Integrating Companies in a Sustainable Apprenticeship System

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Intellectual Output 6A

Spanish Qualifications Framework Towards a framework for the footwear industry

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Contents

1. Background

On 23rd April 2008, Recommendation 2008/C111/01/EC of the European Parliament and of the Council on the creation of the European Qualifications Framework for Lifelong Learning was approved. The objective of this Recommendation was to create a common frame of reference that would serve as a conversion mechanism for the different national systems and qualification levels for general and university education and for vocational education and training. The Recommendation aimed to improve the transparency, comparability and portability of qualifications.

The Resolution of the European Parliament on the European Qualifications Framework for Lifelong Learning (2016/2789 (RSP) was approved on 17th May 2017. One of its main tasks was to facilitate and promote both the transfer of qualifications and the validation of non-formal and informal training and education between different education and training systems.

In parallel, the Spanish Government entrusted the preparation of the Spanish Qualifications Framework (MECU) to the Ministry of Education in 2009. In addition, the Sustainable Economy Law established in 2011 demanded the creation of this framework to favour and increase the mobility of students and workers.

For this reason, the Ministry of Education and Vocational Training, through the General Directorate of Vocational Training, started coordinating the development and implementation of the MECU in cooperation with the Ministries of Employment and Social Security, Industry, Energy and Tourism, and Economy and Competitiveness, as well as other social actors, such as institutional entities and training evaluation agencies.

On 12th March 2019, the State School Council published an opinion approving the draft Royal Decree establishing the Spanish Qualifications Framework for Lifelong Learning. However, this draft Royal Decree has not been published yet on the Official Spanish Gazette (BOE), and therefore, it has not come into force yet.

2. Spanish Qualifications Framework for Lifelong Learning

The Spanish Qualifications Framework for Lifelong Learning (MECU) aims to promote greater mobility for citizens in their learning, training and work environment, fulfilling the commitment derived from the 2030 Agenda and its objectives, and trying to guarantee an inclusive, equitable and quality education, as well as the promotion of lifelong learning.

This framework is a structure for organising qualifications by levels, ranging from the most basic learning to the most complex. It therefore covers formal learning processes (general and adult education, vocational education and training, and higher education), as well as non-formal and informal learning processes.

The Spanish framework is linked to the European framework and completes the regulation of the Spanish qualifications framework, together with the Spanish Qualifications Framework for Higher Education (MECES). The levels into which the Spanish Qualifications Framework for Lifelong Learning is structured, together with the levels of the Spanish Qualifications Framework for Higher Education, complete the eight reference levels of the European Qualifications Framework for Lifelong Learning.

Each level is associated with learning outcomes descriptors, classified in knowledge, skills and autonomy and responsibility, in accordance with the European Qualifications Framework for Lifelong Learning, but adapted to the national context.

Based on the European recommendation to facilitate the progressive incorporation of non-formal learning into the framework, some of the levels have been subdivided.

European Qualifications Framework	Spanish Qualifications Framework for Lifelong Learning
Level 1	Level 1
Level 2	Level 2
Level 3	Level 3 A
	Level 3 B
Level 4	Level 4 A
	Level 4 B
	Level 4 C
Level 5	Level 5 A
	Level 5 B
	Level 5 C

Table 1: Comparative view of the EQF and MECU structure by levels extracted from the draft Royal Decree establishing the Spanish Qualifications Framework for Lifelong Learning.

The scope of the MECU is constituted by official qualifications and certifications from the Spanish non-university educational system: primary education, compulsory secondary education, upper secondary education, vocational training, artistic education and sports education, as well as other titles that have been declared equivalent. The professional certifications issued by the labour administration are also included.

Thus, since the scope of the ICSAS project are level 1, 2 and 3 qualifications, this paper will focus on those levels hereunder.

MECU level 1

Level 1 of the Spanish Qualifications Framework corresponds to level 1 of the European Qualifications Framework. This level includes the certifications corresponding to primary education.

