

Evaluation of the ISCED-97 for the Spanish system of education

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In order to assess the validity of the ISCED-97 for the Spanish case, this chapter will first provide a brief historical introduction to the Spanish system of education. A detailed description of the stages and tracks in the Spanish educational cycle will follow, accounting for the differences stemming from recent legal changes. In the light of this description, possible problems derived from the application of the ISCED-97 to the Spanish case will then be discussed. In order to assess the importance of these problems, I will use three datasets: the European Labour Force Survey (EU-LFS), the Spanish Labour Force Survey (*Encuesta de Población Activa*, EPA) and the first two rounds of the European Social Survey (ESS). The results of applying the ISCED to these data will be compared and discussed.

1 Graduates of three systems of education currently present in the Spanish labour market

Potential members of any sample representative of the active labour market population in Spain may have been educated nowadays under three different systems of education. The first law establishing a Spanish system of education was the Public Education Act (*Ley de Instrucción Pública*), also called Moyano Act, after the name of the Minister of Education who drafted it in 1857. It constituted the basic law regulating public education until 1970. It established primary, compulsory education for the first time in Spanish history, and integrated technical and scientific studies in post-secondary institutions. Primary education then lasted six years, from age 6 to 12. Although it was theoretically compulsory, the fact that it was to be funded by local government made that many poor municipalities were actually unable to provide it. The older members of any Spanish sample may have been educated under this system.

The 1970 General Act on Education and Finance of Educational Reform (*Ley General de Educación*, LGE) meant a “full generalisation of compulsory education for the whole population aged 6 to 14”; that is, it lengthened primary education by two years. It also put an end to the principle of subsidiarity of the State in the provision of education: “This new act recognised the State’s role in the general plan-

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ning of the education system and the provision of school places” (Eurybase, 2003/2004). The 1970 LGE affected those born between 1961 and 1982.

The 1978 Constitution recognised education as a universal right. It also established a new model of a decentralized State, according to which regional governments (Autonomous Communities) would assume responsibility for education. The 1980 Organic Law (LOECE) regulated school statutes. Other subsequent laws developed this constitutional right, like the 1983 University Reform Act (*Ley de Reforma Universitaria*, LRU) or the 1985 Organic Act on the Right to Education (*Ley Orgánica de Derecho a la Educación*), but the most fundamental reform of the Spanish system of education during the democratic period came with the 1990 Organic Act on the General Organisation of the Education System (*Ley para la Organización General del Sistema Educativo*, LOGSE), issued by the third government of the Spanish Socialist Party. The LOGSE set the main features of the Spanish system of education as we know it today. It divided *Educación Infantil* into two stages: *Educación Infantil*, for children from age 3 to 6, and *Educación Pre-escolar*, for children from age 0 to 3. Compulsory education was divided into primary education (6–12) and lower-secondary (12–16). The 1990 LOGSE has affected those born from 1982 onwards.

In recent years, a new university law repealed the LRU. The 2001 Organic Act on Universities (*Ley Orgánica de Universidades*, LOU) is part of an ongoing concern with the performance of Spanish universities. Today, this is still a matter of public debate and a concern for policy makers. Besides, a new Organic Act on the Quality of Education (LOCE) was issued in 2002 by the government of the Popular Party, trying to amend the LOGSE, but it did not fundamentally alter the structure of the system (Eurydice, 2005/2006).

Figure 1. Spanish educational system under the three last reforms

Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
PRE-LGE (1953)												lower voc. training (<i>Iniciación</i>)	lower voc. training (<i>Oficialía</i>)		upper voc. training (<i>Maestría</i>)								
	primary education											lower sec. education (<i>Bachiller Elemental</i>)		upper sec. education (<i>Bachiller Superior</i>)		PREU ^a	university studies (<i>Licenciaturas</i>)						
														upper sec. non-tertiary (<i>Títulos Medios</i>)									
LGE (1970)												lower voc. training (<i>Formac. Profesional 1</i>)		upper voc. training especial (<i>Formación Profesional 2</i>)									
	primary + lower sec. education (<i>Educación General Básica, EGB</i>)															upper voc. training (<i>Formación Prof. 2</i>)							
												general upper sec. education (<i>Bachillerato Unificado Polivalente, BUP</i>)		COU ^a		university education – upper degree (<i>Licenciatura</i>)							
LOGSE (1990)														lower voc. training (<i>CFGM</i>) ^b		upper voc. training (<i>CFGS</i>) ^c							
	pre-school (<i>Educación Infantil</i>)		primary education (<i>Educación Primaria</i>)			compulsory sec. educ. (<i>Educación Secundaria Obligatoria, ESO</i>)																	
														general upper sec. educ. (<i>Bachillerato</i>)		university education – upper degree (<i>Licenciatura</i>)		university educ. – 1 st degree (<i>Diplomatura</i>)					

