



THEME 4:

Initial vocational education and training in Spain

**Informe realizado por el
Servicio Público de Empleo Estatal - INEM
*por encargo del CEDEFOP***

Edita:
Servicio Público de Empleo Estatal
Subdirección General de Servicios Técnicos
Área de Organización y Planificación de la Gestión
Servicio de Análisis, Documentación e Información

NIPO: 215- 05- 022-8

STRUCTURE OF THE THEME 4

0401 INTRODUCTION TO INITIAL VOCATIONAL EDUCATION AND TRAINING (INCL. STATISTICS)

- 040101 Development of IVET
- 040102 Relationship between IVET and general education (incl. statistics)
- 040103 Qualifications structure
- 040104 Schools/training centres/providers
- 040105 Role of social partners and enterprises
- 040106 Planning and forecasting
- 040107 Diagram of main pathways within IVET

0402 IVET AT LOWER SECONDARY LEVEL (INCL. STATISTICS)

- 040201 Curricula
- 040202 Learning outcomes

0403 IVET AT UPPER SECONDARY LEVEL: SCHOOL-BASED AND ALTERNANCE (INCL. STATISTICS)

- 040301 Access requirements
 - 04030101 Promoting participation*
- 040302 Curricula
 - 04030201 Content and delivery*
 - 04030202 Assessment*
 - 04030203 Quality assurance*
- 040303 Learning outcomes
 - 04030301 Qualifications/certification*
 - 04030302 Progression and transition (incl. statistics)*

0404 APPRENTICESHIP TRAINING (INCL. STATISTICS)

- 040401 Access requirements
 - 04040101 Apprenticeship contracts*
 - 04040102 Promoting participation*
- 040402 Curricula
 - 04040201 Content and delivery*
 - 04040202 Assessment*
 - 04040203 Quality assurance*
- 040403 Learning outcomes
 - 04040301 Qualifications/certification*
 - 04040302 Progression and transition (incl. statistics)*

**0405 OTHER YOUTH PROGRAMMES AND ALTERNATIVE PATHWAYS
(INCL. STATISTICS)**

040501 Access requirements

040502 Curricula

040503 Learning outcomes

**0406 VOCATIONAL EDUCATION AND TRAINING AT POST-SECONDARY
(NON-TERTIARY) LEVEL (INCL. STATISTICS)**

040601 Access requirements

040602 Curricula

040603 Learning outcomes

**0407 VOCATIONAL EDUCATION AND TRAINING AT TERTIARY LEVEL
(INCL. STATISTICS)**

040701 Access requirements

040702 Curricula

040703 Learning outcomes

0408 BIBLIOGRAPHICAL REFERENCE AND WEB SITES

04 - INITIAL VOCATIONAL EDUCATION AND TRAINING

Initial vocational training in Spain responsibility of the education authorities at either central government or autonomous community level consists of :

- Basic Vocational Training - is included in the compulsory secondary education curricula and in the "Bachilleratos", and has two primary aims: to familiarise youngsters with the importance of technological issues in the modern world and to ensure that the same youngsters have sufficient information at school about occupations, professions and the world of work, in order to facilitate career guidance.
- Specific Vocational Training - this training modality has the aim of providing on-the-job training. It has been organised in educational cycles and divided into modules. This branch of vocational training is structured into two grades:
 - a) Middle-level Vocational Schooling - for admission the certificate of compulsory education or approval in an admission test is required.
 - b) Higher-level Specific Vocational Schooling - the successful completion of the "Bachillerato" and, in some cases, to have studied certain subjects is required for admission. Those youngsters who are over n twenty years of age must pass an admission test.

Initial vocational training in Spain responsibility of the labour authorities consists of:

The Workshop-School, Trade learning Centre and Employment Workshops are considered a public employment/training programme whose goal is favouring the integration of the young people (under twenty-five) into the labour market through their qualifications or through professional practice in occupations related to the rehabilitation of the artistic, historical or natural heritage, as well as other community services.

0401 - INTRODUCTION TO INITIAL VOCATIONAL EDUCATION AND TRAINING (INCL. STATISTICS)

By vocational training we mean the all training actions which give people the qualifications needed to work in certain jobs, facilitate entry into work and allow them to participate actively in social, cultural and economic life. Among the different forms of vocational training are Formación Profesional Inicial (Initial Vocational Training), including Formación Profesional Específica (Specific Vocational Schooling), as established by the Ley Orgánica de Ordenación General del Sistema Educativo, LOGSE, of 1990 (Education Reform Act).

Specific Vocational Schooling is divided into two educational levels: grado medio (middle level) and grado superior (upper level), also called middle-level and upper-level "ciclos formativos" (training cycles), both of which lead to occupational qualifications. Middle-level Specific Vocational Schooling, which forms part of the secondary education system, is accessed after completing Educación Secundaria Obligatoria (compulsory secondary education); the upper level is accessed after Bachillerato (baccalaureate) level.

Under the timetable for implementing the new LOGSE system, these structures were introduced on a gradual basis until their complete incorporation in the 2002/2003 school year.

Compulsory secondary education as established by the LOGSE is defined as the final stage of basic education. It is comprehensive in nature, lasts from 12 to 16 years of age, and is divided into two two-year cycles.

STATISTICAL INDICATORS AND SERIES

Percentage of student participation in Vocational Training education with regard to the total amount of students of all School Leaving Certificate and Vocational Training education.	
1992-93 COURSE	36,1%
1995-96 COURSE	35,3%
2001-02 COURSE	41,2%

Source: MEC statistics

040101 - DEVELOPMENT OF IVET

The Ley General de Educación y Financiamiento de la Reforma Educativa, LGE (General Education and Education Reform Finance Act) of 1970 represented the first complete restructuring of the Spanish education system in the 20th century. The law divided higher secondary education (post-compulsory) for students between 14 and 18 years of age into two streams, academic and vocational. This level came after the Educación General Básica (General Basic Education), a single structure covering primary and compulsory secondary-level education. The academic stream was divided into the Bachillerato Unificado y Polivalente, BUP (Unified General Baccalaureate), lasting three years, and the Curso de Orientación Universitaria, COU (University Preparation Course). In turn, the Vocational Schooling stream was divided into two: specific and general. General Vocational Schooling lasted two years and Specific Vocational Schooling three.