The characteristics of the qualifications in this level are defined by the aforementioned learning outcomes descriptors:

Knowledge	Skills	Autonomy and Responsibility
Sufficient knowledge to understand the reality of the immediate environment and satisfy the basic needs that arise in habitual situations of daily life.	Reading, writing and applying the techniques. Communicating in a basic way allowing to express and understand simple messages and coping in everyday situations of basic calculation. Analysing the consequences of own actions in simple contexts. Using information and communication technologies in a very basic way to solve simple tasks in everyday situations.	Work or study under direct supervision in a structured context.

Table 2: Learning outcomes descriptors in level 1 extracted from the draft Royal Decree establishing the Spanish Qualifications Framework for Lifelong Learning.

MECU level 2

Level 2 of the Spanish Qualifications Framework corresponds to level 2 of the European Qualifications Framework. This level includes the official certificate of completion of the second year of compulsory secondary education and the certificate of vocational training programs for students with special educational needs or specific groups, regulated under the fourth additional provision of Royal Decree 127/2014.

The characteristics of the qualifications in this level are defined by the aforementioned learning outcomes descriptors:

Knowledge	Skills	Autonomy and Responsibility
Basic knowledge in a specific professional, academic or training field.	Applying basic knowledge to carry out simple tasks. Solving common problems in a specific work area. Communicating knowledge, skills, feelings and activities in usual contexts, through different representations and artistic expressions. Analysing the consequences of your own actions and those of others in daily contexts. Using the necessary information to solve current problems within their professional, academic or training environment. Basic use of technological resources for different purposes and objectives in common contexts.	Work or study, individually or in teams, under supervision, with some degree of autonomy and initiative. Responsibility in everyday situations that require a certain capacity for analysis and evaluation.

Table 3: Learning outcomes descriptors in level 2 extracted from the draft Royal Decree establishing the Spanish Qualifications Framework for Lifelong Learning.

MECU level 3

Level 3 of the Spanish Qualifications Framework corresponds to level 3 of the European Qualifications Framework.

This level has two sublevels, depending on the academic, professional or both, as well as the breadth of the qualification. Level 3 has two sublevels, depending on the academic or professional values, or both, as well as the breadth of the qualification:

- Level 3 A includes programs with academic and professional validity that allow access to level 4 lessons, that is, the Secondary Education certificate and/or the certificate of Basic Professional Technician.
- Level 3 B includes programs with professional validity and without academic value, which do not allow access to Level 4 lessons, i.e. level 1 Professional Certifications.

Knowledge	Skills	Autonomy and Responsibility
Knowledge of facts, principles, processes and general concepts in a specific professional, academic or training field or in various fields of study: linguistics, mathematics, science-technology and natural, social, cultural and artistic environments.	Applying general knowledge to perform relatively simple or complex tasks in predictable environments. Solving problems and carrying out tasks with the necessary skills by selecting and applying methods, tools, materials and general information in specific contexts. Analyzing the consequences of their own actions and those of others in predictable contexts. Using the necessary information to solve current problems within their professional, academic or training environment. Basic use of information and communication technologies for different purposes and objectives in usual or predictable contexts in the personal, public, professional or academic fields. Guided-search and analysis of the specific information necessary to evaluate and solve relatively simple problems within the professional, academic or training field. Creating, innovating and taking initiatives, in a professional, academic or training environment. Adapt one's behavior to circumstances to solve problems in a specific context with respect for the rules of coexistence and democratic values.	Individual or team work or study, assuming responsibilities with certain supervision and adjusting to relatively simple guidelines, showing a certain initiative and organisational capacity, in a specific professional, academic or training environment. Adaptation of own behaviour to circumstances in a responsible way to solve problems and to understand others. Enhancing healthy habits and respect and protection of health, consumption, and care of living beings and the environment, in the field in which the corresponding activity is carried out. Empathy and cooperation, responsibility and initiative in the professional, academic or educational field in usual situations. Responsibility with respect to risk prevention, self and others' safety and environmental protection of the environment in which the corresponding activity is carried out.

Table 4: Learning outcomes descriptors in level 3 extracted from the draft Royal Decree establishing the Spanish Qualifications Framework for Lifelong Learning.