Notes:

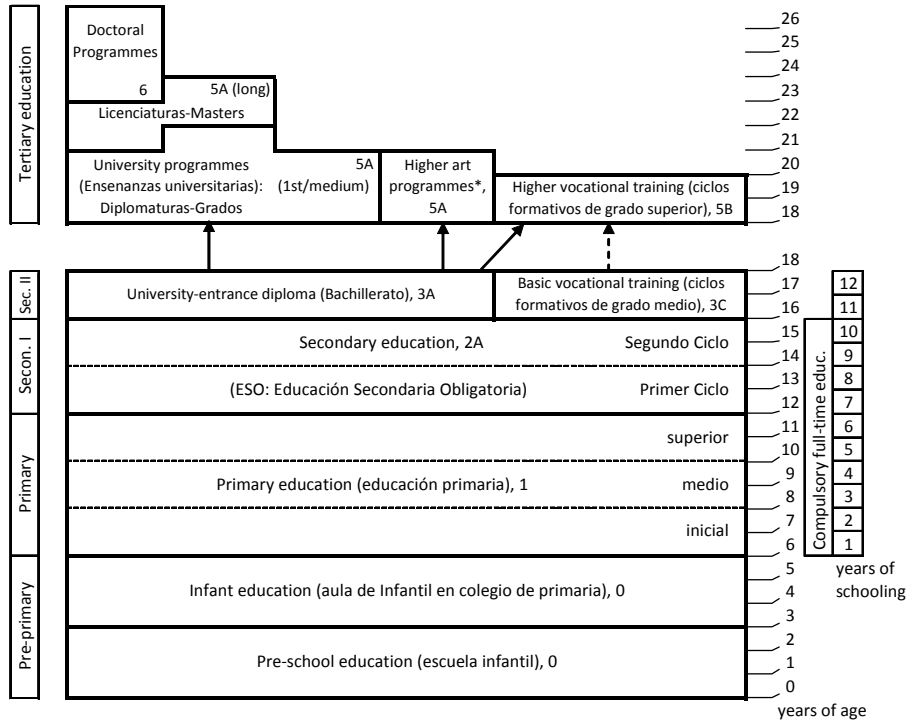
^a COU and PREU were university guidance courses, necessary to enrol university studies

^b CFGM: *Ciclos Formativos de Grado Medio*

^c CFGS: *Ciclos Formativos de Grado Superior*

2 The Structure of the current system of education in Spain

Figure 2. The current Spanish educational system from pre-school to tertiary education



* Enseñanzas artísticas de grado superior

2.1 Pre-primary education (ISCED 0)

The 1990 LOGSE was the first act to incorporate this stage into the educational system, labelling it as *Educación Infantil*. It is non-compulsory and divided into two stages: the first one (“preschool education”), not universally granted, lasts from age 0 to 3; the second one (“infant education”), free and universally granted, lasts from age 3 to 6. Even if there are public centres that provide “preschool education”, public provision does not meet the demand. The excess of demand thus goes to private centres, regulated but not funded by the State as private educational centres that provide later stages in the educational cycle of the individual (González, 2003).

Unlike “preschool education”, “infant education” is publicly granted: every child from age 3 to 6 has the right to attend a pre-primary school, without paying fees.

This difference between the first and the second stage of pre-primary education explains why the enrolment rate suddenly jumps from age 2 to 3 (see table below). It may also explain why the UOE data collection states that the “typical duration” of pre-primary education is 3 years, although its “theoretical duration” is 6 years.

Table 1. Net rate of schooling in “Educación Infantil” per age, school year 2004/2005

Under 1 year	1.5%
1 year old	6.3%
2 years old	15.9%
3 years old	84.0%
4 years old	99.1%
5 years old	100.0%

Source: Spanish Ministry of Education.

