



Erasmus+

DELIVERABLE D.1.3

“Adaptation of the Italian methodology to the Region of Murcia”

Grant agreement n°: **2017-2096/001-001**

Project acronym: **APPSHOE**

Project title: **Apprenticeship in the jute footwear
sector-AppShoe**

Funding scheme: **KA3-Support for Policy Reform**

Start date of project: **01/09/2017**

Duration: **24 months**

Due date of the Deliverable **28.02.2018**

Deliverable issued: **28.02.2018**

Version: **1.0**

Descripción del Documento	
Nombre del documento	Adaptation of the Italian methodology to the Region of Murcia
Resumen	Summary of the adaptation plan of the learning model of Politecnico Calzaturiero in Veneto-Italy to the new apprenticeship in the Northwest Region of Murcia-Spain, establishing a common basis and Italian model possibilities for the Spanish one.
Versión	1.0
Autores	IES G.P. CHIRINOS
Fecha de creación	28-02-18
Fecha de modificación	
Estado	Versión final
Destino	Grupo del proyecto
Documentos relacionados	

List of Milestones – Work Package 1

Milestone Number	Milestone Description	WP Nº	Lead Beneficiary	Month Due	Type
1	Partnership Cooperation Plan	3	IES Ginés Pérez Chirinos	6	Report

Document Control

Document Version	Change Made	Reason For Change	Date of Change	Change By
1.0	Final version	Submit	28.02.2018	IES Ginés Pérez Chirinos



IES GINÉS PÉREZ CHIRINOS



INDEX

1. INTRODUCTION. HISTORY OF THE INSTITUTION.....	4
2 - OBJECTIVES	4
3 - DIFFERENCES BETWEEN THE TRAINING SYSTEM OF IES GINÉS PÉREZ CHIRINOS AND THE POLITÉCNICO CALZATURIERO. ADAPTATIONS.....	5
4 - POSSIBLE ADAPTATIONS OF THE CURRICULUM TO THE NEEDS OF THE FOOTWEAR SECTOR	9
5 - POSSIBLE ADAPTATIONS TO THE CURRICULUM OF THE NEEDS OF THE SECTOR	11
6 - OTHER TYPES OF ADAPTATIONS: SPACES, MATERIAIS,	11
7 - SUSTAINABILITY NEEDS.....	11
8 – CONCLUSIONS.....	12

1. INTRODUCTION. HISTORY OF THE INSTITUTION

Our high school was inaugurated in 1967 as an Industrial Apprenticeship School, beginning its classes in October of this year.

During this first course, 154 students enrolled in the following branches of Vocational Training: Metal and Electricity. This training offer was progressively expanded with the following Branches: Automotive (course 1970-1971); Administrative (course 1971-1972); Electronics (course 1979-1980) and Health (course 1979-1980).

Meanwhile, there was an educational extension in different delegated sections such as: Calasparra (1978, first degree of Electricity and Administrative Branches); Bullas (1979, first degree of Automotive and Administrative Branches), Moratalla (1979, first degree of Electricity and Administration) and Cehegín (1980, first degree of Electricity and Agrarian).

Our institution, already as a Vocational Training Institute, would be called Ginés Pérez Chirinos, this proposal being chosen from among three options (the other two were those of Argos and Emilio Sáez), as set out in the Order of 24 November 1992 of the Ministry of Education and Science.

With the LOGSE, the old Vocational Training was terminated and, in the year 1996-1997, the ESO and Baccalaureate courses and the Middle and Higher Level training cycles were implemented, with the educational center being called the Secondary Education Institute.

In addition, according to the LOE, later modified by the LOMCE, two specialties of the FPB (Administrative Services and Maintenance of Vehicles) are being taught since 2014/2015 course.

In relation to this section, we should mention the extension, in the 2015/2016 academic year, of the educational offer in Vocational Training, with the CFGM of "Electromechanics of Machinery", and in 2017/2018 with the CFGM of "Footwear and Fashion Accessories" and the CFGS of "Dental Hygiene".