It should be noted that, although level 4 and 5 will not be analysed in depth, both have been subdivided into 3 categories.

Level 4. Level 4 A includes the qualifications of Upper Secondary Education, Professional Training Technician, Professional Music Teaching Technician, Professional Dance Teaching

Technician, Plastic Arts and Design Technician and Sports Technician; level 4 B includes level 2 Professional Certifications; and level 4 C includes the Vocational Training Specialisation courses.

Level 5. Level 5 A includes the qualifications of Advanced Technician in Professional Training, Advanced Technician in Plastic Arts and Design, and Advanced Sports Technician; level 5B includes level 3 Professional Certifications; and Level 5C includes Vocational Training Specialisation courses.

3. Spheres of Activity in industrial shoe production

Brief Outlines of the Spheres of Activities of Industrial Shoemakers

Depending on design and make, a shoe consists of several dozen components and its manufacture requires up to 150 work steps. In that sense, shoe production is a relatively complex process, which is mainly characterized by various joining methods. Experienced skilled workers are needed in all departments of a shoe factory, especially at key operations such as cutting, stitching and lasting.

3.1. Cutting and Clicking of Materials for Upper Manufacturing ("Cutting")

The task of the cutting department staff is to cut the shoe parts from upper, lining, interlining and reinforcement materials (leather, synthetic leather, natural or synthetic textiles) in the required geometries.

The following cutting techniques are used:

- Hand cutting with knife and pattern stencils: Mainly used for sample and small series production.
- Clicking machines and cutting dies (swing arm cutting presses for cutting upper and lining leather, travelling head and beam cutting presses for natural and synthetic textile materials): typically used for serial production.
- Dieless cutting on automated CAM cutting tables (oscillating blade / punching / roughing tool, water jet or laser): mainly used for prototyping and small series production, but also for serial production. The cutting geometries are provided by the CAD system.

Material, colour, number of pairs and special requirements can be found in the accompanying specifications that come with each work batch.

Prior to cutting, the leather hides and skins must be checked in terms of differences in thickness and colour, quality zones and eventual defects. Crucial in leather cutting – whether manual, machine cutting or computer-aided – is the compliance with the cutting rules (quality rule, pairing rule, stretch direction) because they influence the quality of the final product. Skill and experience in creating a cutting layout on a hide or skin are also imperative to minimise waste, because the upper leather represents by far the largest single cost item in shoe production.

Further operations in the cutting room are splitting of the cut parts (to reduce them to the required even thickness) and stamping of the parts (article number etc.). The quality control of the cuts is carried out directly in the department.

3.2. Preparation of Upper Parts and Upper Stitching ("Pre-Stitching and Stitching")

Upper manufacturing is time- and labour-intensive and can only be automated to a limited extent, at least in leather street shoe production. Upper manufacturing (the term used for sewing operations in the footwear industry is "stitching") represents the biggest item in terms of value creation in footwear production. Experienced stitching operators are particularly sought-after.

In upper manufacturing, a distinction is made between preparatory work ("pre-stitching") and the actual upper assembly ("stitching").

The stitching work to be done on a shoe depends on the model. Essentially, upper manufacturing consists of assembling all lining parts, assembling all outer upper parts, and then stitching together lining and outer upper with some subsequent final operations.

The necessary pre-stitching operations depend on the type of shoe, the specific model and the material. Typical pre-stitching operations are:

- Skiving (bevelling respectively thickness reduction of the edges of shoe parts)
- Splitting (to achieve homogenous thickness)
- Marking (e.g. to provide guidance for stitching or punching)
- Edge inking (open edges of non through-dyed leathers)
- Cementing (applying adhesive to parts and joining them together)
- Folding (to fold down previously skived edges with adhesive)
- Perforating, punching, embossing
- Reinforcing (with adhesive or ironing-on)
- Crimping (pre-moulding for better shape, e.g. for boot legs)

Pre-stitching operations are done partly manual, partly on machines. They can be decisive for the quality of the final product.