2.2 Primary education

Primary education initially took six years, from age 6 to 12. It was first mentioned by the 1857 Public Education Act, which made it compulsory and free. In 1964, the Francoist regime established Primary Education from age 6 to 14 for those who did not want to study afterwards, extending compulsory education by two years. *Preparatory* Primary School was established from 6 to 10 for those students who wanted to proceed into Secondary Education (*bacalaureate*), this latter one lasting from 10 to 17. This gave access to University Education. Finally, primary education lasted from 6 to 12 for those who wanted to proceed into vocational training (*Formación Profesional*). A substantial number of respondents in any sample in Spain have surely gone through this system of education.

The 1970 LGE established a period of *general compulsory* education for pupils between age 6 and 14. It was called Basic General Education (*Educación General Básica*, EGB) and comprised primary and lower secondary education. Both upper secondary education (*bachillerato*) and vocational training started just after EGB, and the differences between primary and lower secondary were thus suppressed. In sum, ISCED level 1 may not exist for those educated under the LGE. The criterion for distinguishing between ISCED level 1 and ISCED level 2 was specified by the Spanish Statistical Agency as “five years of EGB or less” as ISCED level 1.

Primary education was reformed under the 1990 LOGSE. The younger cohorts have surely gone through this system of education, but they may not constitute the bulk of any sample of the current Spanish active labour market population. The 1990 LOGSE lengthened compulsory (general) education to age 16, dividing this period

into Primary Education and Secondary Compulsory Education (*Educación Secundaria Obligatoria*, ESO). Although the former is not awarded with a diploma, it is formally considered an educational stage. This allows identifying easily again those individuals with ISCED 1.

2.3 Lower secondary education

As primary education, lower secondary education was also subject to changes in the last decades. Before the LGE, lower secondary education (*Bachillerato Elemental*) extended over a four-year period, from age 10 to 14. The EGB, generated by the 1970 LGE, comprised both primary and lower secondary education. It finished at age 14. Its successful completion granted the *Graduado Escolar*, by then the lowest possible formal educational attainment in Spain. The 1990 LOGSE lengthened the period of compulsory (general) education to age 16, and subsequently divided it, reinstating a proper lower secondary education stage (ESO). The lower possible degree then became *Graduado en Educación Secundaria*, necessary to pass on to post-compulsory secondary education.

2.4 Upper secondary, general education

Upper secondary education in Spain is currently branched into an academic and a vocational training track. Academic upper secondary education lasts two years, from age 16 to 18, and gives direct access to university after an exam. Under the previous law (LGE), upper secondary general education was longer and more articulated. It comprised, first, a three-year long *Bachillerato Unificado Polivalente* (BUP), where students could already make choices that conditioned their choice of fields of study at the university. It lasted from age 14 to 17 (theoretically). Then, an additional course, called University Orientation Course (*Curso de Orientación Universitaria*, COU), was necessary to get access to the University. As stated in the EUROSTAT mappings for Spain, COU “does not award any diploma or certification, but it was necessary to pass it in order to apply for the access to university”. Before the LGE, upper secondary general education, then labelled *Bachillerato Superior*, lasted only two years (age 15 to 16) and an additional course (*Curso Preuniversitario*) was also required to get access to university. This course was not awarded with any specific diploma either.

2.5 Vocational Training

The 1990 LOGSE established vocational training as an alternative track after lower secondary education. Vocational training comprises “the set of educational actions preparing for the proper performance of the different professions, the access to employment and the active participation in social, cultural and economic life” (Eu-

rybase, 2003/2004: p. 72). As such, it is currently divided in two stages, or *ciclos formativos*: “specific intermediate-level vocational training” and “specific advanced vocational training”. “Specific intermediate-level vocational training” begins at age 16 and spreads over eighteen months or two years. For this reason, its “typical duration” is consigned in the UOE Data Collection as 1.5–2 years. Specific advanced vocational training begins at age 18, after the completion of *Bachillerato*, and has an approximate length of two years. The successful completion of *ciclos formativos* is awarded with the certificate of *Técnico* and *Técnico Superior*, respectively. The establishments that offer advanced vocational training are usually the same ones that offer intermediate vocational training. After advanced vocational training, it is possible to get access to university.

