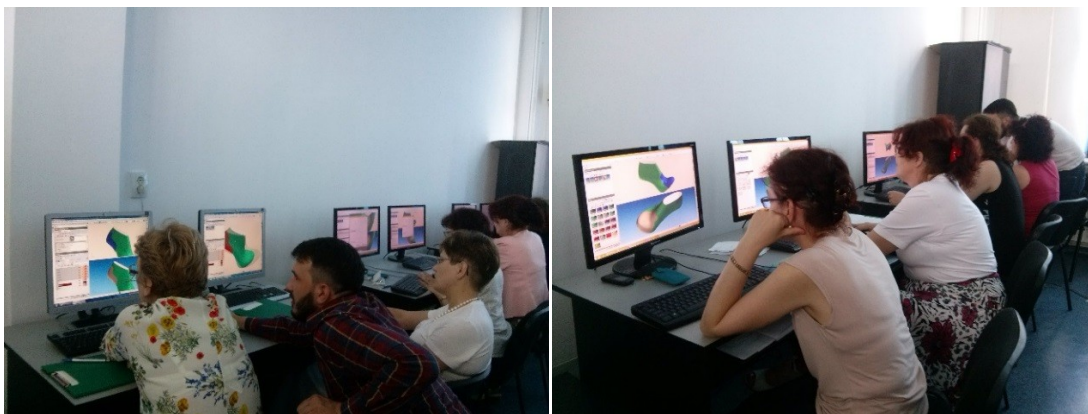
Bogdan Sarghie supporting the participants



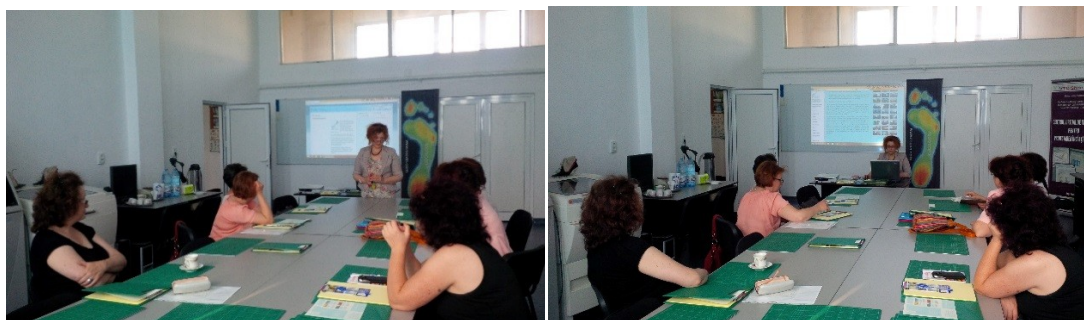
Skype meeting between training participants and Manolo Gomez from RED 21



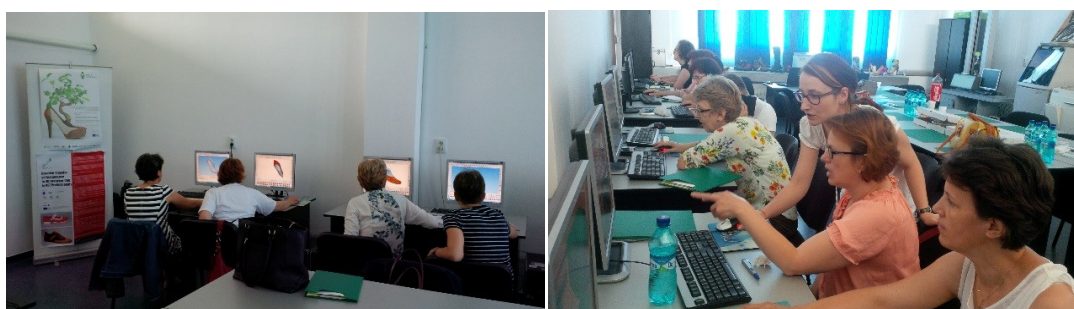
*Second group*



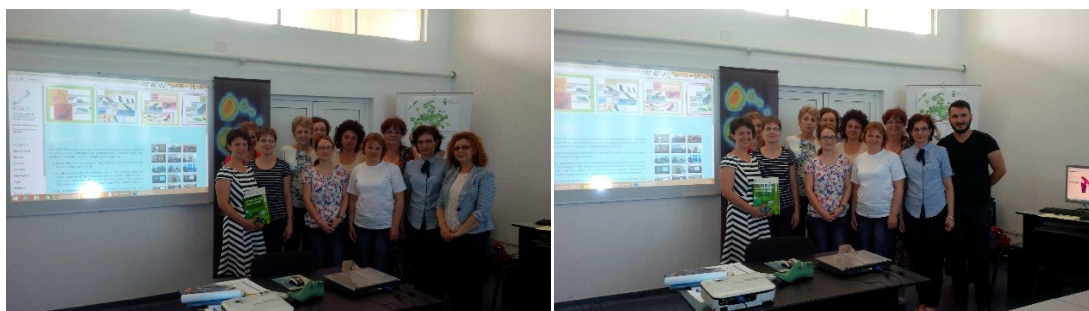
Bogdan Sarghie supporting the participants