Upper assembly is done on stitching machines. There are various types: Flat-bed, post-bed or cylinder-arm machines, as well as single-needle, two- and three-needle machines to perform the numerous stitch types for closing and decorative seams.

3.3. Preparation of Uppers and Bottom Parts for Lasting and Lasting ("Lasting")

"Lasting" means attaching the lasting margin (i.e. the lower edge of an upper) by means of tacks and/or adhesives to the insole, which can be considered as the constructive backbone of footwear, although it is not at all visible on the final product. Lasting is one of the crucial operations in footwear production. Depending on the construction method, the lasting proceedings can differ.

Prior to lasting, toe puffs and heel counters must be inserted into the finished uppers in between upper and lining material in order to reinforce toe and heel. Toe puffs are usually ironed in. Leather fibre-board heel counters are dipped into latex adhesive, dried and then inserted by hand; another type of heel counters are thermoplastic heel counters. Some shoe types require crimping of the vamp, and most shoe types require back part moulding (hot and cold, depending on the type of heel counter). In parallel, lasts and insoles are prepared. The insoles are stapled to the last.

Thicker upper leathers should be treated with tempered water vapour or softener in order to prevent the grain from cracking (during the toe lasting process, the material must endure an elongation of up to 30%). Next to the toe lasting machine, a toe activating device is positioned, which heat-activates the toe puff (some devices work with tempered water vapour to soften the leather and toe puff, and with a mould shaped like the front part of the last to increase mouldability and to pre-mould the toe area).

Lasting starts with pulling the upper in the correct position over the last. Most companies use the two-machine-lasting system, i.e. toe lasting is performed on the first machine and then side-and heel lasting on the second machine. The machine pincers pull the upper material close to the last and the lasting edge is attached under the insole.

During the lasting process, the upper is exposed to high tensile forces in order to shape it to the last.

Some factories use a pounding machine or just manual hammering to improve the lasting result (i.e. flatten the lasting edge and get rid of eventual creases).

The subsequent steps are throughput of the lasted uppers through heat- and cool-setting tunnel transport systems which improve the shape retention of the materials as well as the fit of the final product.

3.4. Assembly of Uppers and Bottom Parts ("Assembly")

In the assembly room, upper and bottom parts are joined. By the time the batch of lasted uppers enters the assembly room, the bottom parts in the correct sizes and numbers have been prepared and put on the rack shelves together with the uppers.

First, the staples fixing the insole to the last bottom need to be removed. The next step is roughing the lasting edge as a surface preparation for the adhesive bond. The objective of roughing is to smoothen potential creases, to remove the grain layer of the leather because it contains oils or other greases or surface treatments which will weaken the bonding strength, and to increase the bonding surface. Roughing can be performed on machines (roughing machines or combined roughing/cementing machines); however, manual roughing remains widespread. It is imperative to precisely respect the roughing contours and to remove just the grain layer in order to preserve the structural strength of the material. Roughing dust must be thoroughly blown off.

Then a filler is inserted into the cavity on the last bottom in order to compensate for the height difference between last bottom and lasting edge.

The next step is cementing, i.e. to apply adhesive onto the roughened shoe bottom (with a cementing or a combined roughing/cementing machine) as well as onto the sole. Although robotised adhesive application solutions for sole cementing exist, manual application with a brush is still common. Depending on the type of soling material, the appropriate adhesive needs to be chosen. Each adhesive type requires a specific surface treatment; the objective of pre-treatments is to clean the bonding surface and to create ideal conditions for the adhesive to adhere to the material.

After the mandatory drying times, the soles can be pressed. Therefore, the adhesive (sole and upper) is re-activated, the soles are positioned manually onto the last bottoms and the whole is then inserted into a sole press (hydraulic or pneumatic depending on their application suitability).

Alternatively, soles can be sewn-on, vulcanised or direct-injected depending on the construction method.

The subsequent operations are delasting and attaching the heel – if the shoe model provides for a heel. The soles of stitch-down or welt-sewn footwear require finishing operations such as scouring and/or polishing of the edges.

3.5. Finishing

In the finishing room, the shoes are prepared for sale and boxed.