The Reforma Experimental de las Enseñanzas Medias (Experimental Middle-Level Education Reform) was implemented in 1983. It reorganised education at this level into two cycles: the first, from the ages of 14 to 16, offered a common education for all students; the second offered two possibilities: the academic

Bachillerato, and a modular vocational cycle. These experimental reforms served as a basis for drawing up the definitive reforms for this educational level in the Ley Orgánica de Ordenación General del Sistema Educativo, LOGSE (Educational Reform Act).

The LOGSE was passed in 1990. It extended free compulsory education to the age of 16 and divided secondary education into three very different stages: Educación Secundaria Obligatoria, ESO (Compulsory Secondary Education); Bachillerato; and middle-level Specific Vocational Schooling.

The Ley Orgánica 5/2002 de las Cualificaciones y la Formación Profesional (Qualifications and Vocational Training Act), passed on 19 June 2002, integrated the three vocational training subsystems into a single system linked directly to employment needs. The Sistema Nacional de Cualificaciones y Formación Profesional (National Qualifications and Vocational Training System) was set up to improve the match between the training on offer and labour market needs. The measures included the creation of Centros Integrados (integrated centres), which offer the whole range of vocational training and of Centros de Referencia Nacional (national reference centres), which coordinate innovation and experimentation in vocational training according to the needs of industry. There are centres of this kind in all the Autonomous Regions.

Lastly, the Ley de Calidad de la Educación (Quality of Education Act) 10/2002 of 23 December has its main objective to promote an effective system of quality with opportunities for all. It introduced measures to improve students' qualification and training.

040102 - RELATIONSHIP BETWEEN IVET AND GENERAL EDUCATION (INCL. STATISTICS)

Initial Vocational Training in the Spanish education system is part of secondary education. This, in turn, is divided into compulsory secondary education and higher secondary education.

The LOGSE defines the objectives of this stage as being to give students a basic grounding in culture, make them ready to exercise their rights and duties within society and to prepare them for entry into the labour market or access to middle-level Specific Vocational Schooling or the Bachillerato.

Specific Vocational Schooling is divided under the LOGSE into two educational levels, middle level and upper level (also called middle-level and upper-level "training cycles"), both of which lead to occupational qualifications. Middle-level Specific Vocational Schooling, which forms part of the secondary education system, is accessed after finishing ESO (compulsory secondary education); the upper level is accessed after the Bachillerato.

These studies are structured into training cycles, grouped by vocational family, which are then organised into training modules. Their duration is flexible and they include training placements at companies. Educational authorities are responsible for organising and managing these studies.

QUALIFICATION AND ACCESS TO THE EDUCATION AND VOCATIONAL SYSTEM

Successful completion of an intermediate-level training cycle leads to the relevant Technician qualification. Similarly, successful completion of an advanced-level training cycle leads to the relevant Senior Technician qualification.

The Technician qualification permits access to any of the Higher Secondary Education streams. The training modules studied are also eligible for homologation with Higher Secondary Education subjects.

The Senior Technician qualification permits direct access to the appropriate university studies, taking into account the vocational training studies completed, in accordance with the pertinent regulations regarding university entrance procedures.

ADVANCED-LEVEL VOCATIONAL TRAINING STUDIES ARE ALSO ELIGIBLE FOR HOMOLOGATION WITH UNIVERSITY STUDIES STATISTICAL INDICATORS

Student participation in vocational schooling compared to the total of all students in Bachillerato and vocational schooling for each year.	
1992-93 COURSE	36,1%
1995-96 COURSE	35,3%
2001-02 COURSE	41,2%

Source: MEC statistics

040103 - QUALIFICATIONS STRUCTURE

The academic and vocational qualifications accrediting successful completion of the studies regulated by Law 1/1990 of 3 October, pertaining to the General Ordering of the Education System (LOGSE) and valid throughout Spain, are issued by the education Authority responsible for the educational institution in which the corresponding studies were completed.

Students who successfully complete middle-level Specific Vocational Schooling receive the qualification of Técnico (Technician) in the corresponding occupation.

This qualification, after the requisite accreditation, gives access to Bachillerato studies in fields related to the vocational schooling completed. It is also possible to study in other specialised or complementary fields, such as Enseñanzas de Régimen Especial (special education streams), which include art or foreign languages.

People who have obtained the qualification of "Technician" and want to take an upper-level "ciclo formativo" (training cycle) in the same occupational group or one legally established as being similar, can access it via

an exam if they are at least 18 years of age. Alternatively, each Autonomous Region may have its own courses which complement the qualification of Technician, and which have to be passed in order to continue on to the next stage.

Students who complete upper-level Specific Vocational Schooling obtain the qualification of "Higher Technician". This is a final training qualification designed to incorporate students into the labour market.

However, students who want to continue their studies can also use this qualification to access certain forms of university education related to the vocational schooling studied, without having to take an entrance exam; or they can use it to access certain forms of specialised or complementary education. In addition to this, the occupational modules they have studied can be credited towards other training cycles.

040104 - SCHOOLS/TRAINING CENTRES/PROVIDERS

Vocational training centres may be private or public.

Middle-level Specific Vocational Schooling may be given in dedicated centres or in centres teaching other schooling as well. Usually this form of education is offered together with compulsory secondary education and the Bachillerato in centres which are called Institutos de Educación Secundaria (secondary education institutes) in the majority of the Autonomous Regions.

In general, the centres which deliver upper-level Specific Vocational Schooling also offer middle-level training, although some Autonomous Regions are creating vocational training institutes exclusively for upper-level Specific Vocational Schooling.

All these centres must meet a series of requirements established nationwide. Among the most important are that the centres must offer at least two training cycles and that the maximum number of students per teacher is 30.

040105 - ROLE OF SOCIAL PARTNERS AND ENTERPRISES

At a national level, the social partners participate in the Consejo General de Formación Profesional (General Council for Vocational Training), a consultative body with institutional representation which advises the government on questions related to vocational training. There are also Consejos Autonómicos de Formación Profesional (regional councils for vocational training) which operate in the same way at the level of the Autonomous Regions. Both these types of councils include representatives from the corresponding government, trade unions and employers' organisations.

The LOGSE includes guidelines for the participation of the social partners in the planning and management of vocational training. This participation is called "formación concertada" (coordinated training) as it involves a close relation and exchange of services between industry and the educational system.

Coordinated training is being developed through a series of measures:

- A catalogue of occupational qualifications is being prepared jointly by the education authorities and experts in the labour market in order to establish the kind of training which should be offered by the education system.
- A module called "Formación en Centros de Trabajo (Training in the Workplace) is being included in the curricula of the training cycles.