2 - OBJECTIVES

The objective of this document is to adapt the methodology outlined in document T1.1, prepared by the Calzaturiero Polytechnic, to the IES Ginés Pérez Chirinos of Caravaca de la Cruz. To do this, a comparative analysis of the educational structures of both institutions will be carried out. The already existing points of common interest will be put in common. Besides, the training needs will be detected, especially those that have already been resolved in the Italian center, so they can help developing methodologies and manufacturing techniques in the Northwest of our region.

3 - DIFFERENCES BETWEEN THE TRAINING SYSTEM OF IES GINÉS PÉREZ CHIRINOS AND THE POLITÉCNICO CALZATURIERO. ADAPTATIONS

Without needing to delve too much, important differences between the conceptions of both centers are already evident.

The Calzaturiero is a private center, whose teachers belong to the staff of the companies that are part of it. This gives the center total flexibility in terms of what content should be taught, how to do it, time allocation, timetables, resources, spaces, etc.

It also facilitates that the students are in contact with the latest technology, which is the one that is being used in companies. This in the Spanish case is complicated, since machinery is an expensive element and the Administration usually can't capitalize on an investment in top-of-the-range machines, so it is invested in less modern models and therefore more economically affordable, sometimes even second hand or ceded by companies once they have already amortized, so that the training of students always takes a gap of several years with respect to the reality of manufacturing.

This problem has been minimized through Dual Vocational Training programs, such as the CFGM that is taught at the IES Chirinos, in which students access companies from the first year of training. This facilitates access to state-of-the-art technology, as well as favors access to internships, scholarships and apprenticeship contracts upon completion of studies.

On the other hand, students of the Calzaturiero are trained by professionals active in the productive sector and, therefore, they must not meet any training requirement, beyond those considered by the companies themselves, or depend on attending refresher courses or recycling to keep your knowledge up to date.

On the contrary, Spanish teachers are professionals in education, and although their didactic training can be considered, a priori, superior to those of the Calzaturiero, since they must necessarily have it to access the teaching work, this does not guarantee that once they have accessed the position, they update their knowledge often, despite the fact that there is an incentive system for the continuous training of teachers (sexennium), which gives them an economic complement in the payroll, if they perform at least 100 hours of training in a period of 6 years.

The current access requirements for the teaching staff of the Spanish Public Education System are regulated in article 13 of Royal Decree 276/2007, of February 23, which approves the Regulation of admission, access and acquisition of new specialties in the teaching bodies referred to in Organic Law 2/2006, of May 3, on Education, and regulating the transitory regime of income referred to in the seventeenth transitory provision of the aforementioned law.

Specifically, the qualifications and specialties required to teach class in the different modules that make up the CFGM of Footwear and Fashion Accessories, are determined by Royal Decree 257/2011, of February 28, which establishes the title of Technician in Footwear and Fashion Complements and its minimum teachings are set.

ANEXO III A)

Especialidades del profesorado con atribución docente en los módulos profesionales del ciclo formativo de Técnico en Calzado y Complementos de Moda

Módulo profesional	Especialidad del profesorado	Cuerpo
0611. Calzado y tendencias.	• Procesos y Productos de Textil, Confección y Piel.	• Catedráticos de Enseñanza Secundaria. • Profesores de Enseñanza Secundaria.
0116. Principios de mantenimiento electromecánico.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0267. Corte de materiales.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0275. Materias textiles y piel.	• Procesos y Productos de Textil, Confección y Piel.	• Catedráticos de Enseñanza Secundaria. • Profesores de Enseñanza Secundaria.
0269. Confección industrial.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0603. Montado y acabado de artículos de marroquinería.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0604. Montado y acabado de calzado.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0605. Procesos de elaboración de calzado a medida	• Procesos y Productos de Textil, Confección y Piel.	• Catedráticos de Enseñanza Secundaria. • Profesores de Enseñanza Secundaria.
0606. Técnicas de fabricación de calzado a medida y ortopédico.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0607. Transformación de calzado para espectáculos.	• Patronaje y Confección.	• Profesores Técnicos de Formación Profesional.
0608. Formación y orientación laboral.	• Formación y Orientación Laboral.	• Catedráticos de Enseñanza Secundaria. • Profesores de Enseñanza Secundaria.
609. Empresa e iniciativa emprendedora.	• Formación y Orientación Laboral.	• Catedráticos de Enseñanza Secundaria. • Profesores de Enseñanza Secundaria.