Finishing operations include various work steps.

Depending on the type of upper material (leather finish and colours) the shoes must be cleaned and – if necessary – repaired. For this purpose, a wide range of tools and auxiliaries are available, which must be selected very carefully, especially for sensitive upper materials such as aniline leather or suede. Wrinkles are ironed out or smoothed-out with a blow-drier.

Spray-finishes, waxes and creams are applied, insocks or seat sock pieces are inserted, and decorative elements fixed.

A task of particular importance is the final quality control prior to shipment (please see also sphere 6; “Quality Assurance”.).

Finally, the shoes are boxed in individual boxes and 10 or 12 or more pair boxes put in shipping cartons (preparation for shipping is often done in the dispatch warehouse).

3.6. Quality Assurance

Quality assurance of footwear relates mainly to three aspects: Visual appearance, fit and functional characteristics (e.g. durability, performance, absence of harmful substances).

Sensibly, these controls should not only be performed on the finished footwear, but at all manufacturing stages. All operators should systematically self-check their work, and all work batches should undergo a quality check before leaving each production department to avoid problems in subsequent processes. A visual quality control before boxing the shoes is standard.

When a customer performs pre-shipment inspections of shoes that were produced by a supplier, the visual control is carried out according to a sampling plan which defines how many shoes must be inspected and in order to be able to decide whether a production batch can be accepted or not.

Fit and wear testing is done by a panel of reliable and product sensible testers who will fill in a test questionnaire. This is commonly organised by the product development team. Bigger companies have dedicated fit and wear testing departments.

The control of technical aspects consists in subjecting the shoes to a series of physical and mechanical tests to ensure their quality and safety. The absence of harmful substances is checked through chemical testing. There are legal standards for the performance of footwear testing, defining the requirements in terms of sampling, conditioning of the samples and test execution in order to facilitate comparison of the results. If the test results are intended to be communicated to customers or other stakeholders, it is recommended to commission an independent laboratory to perform the testing. For certain types of shoes, such as safety shoes, this is even mandatory.

Definition of INSPECTION (according to ISO 2859-1): “Activity such as measuring, examining, testing or gauging one or more characteristics of a product or service, and comparing the

results with specified requirements in order to establish whether conformity is achieved for each characteristic."

3.7. Footwear Design

Shoe designers do not only design individual models, but also concepts for entire collections. The main focus is always to meet the tastes and needs of future buyers, both in terms of fashion as well as of quality and fit.

Designers must be creative, able to draw, have a sense of emerging trends and an eye for harmonious lines and colors. The success of the entire company depends on the success of the models with the customers and thus the success and the employment situation for the entire company.

A shoe designer should be familiar with the shoe making process in order to design models in such a way that the effort in production remains proportionate to the achievable selling price and that the manufacturing can be done with the existing equipment and skills.

Many designers still draw on paper or on deep-drawn copies of the last surface. Younger designers are increasingly moving from initial manual design sketches to design on 3D CAD systems. 3D CAD systems save time and money by permitting to evaluate designs already at an early stage on the screen (which can be shared with co-workers no matter where on the globe) instead of going through the traditional time-consuming prototyping process. In addition, 3D CAD systems generate geometry data for computer-aided machines (CAM and CIM machines).

3.8. Technical Development

When the designer has completed his work, the results are sketches on paper or on deep-drawn last copies, at least in most small and medium-sized enterprises of footwear industry. Only few designers of SMEs in the field of leather street shoes work with digital tools. In the universe of sports shoes, things are often different, especially since global agreements and speed play an even greater role here and CAD systems are very helpful for gaining valuable time.

No matter whether the designer produces sketches on paper or on deep-drawn last copies, the result is an upper design in the first place. Typically, the designer specifies the upper materials to use. In addition, the designer also creates the shoe bottoms, i.e. outsoles and heels, to match the respective lasts (usually also on paper). Bottom parts can also be selected from respective suppliers.

Designers therefore often purely focus on the creative part. Once a design idea exists, this is when the technical developers come into play. They take care of the digitization and the technical development of the designs.