040106 - PLANNING AND FORECASTING

The LOGSE of 1990 marked the start of a comprehensive reform of vocational training, with a general updating of its content. This was a result of a process which saw collaboration between the Ministry of Education, the Autonomous Regions and experts in the labour market. The first step was to publish basic guidelines defining a common academic structure for vocational schooling. This has been the basis for the ongoing authorisation of new occupational qualifications and their corresponding core teaching contents for the whole of Spain.

The Autonomous Regions have complemented this basic standard by establishing the curricula of the training cycles relating to each qualification within their regions. The teaching centres have to develop these curricula through the "proyecto curricular" (curricular project) and the "programación anual" (annual programme), whose objectives, contents, assessment criteria, order and methodology are designed to reflect the characteristics of the students and the training possibilities available for them.

Periodically, the Government (either on its own initiative or at the request of the Education Authorities, the Vocational Training Board or social partners) is obliged to review and, when necessary, either update the professional qualifications or create new qualifications to guarantee that they remain in line with changing vocational qualification requirements.

The Vocational Training Board, created in 1986 and modified in 1997 and 2000, is a consultative body attached to the Ministry of Labour and Social Affairs. It is a tripartite entity, involving the participation of business organisations, unions and the Public Authorities representing the Autonomous Communities. In addition, it acts as an advisory body to the Government on Vocational Training. The National Qualifications Institute was created in 1999 as an independent technical instrument to support the Vocational Training Board.

040107 - DIAGRAM OF MAIN PATHWAYS WITHIN IVET

Number of students in the various pathways of secondary education and percentages in public establishments, 2001-2002		
	NUMBER OF PUPILS	% OF PUPILS STUDYING IN PUBLIC ESTABLISHMENTS
EDUCACIÓN SECUNDARIA OBLIGATORIA ESO (COMPULSORY SECONDARY EDUCATION)	1.897.912	65,6
STUDENTS OF BACHILLERATO (UPPER SECONDARY EDUCATION GENERAL BRANCH)(*)	677.554	74,7
FORMACIÓN PROFESIONAL ESPECÍFICA (SPECIFIC VOCATIONAL SCHOOLING) (POST-COMPULSORY)		
GRADO MEDIO (INTERMEDIATE SPECIFIC VOCATIONAL TRAINING)	210.750	72,0
GRADO SUPERIOR (ADVANCED SPECIFIC VOCATIONAL TRAINING)	208.935	74,6
SOCIAL GUARANTEE PROGRAMS (**)		69,7
STUDENTS STILL STUDYING UNDER THE 1970 SCHOOL REGIME (BEFORE THE LOGSE)		
CURSO DE ORIENTACIÓN UNIVERSITARIA COU (UNIVERSITY PREPARATION COURSE)	13.068	93,0
VOCATIONAL TRAINING (LGE)	29.380	70,8
DISTANCE STUDY		
1970 SCHOOL REGIME: BACHILLERATO UNIFICADO Y POLIVALENTE BUP (UNIFIED GENERAL BACCALAUREATE) AND CURSO DE ORIENTACIÓN UNIVERSITARIA COU (UNIVERSITY PREPARATION COURSE)	6.233	100
SCHOOL LEAVING CERTIFICATE	20.459	92,1
MODULES PROFESIONALES (OCCUPATIONAL MODULES)	2.243	100
TOTAL NUMBER OF STUDENTS IN 2001-02	3.108.561	

(*) The Bachillerato certificate established by the Logse (Education System Reform Act) can be accessed by a two year- post-compulsory school course. It is targeted at students aged 16 and over.

(**) Students of Social Guarantee Programmes provided within educational establishments and activities outside them are included.

Source: Statistical Office (Ministry of Education)

0402 - IVET AT LOWER SECONDARY LEVEL (INCL. STATISTICS)

Formación Profesional de Base (basic vocational schooling), as an integral part of ESO (compulsory secondary education) is offered in two ways: through a general technological education for all students as a specific subject (which must include not only training in different skills but also an understanding of the social and industrial environment); and in addition, through various optional curricular elements which include various kinds of work experience.

This basic vocational schooling promotes knowledge, abilities, attitudes and skills common to a wide number of vocational qualifications or profiles, and guarantees a rounded and wide-ranging training. The aim is to build a close and effective link between training and employment throughout this entire stage of education.

Absolute number of participants							
LATEST YEAR AVAILABLE 2000- 2001 (ACADEMIC COURSE)							
AGE							
	Total	12	13	14	15	16	17
Male	965.091	184.305	221.742	225.353	224.807	89.188	29.956
Female	922.821	185.253	211.289	213.337	216.184	71.720	25.038
Total	1.897.912	369.558	433.031	438.790	440.991	160.908	54.634

Source: MEC Reference year: 2001-2002 (Academic course)

040201 - CURRICULA

The organisation and selection of the contents of curricula in certain areas and the importance given to their aims and criteria for evaluation, as well as the methodology used, has to depend on both the starting point of each student and the general objectives for skills development at this stage.

The variations in the curriculum are based on the common curriculum of the second cycle of the stage, including at least three of the knowledge areas of the basic curriculum, and training elements in the areas of society & linguistics and science & technology. For each student, these measures must include a clear specification of the methodology, contents and personalised assessment criteria, all within the framework established by the relevant education authority.

This curriculum is used exclusively in schools.

040202 - LEARNING OUTCOMES

ASSESSMENT

The assessment of students' learning during Compulsory Secondary Education must be continuous and differentiated according to the different curriculum subjects.

Teachers assess students based on specific objectives and the knowledge acquired in each subject, according to assessment criteria established in the curriculum for each year.

QUALIFICATION

The students who successfully complete compulsory secondary education obtain the qualification of Graduado en Educación Secundaria (Graduate in Secondary Education). This qualification gives them access to Bachillerato studies and to middle-level Specific Vocational Schooling.

The teachers of a particular group of students, coordinated by their teacher-tutor and on the advice of the school career guidance department, may suggest that students who have failed in some areas or subjects may obtain a qualification if they have reached the overall objectives established for the ESO stage. In any event, on completing this stage all the students are credited with the years studied and the qualifications obtained in the different areas and subjects they have completed.

The Ley Orgánica de Calidad de la Educación (Quality of Education Act) of 2002 established that students passing all the subjects in this stage obtain the qualification of Graduado en Educación Secundaria Obligatoria (Graduate in Compulsory Secondary Education).