Project presentation done by project's coordinator - Aura Mihai

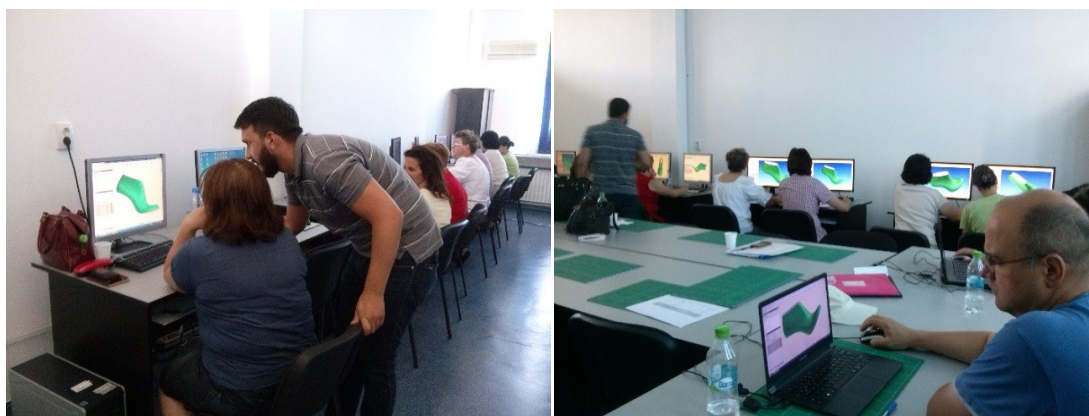


Mariana Costea supporting the participants

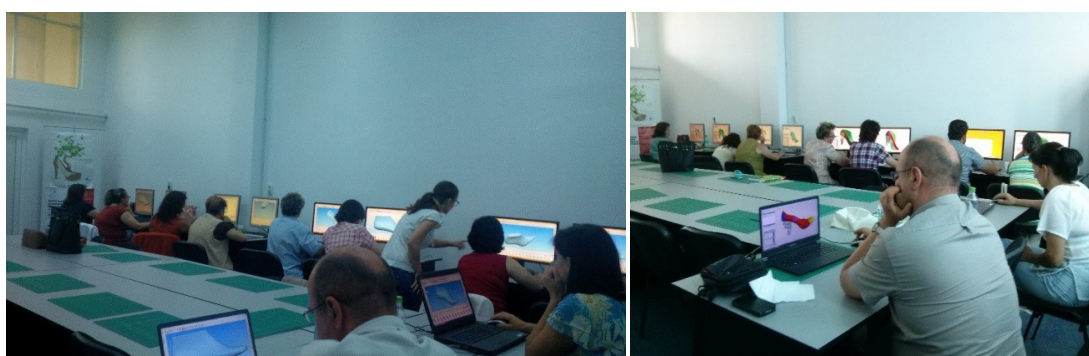


Group picture

*Third group*

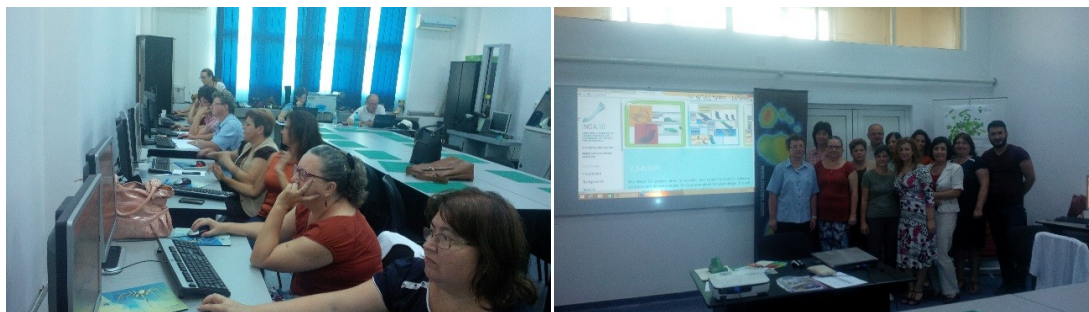


Bogdan Sarghie supporting the participants



Mariana Costea supporting the participants



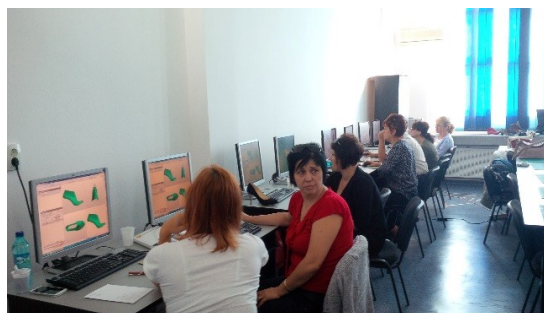


Group picture

*Fourth group*



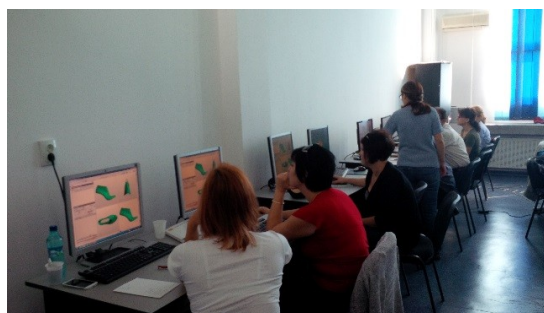
Project presentation done by project's coordinator - Aura Mihai



Bogdan Sarghie supporting the participants



Mariana Costea supporting the participants





Group pictures