Their work focusses on the following questions: How can the idea sketch of a shoe be broken down into producible individual parts with the correct dimensions and the necessary additions and reductions for production? How do you get from a 3D design on a deep-drawn last copy to stencils or punching knives for upper parts, which are to be cut from 2D materials and then

reassembled into 3D objects? Which types of seams, of lining and reinforcement materials and, more generally, which operations in production are necessary to convert the idea into a product that the company can actually manufacture with the existing machinery and the know-how of the production staff?

3.9. Production Planning

Footwear production planning is about distributing and coordinating all activities related to footwear manufacturing.

Production planning activities include the following functions:

- Product data management: Classification of products in terms of size, style, variants, design, target market, materials, components, technical specifications etc.
- Order management: Inventory, manufacturing and delivery planning according to deadlines and available resources
- Manufacturing planning and monitoring: Planning and coordinating all the manufacturing phases and tracking work in progress and consumption
- Materials and components planning and inventory management: Ordering materials and components according to work orders and managing bills and keeping inventory
- Delivery and finished products stock management: Plan, organise and monitor logistics and supply chain activities
- Workforce management: Organising workforce accordingly to availability and keeping daily records of work hours and productivity
- Financial Management: Accountancy system that provides accurate and on time information regarding cash flows, fund flows, recurring expenses, costing and efficiency of manufacturing systems, budgeting and fund allocations

Depending on the company (size, organisation of departments, distribution of activities etc.) part of the activities related to production planning can be included in other departments.

For increased efficiency, companies use software systems for production planning. The main software categories are ERP (Enterprise Resource Planning), PDM (Product Data Management) and PLM (Product Lifecycle Management) systems.

4. National qualifications in the Spanish footwear sector

Since one of the main objectives of the ICSAS project is creating a sector qualifications framework to facilitate the transferability and comparability of qualifications at transnational level, we should deepen into the qualifications related to the footwear sector in Spain.

At national level, three different qualifications corresponding to three different EQF/MECU levels are found:

- EQF/MECU level 1: Shoe and leather goods repair;
- EQF/MECU level 2: Custom-made and orthopaedic footwear manufacturing;
- EQF/MECU level 3: Shoes and leather goods pattern making;
- EQF/MECU level 4: Footwear and fashion accessories technician.

ICSAS project selected a number of spheres of activity when analysing the footwear manufacturing process to create the curricula for the pilot. Thus, each qualification has been analysed in terms of broadness of tasks (knowledge, skills and abilities, and competence), level of autonomy (need of supervision during study or work) and work-process orientation (ability to perform the steps comprised in the footwear manufacturing process) considering those spheres of activity.

Shoe and leather goods repair

This qualification, specifically a professional certification, is found in the national catalogue of qualifications. After 280 hours of classroom training and 80 of practical training, that is to say, a total of 360 hours, the student will receive a certificate that accredits their skills and knowledge as a shoe and leather goods repairer.

It should be noted that this qualification has been included given that it is a level 1 Spanish footwear qualification, but it is not relevant to the scope of the project since it focuses on shoe repair and not on industrial footwear production. Therefore, it will not be analysed in depth in terms of broadness of tasks, level of autonomy and work-process orientation.

However, before moving on to the next qualification, we should mention that the individual in possession of this professional certification would be able to prepare the parts for stitching or lasting in industrial footwear production.

Custom-made and orthopaedic footwear manufacturing

This qualification, specifically a professional certification, is found in the national catalogue of qualifications. After 570 hours of classroom training and 120 of practical training, that is to say, a total of 690 hours, the student will receive a certificate that accredits their skills and knowledge as a custom-made and orthopaedic footwear manufacturer.

Broadness of tasks	Level of autonomy	Work-process orientation
Basic knowledge in the footwear industry to carry out simple tasks and solve simple problems	Supervised study or work, with a certain degree of autonomy	Planning (production planning, technical development) Production (cutting, assembling, lasting) Post-production (finishing)

Table 5: Custom-made and orthopaedic footwear manufacturing description based on the information on the Spanish catalog of qualifications.