0403 - IVET AT UPPER SECONDARY LEVEL: SCHOOL-BASED AND ALTERNANCE (INCL. STATISTICS)

In middle-level Specific Vocational Schooling, also known as Module II, the duration of the courses and the kind of pathways followed are not determined by the economic sectors or specialties involved. Students who successfully complete middle-level Specific Vocational Schooling obtain the qualification of Technician in the corresponding occupation.

The qualification of Technician, with the requisite accreditation, allows access to Bachillerato studies in fields related to the training course completed. It is also possible to study other specialised or complementary fields, such as the special education streams (Art or Foreign Languages).

People who have obtained the qualification of "Technician" and want to take an upper-level training course in the same occupational group, or one legally established as similar, can access it via an exam if they are at least 18 years of age. Alternatively, each Autonomous Region may have its own courses which complement the qualification of Technician, and which have to be passed before continuing onto the next stage.

Middle-level Specific Vocational Schooling, also known as Module II, may be offered in specialist centres or in centres offering other schooling as well. Usually this training is offered together with ESO (compulsory secondary education) and the Bachillerato in centres which are called Institutos de Educación Secundaria (secondary education institutes) in the majority of Autonomous Regions.

This level is for students of over 16 years of age. The duration varies according to the training course in question (between 1 300 and 2 000 hours over one and a half or two academic years (usually one and a half)).

Middle-level training cycle modules II (Level II Modules), Students enrolled per year (*)	
1993/94	14 213
1994/95	21 442
1995/96	29 457
1996/97	48 609
1997/98	75 766
1998/99	119 556
1999/00	158 573
2000/01	191 456
2001/02	210 750

(Source: Ministry of Education)

(*)The Level II Modules were started in the academic year 1990/91, when the previous education system was still in force at some levels. The programme was introduced gradually under the new educational system (LOGSE 1990) and was completed in the 2002/03 school year.

LATEST YEAR AVAILABLE 2001-2002 (SCHOOL YEAR)								
AGE								
	TOTAL	14 (AND LESS)	15	16	17	18	19	20 (AND MORE)
MALE	118.698			10.110	26.530	30.977	22.091	28.990

FEMALE	92.052			7.608	18.715	22.334	16.524	26.871
TOTAL	210.750			17.718	45.245	53.311	38.615	55.861

Source: MEC

Reference year: 2001-2002 school year

040301 - ACCESS REQUIREMENTS

Access to middle-level Specific Vocational Schooling requires the Graduado en Educación Secundaria (Graduate Diploma of Secondary Education), or the qualification of Auxiliary Technician or Technician. It is also possible to access the training after successfully completing the second year of the Bachillerato Unificado y Polivalente, BUP (Unified General Baccalaureate), or by completing certain academic courses in Applied Arts or Crafts studies.

However, candidates may also join the course without fulfilling the established academic requirements provided that in a special exam they show a sufficient level of knowledge to suggest they will benefit from the studies.

Candidates must fulfil the following conditions to sit this exam:

- to be at least 18 years old at the time of taking the exam;
- to be accredited with at least one year's work experience in a field related to the "training course " to be studied;
- to have successfully completed a Social Guarantee Programme.

The secondary education centres and, where applicable, the specific vocational training centres, which train students with special educational needs at post-compulsory educational levels, with the corresponding qualifications, must offer the personal and material means necessary to ensure that these students can receive their training with any adaptations in the curriculum which may be necessary.

In the event that the demand for places in a centre exceeds supply, priority is given according to criteria that have been established for admitting students in public centres and in grant-aided centres in general nationwide.

04030101 - PROMOTING PARTICIPATION

The tutorial and guidance function forms part of the teaching function. Each group of students must have a teacher-tutor responsible for coordinating the assessment and the personal guidance of students, with the support of the centre's guidance department.

The training and career guidance may also be undertaken by a special teacher in the guidance department whose responsibilities include offering training and career guidance for students and helping them to find ways into the labour market as well as offering information on the labour market, self-employment, etc. In addition to this, there is a training and career guidance module in all the training courses.

040302 - CURRICULA

The LOGSE of 1990 marked the start of a comprehensive reform of vocational training, with a general updating of its content. This was a result of a process which saw collaboration between the Ministry of Education, the Autonomous Regions and experts on the labour market. The first step was to publish basic guidelines defining a common academic structure for vocational schooling. This has been the basis for the ongoing authorisation of new occupational qualifications and their corresponding core teaching contents for the whole of Spain.

The Autonomous Regions have complemented this basic standard by establishing the curricula for the training courses relating to each qualification within their regions. The teaching centres have to develop these curricula through the "proyecto curricular" (curricular project) and the "programación anual" (annual programme), whose objectives, contents, assessment criteria, order and methodology are designed to reflect the characteristics of the students and the training possibilities available to them.

From time to time, the government (on its own initiative or at the request of the education authorities, the General Council for Vocational Training or the social partners) has to review and, where applicable, update the vocational qualifications or create new qualifications, in order to guarantee that they accurately reflect real skills needs.

The General Council for Vocational Training, created in 1986 and modified in 1997 and 2000, is an advisory body dependent on the Ministry of Labour and Social Affairs. It is organised on a tripartite basis with representation from the employers' organisations, trade unions and government, including the Autonomous Regions. It also functions as an advisory body for the government in the field of vocational training. The Instituto Nacional de las Cualificaciones (National Institute for Qualifications) was created in 1999 as an independent technical tool to support the General Council for Vocational Training.

04030201 - CONTENT AND DELIVERY

In general, the duration of middle-level vocational schooling is between 1 300 and 2 000 hours (one and a half or two academic years). Training in the workplace consists of between 300 and 700 hours of combined training and work experience.

The training cycles are structured into vocational modules of mixed theoretical and practical training, the

duration of which depends on the vocational skills required for the particular qualification. These modules can be of two types: they may be associated with a particular skills unit; or cross-disciplinary or basic, helping to teach basic general skills for the vocational abilities needed in the corresponding training cycle.

The basic minimum content for each training cycle offering a vocational qualification is expressed as a proportion of the training cycle as a whole and of each of the corresponding modules. This basic timetable, established nationwide, may in no case represent more than 55 % (in the case of Autonomous Regions with their own language) or 65 % (for those without) of the total hours of the training cycle

Furthermore, all training cycles include a training and career guidance module that gives advice on the labour market and the legal framework, application of basic health measures and recognition of the most common situations which may give rise to industrial work hazards.