Before the LOGSE reform, vocational training was also an alternative track to general upper secondary education, but it finished earlier. Under the LGE, there was an elementary stage of vocational training (FP1, *Formación Profesional 1*), lasting from age 14 to 16 (thus bridging the time between basic education, EGB, and minimum working age) and concluding with the attainment of a degree of *Técnico Auxiliar*. This title was functionally equivalent to current *Técnico*.² FP1 was meant to be accessed mainly from lower secondary education, even if such an educational stage had not been successfully completed and awarded with the corresponding diploma. After the completion of BUP, the student could enrol into an advanced level of vocational training (FP2, *Formación Profesional 2, General*), which lasted from age 17 to 19 (Otero et al., 1999). FP2 was also accessible from FP1, but just in the same vocational branch (trade) as the student had taken in FP1. This latter trajectory, and the subsequent link between FP1 and FP2, was initially devised as exceptional (FP2, *Formación Profesional Especial*). It lasted from age 16 to 19. FP2 enabled the student to get a degree as *Técnico Especialista*, functionally equivalent to current *Técnico Superior* (LOGSE). FP2 gave access to certain technical university courses and COU.

Before the LGE, and in accordance with different bills issued in 1955, vocational training was basically industrially driven (Otero et al., 1999: 39). Afterwards, it comprised two cycles: an elementary one (*Oficialía*), lasting from age 14 to 17, and an advanced one (*Maestría*), from 17 to 19. Both were preceded by a two-year preparatory stage (*Iniciación*) that could be started just after the first 6 years of primary education (at age 12). *Maestría* required the completion of *Oficialía*, but not the completion of secondary education (*Bachillerato*). There was no link between general and vocational training branches by then (López Quero et al., 1996).

² The assignment of ISCED categories to these vocational training diplomas may be contentious, and it will be discussed further down, in section 5.2.

2.6 University

Until the recent introduction of the European University Space, the Spanish university has followed a quite generalist model, resembling the French model in its articulation in cycles. The first cycle consisted of lower university degrees, normally lasting three years and concluding with the attainment of a university diploma (*diplomaturas*), and the first year of upper university degrees. Many of the university diplomas are the result of the upgrade of *Títulos Medios*, made by the 1970 LGE. Before this law *Títulos Medios* were professional titles (teacher, auxiliary nurse ...) that could be started at age 14, after lower secondary education (*Bachillerato Elemental*) and lasted three years. They were taught in the so called Middle Schools (*Escuelas de Grado Medio*), not formally considered part of the university system. The 1970 LGE upgraded these titles into university degrees, with the usual requirements (entry after upper secondary education and COU). The respective schools were integrated into the university system.

As regards the second cycle, it is constituted by long university degrees, lasting five or six years and known as *licenciaturas*. After the LRU (1983), some second-cycle-only *licenciaturas* were introduced, requiring the previous completion of the first cycle of another *licenciatura* or, alternatively, the completion of a *diplomatura*. Some *licenciaturas* were also reduced by one year (from 6 to 5 years or from 5 to 4 years). Finally, third cycle university studies, Doctorate Programmes, were introduced.

The university is currently in a process of reform that will unify first and second cycles of university studies. In accordance to the Bologna Process for setting up a European University Space, all university undergraduate degrees will last 3 to 4 years, being followed by Master degrees and, eventually, Ph.D. Degrees.

3 Possible problems with the application of the ISCED to the Spanish case

As a result of the recent and repeated reforms of the system of education described above, any sample representative of the whole Spanish population will necessarily include people who have gone through either of three possible systems of education: the one prior to the LGE (1970), the one derived from the LGE and the one derived from the LOGSE. The application of the ISCED-97 may subsequently induce some problems, which will be discussed next.