In it, two clearly differentiated profiles are distinguished:

- The Teacher of Secondary Education for Vocational Training (PS)
- The Technical Teacher of Vocational Training (PT).

In both cases teachers must have the pedagogical and didactic training referred to in article 100.2 of the Organic Law 2/2006, of May 3, of Education, but also in each case, the enabling qualifications are:

For PS: To be in possession of the title of Doctor, Licentiate, Engineer, Architect or the corresponding degree title; or the Technical Engineer, Textile Specialty.

For PT: To be in possession of the degree of University Diploma, Technical Architect, Technical Engineer or the corresponding Degree title; o Higher Technician in Industrial Dressing Processes, Senior Technician in Pattern Making, Specialist Technician in Industrial Garment of Foreign Garments, Specialist Technician in Industrial Garment of Inner Garments, Specialist Technician in Made-to-Measure Dressmaking, Technical Specialist in Production in Clothing Industries , Specialist in Tailoring and Dressmaking Technician or Specialist in Fabric Making.

Both profiles can be part of the bodies of career teaching staff, which is accessed by approving a competition, or come from interim lists formed with candidates who do not get a place in the competition, in this case officials Teachers hired labor. These last lists are regulated by the Resolution of March 11, 2016 by which the publication in the Official Gazette of the Region of Murcia of the agreement on temporary teaching staff is available.

The IES Ginés Pérez Chirinos is a center of public ownership, and therefore, is subject to the educational regulations in force in Spain. Specifically, this training cycle is regulated by Royal Decree 257/2011, of February 28, which establishes the title of Footwear and Fashion Complements Technician and sets its minimum teachings. The order by which your curriculum is established for the Region of Murcia, has not yet been published, but a draft of it is available at the moment in the public exhibition phase, and can be found at <https://transparencia.carm.es/-/2018-orden-titulo-calzado-complementos>.

This regulation marks the contents, learning outcomes, evaluation criteria, minimum spaces required, provision of machines and auxiliary equipment, number of courses to complete the cycle and number of weekly hours dedicated to each training module.

All of them have been widely exposed in the document contributed by Calzia, so here we will only focus on the configuration of training modules and their distribution in the IES Chirinos for this course and the next one, it is likely that it will be as follows:

PROFESSIONAL MODULE	CURRICULUM HOURS	WEEKLY HOURS	
		FIRST COURSE	SECOND COURSE
Footwear and trends	100	3	
Principles of electromechanical maintenance	70	2	
Cutting of materials	200	6	
Textiles and leather	120	4	
Industrial manufacturing	330	9	
Training and career counseling	90	3	
Technical English for footwear and fashion accessories	90	3	
Mounting and finishing of leather goods	60		3
Mounted and finished footwear	225		10
Tailor made footwear processing processes	40		3
Tailor made and orthopedic footwear manufacturing techniques	110		8
Transformation of footwear for shows	60		3
Business and Entrepreneurship	60		3
FCT (*)	400		
TOTAL CURRICULUM HOURS	2000		
TOTAL WEEKLY HOURS PER COURSE		30 (1st, 2nd y 3rd terms)	30 (1st y 2nd terms)

As can be seen, here there are also evident differences with the Calzaturiero, whose training consists of a total of a maximum of 720 hours distributed in 3 courses, compared to almost 2,300 of the Spanish CFGM distributed in only 2 courses.