The curricula of all the training cycles include a practical training stage in a workplace, which may be wholly or partially left out for people who are able to prove sufficient work experience. Training in the workplace is considered an integral obligatory module within the curriculum, the only difference being that it is carried out in a workplace. Possible workplaces are companies and other institutions able to offer jobs combining training and productive work in which students can complement the vocational skills acquired at the education centres.

Overall, the didactic methodology of Specific Vocational Schooling aims to promote a comprehensive and coordinated view of the industrial process in which students take part by integrating scientific, technological and organisational aspects. Likewise, it should encourage students' ability to learn on their own and to work as part of a team.

04030202 - ASSESSMENT

Each Autonomous Region has to regulate the assessment of Specific Vocational Schooling according to its competences and following basic national regulations. There are no significant differences among Autonomous Regions in this respect. A system of continuous assessment is used (as in the other educational programmes under the 1990 LOGSE legislation) for each vocational module, though the modules as a whole are also taken into account. The assessment bears in mind the vocational skills related to the qualification, the objectives or skills aimed at in each module leading to the qualification, and the maturity of the student. The assessment of the training in workplaces is aided by the person designated as responsible for training in that workplace.

The final assessment is given as a figure between one and ten, except for the workplace training module, in which a simple pass or fail grade is awarded. A pass grade has to be awarded in all the individual modules making up the training course in order to successfully complete the training course as a whole. If failed, modules can be taken again through specially programmed activities.

04030203 - QUALITY ASSURANCE

The Ley Orgánica de la Participación, la Evaluación y el Gobierno de los Centros Docentes, LOPEG (Teaching Centre Participation, Assessment and Management Act) of 1995 regulates inspections in the educational system and establishes that the Autonomous Regions are responsible for the inspection of all centres, services, programmes and activities in their regions, whether public and private. Each Autonomous Region is responsible for the organisation and operation of its own system of inspection.

The Ley Orgánica de Calidad de la Educación LOCE (Educational Quality Act) of 2002 established, as in the LOPEG, that the inspections of educational institutions be carried out by the public authorities competent within their geographical areas and in accordance with the basic laws regulating this matter. The inspections deal with all the elements and aspects of the education system.

The functions of the Inspección Técnica (Technical Inspectorate) are twofold: first, to advise and support the educational community and government bodies regarding improvements in the quality of the system, helping to identify needs and promoting continuous improvement in teaching methods, continuing training of teachers and the introduction of reforms; and secondly, to help the education system achieve its objectives using an appropriate system of control and assessment.

QUALITY MODELS

There are several quality models applicable to training. A specific example is the EFQM model used in the Vocational Training Centres attached to the National Public Employment Service (INEM) and to the Community of Madrid.

The purpose of this model is to implement a system for evaluating and improving training management through: the design of procedures and ad hoc tools, the internal verification of the organisation (self-assessment), the planning and development of improvement processes for Training Centre management, and, finally, assessment of the viability of adapting the European Quality Management Model for Education Centres.

040303 - LEARNING OUTCOMES

See points 04030301, 04030302

04030301 - QUALIFICATIONS/CERTIFICATION

The students successfully completing Specific Vocational Schooling obtain the qualification of Technician in

the corresponding occupation.

04030302 - PROGRESSION AND TRANSITION (INCL. STATISTICS)

Obtaining a qualification provides preparation for a specific job but does not allow automatic access to it. For example, a trade such as an electrician requires an additional administrative authorisation.

Middle-level specific vocational schooling entitles students to continue with their studies by taking the Bachillerato, in which they are credited with the subjects they have studied related to the course they are to take. It is also possible to access other specialised or complementary education such as Arts and Foreign Languages in the Enseñanzas de Régimen Especial (Special Education Stream).

In addition, people who have the qualification of Technician and want to access an upper-level training cycle in the same occupational group or one officially established as being related, can either take an entrance exam (the minimum age requirement for which is 18) or the courses offered by Autonomous Regions to supplement the learning and skills obtained through the studies by which they received the qualification of Technician.

0404 - APPRENTICESHIP TRAINING (INCL. STATISTICS)

What was the apprenticeship contract is now called "contrato de formación" (training contract). This name originally appeared in legislation in the Estatuto de los Trabajadores (Workers' Statute of 1980), and was subsequently called "de aprendizaje" (apprenticeship) before reverting to its original name. The aim of the contract has always been the same, with only some minor differences of detail in the content. At present it is regulated by article 11 of the Royal Legislative Decree 1/1995 of 24 March, which passed into law the amended text of the Workers' Statute Act.

There are two important types of programme offering alternance between training and employment: the training contract programme and the Escuelas Taller (School-Workshop), Casas de Oficio (Trade Learning Centre) and Talleres de Empleo (Employment Workshop) programmes.

TRAINING CONTRACTS

This is a mixed work/training contract for theoretical and practical preparation for a trade. Its purpose is to deliver the theoretical and practical training needed for a trade or job requiring a level of qualification subject to formal accreditation. If there is no such formal accreditation, the reference used is the basic level of qualification for each occupation in the given company's own system of classification.

TRAINING CONTRACTS

YEARS	NO. OF CONTRACTS	DISTANCE LEARNING	THEORETICAL TRAINING FOLLOWED IN TRAINING CENTER
1998	147 415	132 674	14 742
1999	154 000	138 600	15 400
2000	119 091	107 182	11 909
2001	121 207	109 086	12 121
2002	126 568	113 911	12 657
TOTAL	668 281	601 453	66 829

ESCUELAS TALLER (SCHOOL-WORKSHOPS) AND CASAS DE OFICIOS (TRADE LEARNING CENTRES)

This is a mixed employment and training programme aimed at improving the employability of young unemployed people under 25 in order to facilitate their entry into the labour market.