First, it could be easily drawn from what has been previously said that the number of years for completing primary education varied: initially it took six years; under the Francoist regime it was lengthened to eight for those not proceeding into secondary education; the LGE collapsed primary and lower-secondary education into one level, making it difficult to identify each one of them; and finally, with the

LOGSE, primary education was again reduced to six years. In sum, ISCED 1 may correspond to different numbers of years of full-time education for different birth cohorts. As regards the LOGSE period, where primary and lower secondary were undifferentiated, there does not seem to be a better solution for assessing ISCED level 1 than following the usual practice of the Spanish Statistical Agency (INE), consisting of including in this category all those who have “five years of EGB” (*Educación General Básica*, Basic General Education), even if they have not achieved the diploma granted after the successful completion of EGB. Yet, this may mean including very few people. As a result, a slightly false idea of the evolution in educational attainment in Spain at this level might be drawn from the data.

As regards lower secondary education, it is straightforward to classify the 1990 *Educación Secundaria Obligatoria* (ESO) and the 1970 *Educación General Básica* (EGB) as ISCED level 2. Since both were compulsory, most people affected by these systems of education will at least have attained this level. As for the pre-LGE system, the *Bachillerato Elemental* seems the obvious candidate to figure as ISCED level 2. Yet, since it was far from universal, most people of the corresponding age will surely appear as ISCED level 1. The result would be a sudden rise in the percentages of people with ISCED level 2, produced by the LGE, but the total years of schooling (see figure 1, above) would have changed quite gradually.

As regards the academic branch of upper secondary education, the 1970 LGE introduced an additional course (COU) for gaining access to the university. This course is beyond the completion of *Bachillerato*. However, its successful termination is not awarded with any diploma. Students having completed both COU and *Bachillerato* (BUP) are thus coded as ISCED 3A. Yet, having completed COU may mean a difference as regards occupation and earnings. It is an empirical question to answer, but usually COU is not covered separately in Spanish data on educational attainment.

The classification of vocational training in Spain into the ISCED-97 is more problematic, given the recent reforms of the Spanish system of education (Planas, 2005). Under the most recent LOGSE reform, such a classification seems straightforward. *Ciclos Formativos de Grado Medio* should be classified as ISCED 3C, since they require the successful completion of general education at ISCED level 2. Following an equivalent reasoning, upper vocational training (*Ciclos Formativos de Grado Superior*) should be regarded as ISCED 5B, since it requires the successful completion of ISCED 3A and lasts two years. Unlike the vocational training titles generated by the two previous systems of education, these titles do not constitute a large amount of the Spanish active population yet.

The problems with the classification of Spanish vocational training using the ISCED-97 begin when the two previous reforms of the Spanish system of education are considered, since they (especially the LGE) affect a potentially larger percentage of any current sample in Spain. Under the first system, before the LGE, *oficialía industrial* (lower vocational training) could be accessed at age 12, even without complet-

ing primary education; *maestría industrial* could be accessed at age 17, and it did not have any educational requirement other than *oficialía*. Following ISCED-97 criteria, *oficialía* should be classified as a vocational training branch of lower secondary education, ISCED 2B, and *maestría* as ISCED 3C.

Under the LGE, lower vocational training (*Formación Profesional 1* or FP1) officially started after lower secondary education (*EGB*, ISCED 2A); and advanced vocational training (*Formación Profesional 2* or FP2) after upper secondary education (*Bachillerato Unificado Polivalente*, *BUP*, ISCED 3A). According to the OECD manual, FP1 is classified as 3C, and FP2 as ISCED level 4A (vocational). There are several problems with this. Firstly, the facts strongly diverted from the formal requirements, as many FP1 students never finished *EGB* (lower secondary education), thus entering FP1 just when they became fourteen, and many FP2 students (up to 80%) directly arrived to these studies through the (*theoretically exceptional*) way of completing FP1, rather than through the supposedly main way of having completed *Bachillerato* (upper secondary general education). Secondly, FP1 was functionally and professionally equivalent to *oficialía*; and, in the same fashion, FP2 was functionally equivalent to *maestría* (see Table 2). All this might lie behind the decision of the Spanish Statistical Agency (INE) to equate FP1 and FP2 to *oficialía* and *maestría*, respectively. In this way, FP1 and FP2 would be regarded as ISCED 2B and ISCED 3C, respectively, in many Spanish statistics. However, FP2 does give access to university, a difference in relation to *maestría* that might lie behind the decision of the OECD of classifying it as 4A. But then, classifying FP1 as 2B and FP2 as 4A is inconsistent with the concept of the ISCED-97, as FP1 gives access to FP2. Thirdly, there is an inconsistency between the coding of FP2 and *Ciclos Formativos de Grado Superior*, as they are assigned to different ISCED categories despite being regarded as equivalent in Spain. The former was assigned to ISCED 4A (or 3C by the Spanish statistical office), as this programme could be accessed from FP1, which is classified 3C (or 2B). As *Ciclos Formativos de Grado Superior* (theoretically) cannot be accessed from *Ciclos Formativos de Grado Medio*, but require a higher education entrance qualification, it is classified as ISCED 5B by the OECD. Thus the mere change of formal access conditions changed the OECD assignment of advanced vocational qualifications to ISCED-levels in Spain. Finally, since in practice many of the students who undertake *Ciclos Formativos de Grado Medio* actually go into the next cycle of vocational training studies (*Ciclos Formativos de Grado Superior*) despite not having the higher education entrance qualification, the former may be classified as ISCED 3B rather than ISCED 3C or even 2B.