The formative units of the Calzaturiero are very numerous and of rather short durations (between 2 and 4 hours each), while in the CFGM, didactic units of between 20 and 60 hours each are chosen, depending on the time allocation of the module, which gives them a solid theoretical content, while working eminently practical content.

As for the number of teachers and students, the Calzaturiero consists of 50 teachers and 287 students among unemployed young people and students of the School of Design. This yields a ratio of approximately 6 students per teacher.

The IES Chirinos has only two teachers, a Secondary Teacher (PS) and a Technical Teacher (PT), for a maximum of 20 students enrolled, which yields a ratio of 10 students per teacher (almost double). This could indicate that the Calzaturiero would bet for a more personalized attention to the student.

Going to assess the teaching methodology, the Calzaturiero focuses mainly on the pattern and design of different footwear models, how to draw them correctly, as general base patterns, how to generate them with CAD software, etc. The teachings are eminently applied, which is already a common point with the Spanish Vocational Training (FP), and specifically with our training cycle, but the CFGM of Footwear and Fashion Complements has no content or competences assigned in design or in pattern of footwear, since these correspond to the graduates of Higher Degree.

Specifically, and this is also what Calzia says in her document, the main training needs demanded by the sector are focused on cutting, assembling and setting up, which are precisely the profiles of graduates of the Middle Grade.

In spite of all the above, there are some concepts about materials, design and basic pattern making that are taught in some of our modules' teaching units, which are common with those worked on in the Calzaturiero:

BY HAND TECHNICAL PATTERN-MAKING

- Check of the materials, tools, practice exercise of cutting on cardboard (4 h)
- wrap the last with the paper, realization of the basis of the model (4 h)
- Correction of the basis of the model (4 h)

PROCESSES/MATERIALS TECHNOLOGIES

- Structure of a shoe: parts, components and materials (2 h)
- Supply chain and shoes manufacturing organization and main processes (2 h)
- The last (2 h)
- Visit to the last factory (2 h)
- Leather (4 h)
- Reinforcements, tips and counters (2 h)
- The insole (2 h)
- The heel (2 h)
- The leather sole (2 h)
- Technical sheets: last, sole, insole, heel (2 h)
- Adhesives and glues for the footwear industry (2 h)
- Steps and processes of footwear realization. Cutting: organization, documentation and problems (2 h)
- Steps and processes of footwear realization. Stitching: organization, technologies, documentation and problems (2 h)
- o Steps and processes of footwear realization. Lasting and finishing: organization, technologies, documentation and problems (2 h)
- o Visit to shoe factory (2 h)

PROCESSES TECHNOLOGIES

- Cutting: technical sheet – filling out of the form + preparation to stitching (skiving) (2 h)
- Stitching: preparation to stitching (skiving) + execution of stitching (4 h)
- Introduction to CAD system in footwear sector + 2D CAD for upper and lining development (2 h) Seminar
- 3D CAD Technologies for last, insole, sole and heel development (2 h) Seminar
- Organization of a shoe factory and main processes (2 h) Seminar
- Stitching: technical sheet (2 h)
- Stitching: virtual billboard (2 h)
- Lasting: preparation to lasting (tips, counters, over heel) – lasting (2 h)
- Visit to Footwear Museum Villa Foscari Rossi - Riviera del Brenta (2 h) Seminar
- Finishing: technical sheet – finishing activity (2 h)
- Material quality control and tests (with a specialized company) (2 h) Seminar
- Rubber soles (2 h) Seminar

CAD 2D TECHNICAL PATTERN-MAKING

- Presentation of the program and of the software features (4 h)
- Software features (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 1st model (4 h)
- CAD pattern making of 2nd model (4 h)
- CAD pattern making of 2nd model (4 h)
- CAD pattern making of 2nd model (4 h)
- Developments and verification (4 h)