Since the national data relating to the year 2002 have not been fully computerised, the data requested are here given for the year 2001:

School-Workshops (ET)/Trade Learning Centres (CO)/Employment Workshops (TE)				
	ET	CO	TE	TOTAL
ENROLLED STUDENTS	18 572	4 799	10 680	34 051
PARTICIPATING STUDENTS	40 728	8 611	17 687	67 026
STUDENTS COMPLETING COURSE	8 423	3 644	7 232	19 299
STUDENTS NOT COMPLETING COURSE	7 881	1 560	670	10 111
NUMBER OF TEACHERS	9 020		3 731	12 751
NUMBER OF CENTRES	899	272	704	1 875

Breakdown by gender, in 2002, %		
	SCHOOL-WORKSHOP AND TRADE LEARNING CENTRE (ET/CO)	EMPLOYMENT WORKSHOP (TE)
Male	63.09 %	34.50 %

Female	36.91 %	65.50 %
--------	---------	---------

APPRENTICESHIP TRAINING (INCL. STATISTICS)

Absolute number of participants								
LATEST YEAR AVAILABLE 2003								
AGE								
	TOTAL	14 (AND LESS)	15	16	17	18	19	20 (AND MORE)
MALE	77.552			11.209	14.632	15.197	13.258	23.256
FEMALE	48.222			6.974	9.101	9.453	8.247	14.447
TOTAL	125.744			18.183	23.733	24.650	21.505	37.703

Source: INEM

Reference year: 2003

040401 - ACCESS REQUIREMENTS

Training contracts and, programmes of Escuelas Taller (School-Workshop), Casas de Oficio (Trade Learning Centre) and Talleres de Empleo (Employment Workshop), may be offered to people over 16 and under 21 years of age who do not have the qualifications required for a contrato en prácticas (work-experience contract).

The maximum age limit will not be enforced for contracts with the unemployed who fall into any of the following groups:

- The disabled;
- Foreign workers during the first two years of validity of their work permit, except when they accredit the training and experience needed to carry out the job;
- People unemployed for more than three years;
- People in a situation of social exclusion;
- Student-workers in the School-Workshop, Trade Learning Centre and Employment Workshop programmes.

04040101 - APPRENTICESHIP CONTRACTS

The maximum number of apprenticeship contracts in a company, as well as the jobs involved, may be established according to the size of the workforce by means of collective industrial agreements at a national level, or failing this at a more local level.

Collective agreements within the company may also establish the maximum number of contracts according to the size of the workforce, if there is a company training plan.

If the collective agreements mentioned above do not determine the maximum number of apprenticeship contracts which each company may use according to the size of its workforce, the number will be determined by law.

The minimum length of the contract is six months and the maximum two years. Other periods may be established by industrial agreements at a national level, or failing this, by more local industrial agreements, taking into account the characteristics of the trade or job in question and its training needs. In no case may the minimum length be less than six months or the maximum more than three years (or four when the contract is for a disabled person, taking into account the type or degree of disability and the characteristics of the training involved).

When the maximum duration of the training contract ends, the worker may not be employed again using this contract, be it in the same company or a different one.

Workers may not be employed on training contracts for jobs which they have already carried out in the same company for over 12 months.

The wages of workers on training contracts are established by collective agreement, and they may never be below the minimum wage calculated proportionally according to the real time worked.

04040102 - PROMOTING PARTICIPATION

Companies may undertake, through collective bargaining, to convert training contracts into indefinite-term contracts.

The protective provision of the social security system for workers recruited on training contracts will include (as categories payable, situations to be protected and benefits): time off arising from work-related accidents and illnesses; medical care in the case of non-work related illness or accident and maternity leave; financial benefits for temporary invalidity caused by non-work related risks or maternity; and pensions. Workers also have the right to cover under the Fondo de Garantía Salarial (Wage Guarantee Fund).

Workers who continue in the company after completion of the training contract may not be subjected to a further trial period, and the duration of the training will be included for the purposes of calculating length of

service in the company.

The training contract will be deemed to be an ordinary contract if the employer fails to fulfil any of his or her obligations with regard to theoretical training.

In addition to the support mechanisms provided through Training Contracts, student-workers in Escuelas Taller (School-Workshops) Casas de Oficio (Trade Learning Centre) also receive grant during the initial theory phase of the training programme.

040402 - CURRICULA

The Instituto Nacional de Empleo, INEM (National Employment Institute), keeps an updated catalogue and map of training centres authorised to give theoretical instruction for training contracts, detailing the training contents of the modules or specialities provided. The necessary cooperation between the information and guidance services of the national and regional public administrations is now being strengthened.

Distance learning may be provided through distance education centres if the place in which the work centre is located does not have any education centres or the existing centres do not provide training courses appropriate for the objectives of the contract.

Appropriate accredited courses are deemed not to be available at education centres when either the class hours or training content are incompatible with working hours or are irrelevant to working practices

In the case of Workshop Schools and Trade Learning Centres, the student-workers receive an initial theory training stage during which, in addition to the content specific to their training modules, they receive guidance, advice, vocational information and business training. In the second stage, they are hired by participating entities under the terms of training contracts.

04040201 - CONTENT AND DELIVERY

Theoretical training must be delivered outside the workplace. This part of the training provision consists of the theoretical training modules for the occupational certificates related to the job or trade in question. If such certificates do not exist, the contents are established by the INEM.

After consultation with the General Council for Vocational Training, the Ministry of Labour and Social Affairs determines and approves the contents of the training modules for the occupational certificates. These then constitute the theoretical part of the training contract.

The time dedicated to this part of the training, which is always be separate from the job but during the working day, is always established in the contract to reflect the characteristics of the trade or job and the number of hours established for the training module applicable to this job or trade. In no case may it be less than 15% of the maximum legal working day. The theoretical training requirements are deemed to have been fulfilled when the worker is certified by the public authorities to have completed a vocational training course which is appropriate to the trade or job specified in the employment contract.

Theoretical training may be delivered via the network of public centres, the network of centres run by the social partners or by approved private centres.

Regarding student-workers who participate in a School Workshops and Trade Learning Centres, plus participants in Employment Workshops, these not only receive training related to the education modules for their corresponding occupations, but also, in the case of those who have not met the objectives of Compulsory Secondary Education, are allowed to participate in specific programmes to provide them with the basic, vocational training that will enable them either to join the labour market or continue their studies in different education areas.

In order to provide student-workers with access to new information and communications technologies, all projects include a module on computer education lasting at least 30 hours.

04040202 - ASSESSMENT

Practical training on a job appropriate to the purpose of the contract has to be carried out under the guidance of the employer or a worker with suitable qualifications or work experience. Each tutor may not be responsible for more than three workers on training contracts, except when a higher number is determined by collective agreement.

Within one month after completion of the instruction, the employer has to issue a certificate recording the duration of the theoretical training and the level of training acquired. In addition, within 15 days the centre where the theoretical training has been delivered must issue a certificate which states the planned training content and the extent to which good use has been made of the training.