Shoes and leather goods pattern making

This qualification, specifically a professional certification, is found in the national catalog of qualifications. After 660 hours of classroom training and 120 of practical training, that is to say, a total of 780 hours, the student will receive a certificate that accredits their skills and knowledge as a shoes and leather goods pattern maker.

Broadness of tasks	Level of autonomy	Work-process orientation
General knowledge of facts, principles, processes and concepts in the footwear industry to carry out tasks and solve problems selecting and applying methods, tools and materials	Independent or team work or study	Planning (production planning, technical development)

Table 6: Shoes and leather goods pattern makering description based on the information on the Spanish catalog of qualifications.

Footwear and fashion accessories technician

This qualification, specifically a middle grade of VET training, is found in the national catalog of qualifications. After 2000 hours of both classroom and practical training, the student will receive a certificate that accredits their skills and knowledge as a footwear and fashion accessories technician.

Broadness of tasks	Level of autonomy	Work-process orientation
Knowledge in wide contexts in the footwear sector to carry out a set of activities, solve predictable problems, analyse concrete information and find creative solutions	Self-managed work or study, supervising other people's work	Planning (production planning, technical development) Production (cutting, assembling, lasting) Post-production (finishing)

Table 7: Footwear and fashion accessories technician description based on the information on the Spanish catalog of qualifications.

5. Spanish contribution to SQR

autonomous performance

initiation

Partly; e. g. planning of a single product (not production line)

not tackled

Country	Level according to EQF (Qualification)	Spheres of activity in footwear sector								
ES	Level 2 Custom-made and orthopaedic footwear manufacturing	Cutting	Stitching	Lasting	Assembly	Finishing	Design	Technical development	Production planning	Quality assurance
ES	Level 3 Shoes and leather goods pattern making	Cutting	Stitching	Lasting	Assembly	Finishing	Design	Technical development	Production planning	Quality assurance
ES	Level 4 Footwear and fashion accessories technician	Cutting	Stitching	Lasting	Assembly	Finishing	Design	Technical development	Production planning	Quality assurance

Table 8: Coverage of peripheral spheres by Spanish IVET qualifications

6. Conclusions

The creation of the MECU (Spanish Qualifications Framework for Lifelong Learning) has been carried out in parallel with the creation of the European Qualifications Framework for Lifelong Learning following the recommendation of the Parliament and the Council in 2008.

At European level, the EQF -approved in 2017- makes it possible to link the qualifications of the Member States in the context of a common reference, and calls for the creation of national qualification frameworks.

At the national level, although the MECU preparation process began in 2009, the draft Royal Decree was not published until 2019, and has not yet entered into force.

As observed, the EQF and the MECU share the same objectives, such as: facilitating the understanding of qualifications by describing them in terms of learning outcomes; facilitating the identification, validation and recognition of all types of learning outcomes, including those related to non-formal and informal learning; or improving citizens' information on national qualifications, as well as facilitating and promoting mobility.

The Spanish Qualifications Framework for Lifelong Learning consists of 5 levels, which together with the Spanish Qualifications Framework for Higher Education (MECU) complete the eight reference levels of the European Qualifications Framework. These levels, in some cases, have been subdivided depending on the academic or professional values, or both, as well as the breadth of the qualification. Thus, formal learning processes as well as non-formal and informal learning processes are included.

As seen in the analysed levels, each one is associated to descriptors (knowledge, skills and autonomy and responsibility) adapted to the national context, which facilitates the understanding of the qualifications included in each level and what to expected from them.

Finally, regarding the national qualifications in the Spanish footwear sector, the level 2 qualification (custom-made and orthopaedic footwear manufacturing) encompasses most of the steps in pre-production, production and post-production, however, it does not deepen into the knowledge to carry out the tasks and solve problems and the work has to be supervised. The level 3 qualification (shoes and leather goods pattern making) only focuses on pattern-making, although the work can be carried out independently. Therefore, it is the level 4 qualification (footwear and fashion accessories technician) the one that encompasses most of the steps in pre-production, production and post-production, deepens into each operation and work is self-managed.

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