In particular, in the third year a specialization course on "Handmade Luxury Footwear" is offered in the Italian center, which has many contents in common with the "Customized and Orthopedic Footwear" module, as some phases of production (cutting, sewing / finishing, skin treatment or finishing) are common with the type of jute footwear that is currently being manufactured, both in textile and leather, only by varying the system of joining the floor to the cut, which in the Spanish case it is done with a manual sewing type "festoon", instead of being made with the traditional stitching of luxury footwear (Blake or similar). That is, although the concept of shoe in both cases is destined to different markets, differentiated by the purchasing power of the client, the production processes have common phases, which run in an identical way, being treated in both cases of handmade footwear and made by hand.

4 - POSSIBLE ADAPTATIONS OF THE CURRICULUM TO THE NEEDS OF THE FOOTWEAR SECTOR

For all of the above, it is concluded that, despite the notable differences between the Italian and Spanish models, there are points in common that can be exported to our training system, with the proviso that a series must be met. of regulatory restrictions that do not exist in Italy. Thus, at first it was thought to generate a Professional Module of the Region of Murcia, which will exclusively deal with the jute environment as material and its manipulation and integration into the final product, in a similar way to the training units taught in the Calzaturiero, organized by processes and technologies, and eminently practical.

But the system of Vocational Training in Spain is aimed at training generalist technicians, leaving the training of specialists in the hands of the SEF and its courses, much more specific, so that later, it was decided that it would be more didactically assimilated to integrate said contents of the training module. jute, in two already existing modules that deal with the same didactic objectives, together with other alternative and complementary materials: "textiles and leather" (more theoretical) and "assembled and finished shoes" (more practical), within the Training Cycle of Middle Grade, thus being more in line with the profile of Vocational Training.

This adaptation of the official curriculum is due to the collaborations received from the rest of the project partners, by implementing the need to develop skills that work with the contents of:

Textiles and Leather:

- Jute: history, production and properties of fiber.
- Process of obtaining jute fiber.
- Applications and uses of jute.
- Storage, cleaning and maintenance of jute products.

Mounted and Finished Footwear:

- Manufacturing process of jute footwear: braiding, warping, sewing, vulcanizing, assembling and finishing.
- Products and raw materials for assembling and finishing jute footwear.
- Factors and quality criteria for the assembly and finishing of jute footwear.
- Machinery and tools used in the manufacture of jute footwear.
- Techniques for assembling jute footwear: manual / automatic, glued / sewn (buttonhole point), and finishes.

The didactic methodology in the educational center that has been raised in Spain, is similar to the one described in the D.1.1 deliverable. of the Calzaturiero Polytechnic, with theoretical parts explained in the classroom, and then practical applications of this theory in the center's workshop, in order to familiarize the students with all the stages and profiles of the production process, although much more extensive, by counting the CFGM with triple the teaching hours of the Calzaturiero courses.

To try to solve the problem of not having the latest generation machinery in the Chirinos that is available in the Calzaturiero, it was decided to offer the CFGM in the Dual FP modality of Deepening. Thus, students are incorporated a total of 700 hours to companies (300 hours more than usual in FP), to practice with machines and materials that are not available in the school, and thus improve their base training. It should be noted that during the apprenticeship period within the companies each student receives an economic compensation paid by the company as a scholarship established at € 2.44 per hour of assistance, being subsidized by means of public incentives at 100% the contributions to Social Security, after an initial payment by the company.

5 - POSSIBLE ADAPTATIONS TO THE CURRICULUM OF THE NEEDS OF THE SECTOR

Taking as reference the information provided by Calzia, we can summarize the needs of the footwear sector in the Northwest region in the following:

- Specific training needs in Jute footwear manufacturing
- Need for qualified workers in the cutting section.
- Need for qualified workers in the section of aparado.
- Need for skilled workers in the assembled section (manual and automatic).
- Training in new digital skills.