The worker may ask the competent public authority to issue the corresponding occupational certificate after completing the necessary tests.

In the case of student-workers participating in a School-Workshops and Trade learning Centres, plus participants in the Employment Workshops, these all receive on completion of their programmes and workshops a certificate issued by the participating entity indicating the number of hours of participation in the programme, the level of theory-practical training acquired and the training modules studied.

This certificate, in whole or in part and in accordance with the established requirements, is eligible for homologation with the Vocational Certificate defined in the National Vocational Training and Placing

Programme.

0404203 - QUALITY ASSURANCE

The worker may ask the competent public authority to issue the corresponding occupational certificate after completing the necessary tests.

Each quarter, the recognised centres for theoretical training send the provincial directorate of the INEM a list of workers who have either begun or completed training contracts in that quarter. The list indicates the number of hours, costs and the number of the contract as registered with the INEM.

Also on a quarterly basis, these centres inform the INEM of the trainee's progress and make out a final report when the initial contract and any subsequent renewals expire.

Regarding the programmes offered by Escuelas Taller (School-Workshop), Casas de Oficio (Trade Learning Centre) and Talleres de Empleo (Employment Workshop), an annual Follow-up Plan is conducted on areas such as human and material resources plus the subsequent degree of labour insertion of student-workers. The degree of insertion is used in these programmes as an indicator of quality.

The results obtained in each Follow-up Plan are used as a reference for introducing changes in the development of programme content, as well as in successive management programming by the Autonomous Communities.

040403 - LEARNING OUTCOMES

Within 15 days of the end of the training, the centres where the theoretical training was delivered have to issue a certificate outlining the training content and the extent to which good use has been made of it.

The worker may ask the competent public authority to issue the corresponding occupational certificate after completing the necessary tests.

On completion of these Programmes, Escuelas Taller (School-Workshop), Casas de Oficio (Trade Learning Centre) and Talleres de Empleo (Employment Workshop), student-workers receive a certificate issued by the participating entity indicating the hours of participation in the programme, the level of theory-practical training acquired and the training modules studied.

04040301 - QUALIFICATIONS/CERTIFICATION

On completion of the training contract, the employer must give the worker a certificate which states the duration of the theoretical training and the practical training level achieved. This is designed to foster a suitable level of coordination with the centres giving the theoretical training.

For a qualification to be offered via a training contract, such a qualification must be formally accredited or, failing this, it must represent the basic level for each corresponding occupation in the system of qualifications within the company.

The students participating in these programmes, Escuelas Taller (School-Workshop), Casas de Oficio (Trade Learning Centre) and Talleres de Empleo (Employment Workshop), receive a certificate that, in whole or in part and in accordance with the requirements, is eligible for homologation with the Vocational Certificate defined in the National Vocational Training and Placing Programme.

04040302 - PROGRESSION AND TRANSITION (INCL. STATISTICS)

When the worker has not completed compulsory education, the immediate purpose of the theoretical training is to complete this level of education and the worker can then return to the ordinary education system, for which the education authorities are responsible.

Workers who have completed compulsory education will receive the theoretical training needed to adequately perform a trade or job requiring a certain skill level.

The students/workers who complete a training contract may remain in the company on temporary contracts or the company may take advantage of facilities for converting the contracts into indefinite-term ones.

CONTRACT FOR TRAINING

ESCUELAS TALLER (SCHOOL-WORKSHOP), CASAS DE OFICIO (TRADE LEARNING CENTRE) AND TALLERES DE EMPLEO (EMPLOYMENT WORKSHOP)

In the event where student-workers have not completed compulsory education, the immediate objective of the theory classes is to enable them to complete it.

0405 - OTHER YOUTH PROGRAMMES AND ALTERNATIVE PATHWAYS (INCL. STATISTICS)

The Spanish programmes for the training or integration of young people into the labour market in Spain are included under points 0402, 0403 and 0404.

040501 - ACCESS REQUIREMENTS

The Spanish programmes for the training or integration of young people into the labour market in Spain are

included under points 0402, 0403 and 0404.

040502 - CURRICULA

The Spanish programmes for the training or integration of young people into the labour market in Spain are included under points 0402, 0403 and 0404.

040503 - LEARNING OUTCOMES

The Spanish programmes for the training or integration of young people into the labour market in Spain are included under points 0402, 0403 and 0404.

0406 - VOCATIONAL EDUCATION AND TRAINING AT POST-SECONDARY (NON-TERTIARY) LEVEL (INCL. STATISTICS)

"In Spain there is no vocational educational and training programme at a level between middle-level Specific Vocational Schooling and non-university tertiary level vocational schooling (also called Higher-level Specific Vocational Schooling)".

040601 - ACCESS REQUIREMENTS

"In Spain there is no vocational educational and training programme at a level between middle-level Specific Vocational Schooling and non-university tertiary level vocational schooling (also called Higher-level Specific Vocational Schooling)".

040602 - CURRICULA

"In Spain there is no vocational educational and training programme at a level between middle-level Specific Vocational Schooling and non-university tertiary level vocational schooling (also called Higher-level Specific Vocational Schooling)".

040603 - LEARNING OUTCOMES

"In Spain there is no vocational educational and training programme at a level between middle-level Specific Vocational Schooling and non-university tertiary level vocational schooling (also called Higher-level Specific Vocational Schooling)".

0407 - VOCATIONAL EDUCATION AND TRAINING AT TERTIARY LEVEL (INCL. STATISTICS)

The Ley de las Cualificaciones y de la Formación Profesional (the Qualifications and Vocational Training Act) was passed in 2002. Its objective is to create an integrated system of vocational training, qualification and accreditation that responds to social and economic demands in the variety of its training formulas:

Formación Profesional Inicial (Initial Vocational Training), covering both middle and higher-level Specific Vocational Schooling, is regulated by the LOGSE.

Higher level Specific Vocational Schooling includes a set of modular training courses of variable length within theoretical and practical knowledge areas based on the different occupational fields.

The teaching centres may be public or private. Some Autonomous Regions are setting up special upper level Specific Vocational Schooling institutes.