The following table shows the correspondence made by the INE between the titles generated by the different reforms of the Spanish system of education.

Table 2. Correspondence between educational titles provided during different periods of the Spanish system of education and their ISCED levels (OECD)

INE codification	Pre-LGE	LGE	LOGSE
Primarios	Primarios sin certificado	Primera etapa de EGB (1)	Primaria (1)
Secundarios 1	Primaria con certificado, Bachillerato Elemental (2A)	EGB (2A)	ESO (2A)
Secundarios 2.1	Oficialía (2B)	FP1 (3C)	Ciclo formativo medio (3C)
Secundarios 2.2, técnicos	Maestría (3C)	FP2 (4A)	Ciclo formativo superior (5B)
Secundarios 2.2, generales	Bachiller superior (3A)	BUP (3A)	Bachillerato (3A)
Terciarios 1	Titulos Grado Medio (5A(medium))	Diplomaturas (5A(medium))	Diplomaturas-Grados (5A(medium/1 st))
Terciarios 2	Licenciaturas (5A(long))	Licenciaturas (5A(long))	Licenciaturas-Masters (5A(long/2 nd))
Terciarios 3	Doctorado (6)	Doctorado (6)	Doctorado (6)

Source: Spanish Statistical Agency.

In sum, whereas the *Ciclos Formativos de Grado Medio* (lower vocational training under the LOGSE) and FP1 (under LGE) are classified as ISCED 3C in the ISCED-97, its functional equivalent before the LGE was considered as ISCED level 2B. Similarly, whereas upper vocational training (*Ciclos Formativos de Grado Superior*) is classified as ISCED 5B, its functional equivalent under the LGE was classified as ISCED level 4A, and the functional equivalent before the LGE, *maestría*, even as 3C. Over time, this might induce a sudden increase in some categories and a parallel decrease in others. This increase would not correspond to a substantial change in the content or depth of the training received by individuals, but only to the amount of general education received before entering the vocational programme.

The different reforms the system of education in Spain went through upgraded vocational training, delaying its beginning and raising the requirements for its commencement. *Oficialía*, FP1 and *Ciclos Formativos de Grado Medio* on the one hand, and *maestría*, FP2 and *Ciclos Formativos de Grado Superior*, on the other hand, produced credentials with seemingly equal value in the labour market. The functional equivalence of either one or the other group of these titles is clear, since they prepare for the same trades and professions. Finally, the equivalence of the titles has been established by law, and subsequently reflected in the INE official classification.

Thus, the problem lies not so much in the classification of the vocational training titles generated by the most recent LOGSE reform, but in the subsequent classification of the vocational training titles that preceded them in the labour market and are still very much present in any sample of the Spanish active labour market population. The ISCED-97 confronts us with the dilemma of retrospectively assigning an ISCED-97 category to vocational training degrees formerly not so highly considered by the INE, or to violate ISCED-97 criteria by assigning more recent vocational training degrees to an ISCED category that corresponds more strictly to the category its functional equivalent held in the past. In sum, the dilemma consists in sticking to the ISCED-97 criteria for vocational training degrees not awarded any more but still held by a substantial amount of the active labour market population, or adapting the most recent titles to the category the Spanish Statistical Agency granted in the past to the ones functionally equivalent to them. A third alternative would consist in assigning a separate coding for each vocational training diploma, according to how it would have been classified when the corresponding reform was in effect, and then applying the ISCED-97 as found in the OECD mappings (given in Table 2). Such an alternative would be grounded on the fact that each one of these supposedly functionally equivalent titles were granted after an *increasing* number of years of general education. Yet, this would require that educational attainment be recorded in the data in more detail than is usually the case. The only workaround would be to change the assignment to the ISCED-97 according to the age cohorts that most probably finished their education under the different systems.