To contemplate these needs, the following considerations have been included in the draft of the Regional Curriculum Decree:

- Specific contents related to Jute and footwear manufacturing have been included with it in the Textile and Leather and Footwear Mounting modules.
- The weekly time allocation of the modules of Cutting, Industrial Dressing and Footwear Assembly has been the maximum possible (6, 9 and 11 hours per week respectively), in order to reinforce the training of students precisely in those needs that most demand Business.
- The training of students in the use of new digital skills has been reinforced, since it is one of the most required needs.

6 - OTHER TYPES OF ADAPTATIONS: SPACES, MATERIALS, ...

We do not know, in a complete way, how the facilities of the Calzaturiero Polytechnic are organized, nor of what material they have, since that information has not been provided.

However, given the teaching experience of this course, the training of Spanish students could benefit if there was a greater involvement of companies both in providing teachers with the usual material with which they work in their respective factories, as well as specification of work procedures, specific techniques, etc.

The workshops of the CFGM are only equipped with flat sewing machines and a single bending-to-glue machine, which does not reflect at all the reality of the machinery present in the companies. In this way, it is impossible to accustom the students to work with the equipment they will find in them, being therefore the least efficient training.

7 - SUSTAINABILITY NEEDS

Obviously, the manufacture of footwear is a hugely burdensome activity. The skin is expensive, the acquisition of machinery is very expensive and its maintenance is not less.

We do not know how the machinery and equipment were acquired by the Calzaturiero Polytechnic, since they do not specify it in their document, but it is assumed that the machinery belongs to the companies, which cede their use for the training of their workers. The companies

make profitable the acquisition of the machinery precisely with the production of the footwear that later they sell.

This model is not applicable to the case of public HEIs. In this specific case, the acquisition of material depends on the budget allocation assigned by the center to the department, which in turn is determined by the budgetary allocation of the educational administration to the center.

Realistically, neither is usually very high, so the way to have machinery and expendable equipment would be for companies to cede altruistically for the sake of better training of their future workers.

8 – CONCLUSIONS

In view of the foregoing, the following demands / questions may be raised:

- The Calzaturiero is a private center, with total flexibility as to what content should be taught, how to do it, time allocation, timetables, resources, spaces, etc. and contact with the latest technology present, while the IES Chirinos is a public center, subject to national and regional regulatory restrictions that stipulate what and how it should be taught, with difficulty of rapid access to technology due to the immediate impossibility of Public Administration to access cutting-edge machinery constantly.
- Calzaturiero teachers are active professionals in the sector, although they do not seem to show didactic training to carry out their work. On the other hand, teachers of Spanish vocational training have strong access requirements in terms of qualifications and didactic training, being different from the requirements for updating technical knowledge.
- The training in the Calzaturiero consists of a total of, at most, 720 hours distributed in 3 courses (more specialized training), compared to almost 2300 of the Spanish CFGM distributed in only 2 courses (more general training).
- The Calzaturiero has a ratio of approximately 6 students per teacher, while in the IES Chirinos we have finished with one of 8 students per teacher. This seems to indicate that the Calzaturiero would bet on a more personalized attention to the student.
- The Calzaturiero focuses mainly on Pattern and Design, while the CFGM of Footwear and Fashion Complements does not have content or competences assigned to design or pattern of footwear, since these correspond to the graduates of Higher Degree. Even so, there are training units that can provide valuable exportable knowledge to the artisan manufacturing of jute footwear. Specifically, the specialization course on "Calzado de Lujo Handmade" of the Calzaturiero has enough contents in common with the "Customized and Orthopedic Footwear" module of the IES Chirinos, being both footwear and artisan made hand.
- Polytechnic Calzaturiero could provide more information on how their facilities are organized (number of workshops, students per workshop, distribution of the machines, what material they have in them, etc.)
- Calzaturiero Polytechnic could provide more information on how they acquire and make profitable the machinery used to manufacture footwear.
- It would be up to footwear manufacturers to supply the usual avant-garde fungible material for better training of the students (skins, yarns, textiles, soles, etc).