Students enrolled per school year (*) Specific Vocational Schooling higherLevel/Level III Modules	
1993/94	16 187
1994/95	22 490
1995/96	32 285
1996/97	54 465
1997/98	79 900
1998/99	110 516
1999/00	147 875
2000/01	185 051
2001/02	208 935

(Source: Ministry of Education)

(*) Level III Modules were set up in the 1990-91 year, when the previous educational system was still in force at some levels. The programme was gradually introduced through the application of the new educational system (LOGSE 1990) and was completed in the 2002/03 school year.

VOCATIONAL EDUCATION AND TRAINING AT TERTIARY LEVEL (INCL. STATISTICS)

Absolute number of participants
LAST YEAR AVAILABLE

2001-2002								
	TOTAL	17	18 (ANH LESS)	19	20	21	22	23 (AND MORE)
MALE	105.693		9.307	16.631	20.767	17.217	12.776	28.995
FEMALE	103.242		10.847	19.075	19.831	16.142	11.421	25.926
TOTAL	208.935		20.154	35.706	40.198	33.359	24.197	54.921

Source: MEC

Reference year: 2001-2002 school year

040701 - ACCESS REQUIREMENTS

Upper level Specific Vocational Schooling is studied after successful completion of the Bachillerato or COU(*), or after an entrance exam. It consists of a modular set of training cycles of variable duration, within theoretical and practical knowledge areas based on the different occupational fields.

In general, the centres in which upper level Specific Vocational Schooling is delivered are the same as those for middle-level schooling (although some Autonomous Regions are creating special upper level Specific Vocational Schooling institutes).

Vocational education of a special occupational nature requires a minimum age and a pass in the university entrance exam.

(*) The University Orientation Course (COU), which lasted one academic year, used to be the final year of Secondary Education prior to university study. This has been replaced in the current education system by the second year of the Higher Secondary Education stipulated in the Law on General Ordering of the Education System (LOGSE).

040702 - CURRICULA

The LOGSE of 1990 marked the start of a comprehensive reform of vocational training, along with a general updating of its content. This was a result of a process which saw collaboration between the Ministry of Education, the Autonomous Regions and experts in the labour market. The first step was to publish basic guidelines defining a common academic structure for vocational schooling. This has been the basis for the ongoing authorisation of occupational qualifications and their corresponding core teaching contents for the whole of Spain.

The Autonomous Regions have complemented this basic standard by establishing the curricula of the training courses corresponding to each qualification within their regions. Teaching centres have to develop these curricula through the "proyecto curricular" (curricular project) and the "programación anual" (annual programme), whose objectives, contents, assessment criteria, order and methodology are designed to reflect the profiles of the students and the training possibilities available to them.

From time to time the government (on its own initiative or when asked by the education authorities, the General Council for Vocational Training or the social partners) must review and, where applicable, update the vocational certificates or create new certificates, in order to guarantee that they reflect changes in occupational skills requirements at all times.

Vocational certificates are organised into cycles with specific self-sufficient training objectives and academic values.

040703 - LEARNING OUTCOMES

Students who successfully complete Higher-level Specific Vocational Schooling obtain the qualification of "Higher Technician". This is a final training qualification designed to help students enter the labour market.

The qualification of "Higher Technician" also gives access to other specialised or complementary education. The "Módulos profesionales" (occupational modules) can also be credited across different training cycles.

Students who want to continue their studies can move directly on to university studies related to the vocational training studies they have taken, without having to pass the university entrance exam.

0408 - BIBLIOGRAPHICAL REFERENCE AND WEB SITES

Guía Laboral y Asuntos Sociales 2002. Ministerio de Trabajo y Asuntos Sociales Madrid. MTAS. 2002

Guía de la Formación Profesional en España. Instituto Nacional de las Cualificaciones. Madrid. MTAS. 2001

Estadísticas de la Educación en España 1999-2000. Ministerio de Educación Cultura y Deporte Dirección General de Programación Económica, Personal y Servicios.. Madrid. MECD. 2002

Estadísticas de la Educación en España 2000-2001. Ministerio de Educación Cultura y Deporte. Dirección General de Programación Económica, Personal y Servicios.. MECD. 2001

Pérez Díaz Víctor; Rodríguez Juan. La educación profesional en España. Madrid. Fundación Santillana. 2002

Inserción laboral 2001 Evaluación de resultados en Escuelas Taller y Casas de Oficio. INEM . Ministerio de Trabajo y Asuntos Sociales. 2003 Orgánica 1/1990, de 3 de octubre, Boletín Oficial del Estado. (BOE) 4 de octubre de 1990 de Ordenación General del Sistema Educativo

Real Decreto Legislativo 1/1995, de 24 marzo de 1995 Boletín Oficial del Estado BOE 29 marzo 1995, núm. 75/1995 por el que se regula el contrato para la formación.

Real Decreto 733/1995 de 5 de mayo, BOE 2 de junio de 1995 núm. 131 /1995. Expedición de los correspondientes títulos a las enseñanzas establecidas... en la Ley Orgánica de Ordenación General del sistema educativo.

Ley Orgánica 9/1995, de 20 de noviembre Boletín Oficial del Estado. (BOE) 21 noviembre de 1995, de la Participación, la Evaluación y el Gobierno de los centros docentes

Orden de 23 de febrero de 1998(BOE 27/02/1998) por la que se regulan las titulaciones mínimas y condiciones que deben poseer los profesores para impartir formación profesional específica en los centros privados y en determinados centros educativos de titularidad pública.

Real Decreto 777/1998, de 30 de abril, Boletín Oficial del Estado (BOE) 8 de mayo de 1999 por el que se desarrollan determinados aspectos de la ordenación de la Formación Profesional en el ámbito del sistema educativo

Ley Orgánica 5/2002, de 19 de junio Boletín Oficial del Estado (BOE) 20 de junio de 2002 de las Cualificaciones y de la Formación Profesional

Ley Orgánica 10/2002, de 23 de diciembre, Boletín Oficial del Estado (BOE) 24 de diciembre de 2002 de Calidad de la Educación

Real Decreto 362/2004, de 5 de marzo, (BOE 24 de marzo) por el que se establece la ordenación general de la formación profesional específica

ORDEN TAS/470/2004, de 19 de febrero, por la que se desarrolla el Real Decreto 1506/2003, de 28 de noviembre, por el que se establecen las directrices sobre los certificados de profesionalidad.

<http://www.mtas.es/>

<http://www.inem.es/>

<http://www.inem.es/sp/index.shtml>

<http://www.eurydice.org/Eurybase/>

<http://www.mec.es/>

<http://www.mec.es/instcual/index.html>