Among these three alternatives, I would be in favour of considering upper and lower vocational training in accordance to the system affecting a larger share of people in the survey, even if such an alternative is not fully satisfactory and not advisable in the long run, when most of the population in any Spanish sample are affected by the LOGSE system. In terms of an ideal ISCED classification, I would also bear in mind that the LGE reform did not make vocational training much different from the vocational training under the previous system; and that the passage from lower to upper vocational training was more frequent than the jump from upper vocational training to university. I would thus propose to classify lower vocational training as ISCED 2B and upper vocational training as ISCED 3C (see Table 4).³

³ ISCED 3C is certainly constituted by “programmes at level 3 not designed to lead directly to ISCED 5A or 5B” (UNESCO, 2006 [1997]: 29). In this sense, the fact that *Formación Profesional II* made possible the access to the university may make my proposal inconsistent with the ISCED-97 criteria of classification. Yet, I would argue that such a vocational training programme was actually *not designed to* grant such an access to the university, but to grant access directly to the labour market. Transitions from upper vocational training to university were certainly considered, but they were actually quite exceptional.

Another very important shortcoming of the ISCED-97 for the Spanish case lies in the classification of university studies. Proper university degrees might have been more easily identified with the ISCED-76 than with the ISCED-97, since the former used different levels to differentiate lower and higher university degrees. The ISCED-97, on the contrary, uses *just one level and one letter* for both lower and higher university degrees, and the subcategories “short/medium/long” or “first/second degree” are hardly ever used in practice. The difference between lower and higher university degrees is an essential part of the university system in Spain, since lower university degrees might not have the same occupational outcomes and returns in terms of wages and occupational prestige as higher university degrees. In this sense, the ISCED-97 is losing some valuable information if the above-mentioned subcategories of ISCED 5A are not used. The problem with *diplomaturas* may be extended by the fact that most of them have their origin in the abovementioned upgrading of some *títulos medios*, access to which could be then formerly obtained by completing the *Bachillerato Elemental* (i.e. level 2A). Some *diplomaturas* thus were, not long ago, not even university studies. According to the logic of the ISCED-97, thus, *títulos medios*, as their names betray, were just a professional branch of upper secondary education, whose proper classification in the ISCED-97 would have been ISCED 3C.

4 Alternative datasets to check the validity of the ISCED-97 in the Spanish case

The best way of checking the validity of the ISCED-97 classification for the Spanish case would be a survey which included both educational attainment according to the ISCED and a detailed record of the different educational titles or diplomas attained by the members of the sample. The Spanish survey with the most detailed record of educational titles or diplomas is the Sociodemographic Survey (*Encuesta Sociodemográfica*, ESD), carried out in the fourth term of 1991 by the Spanish Statistical Agency (*Instituto Nacional de Estadística*, INE) as a supplement to the national census. Although it is mainly devoted to the labour market situation of the interviewee, it pays special attention to recording types of educational titles and diplomas both prior to the 1970 LGE and after this reform. Further work has enabled to identify the titles generated by the LOGSE reform. Quite unfortunately, such a detailed record of educational attainment was not replicated in any later survey carried out by the Spanish Statistical Agency.

For this reason, I will compare data drawn from the European Labour Force Survey (EU-LFS) and the Spanish Labour Force Survey (EPA, *Encuesta de Población Activa*), with data from the two first rounds of the European Social Survey (ESS). The two rounds of the ESS show some striking differences, relative to either EU-LFS or EPA, which could be attributed to mistakes at the moment of interview, at the moment

of coding the interviewees' responses or at the moment of recoding the educational titles into broader ISCED-97 categories.

Some categories show negligible frequencies. For this reason, special attention will be paid to the ones that could be more relevant for studies considering the Spanish case and using educational attainment as classified by the ISCED-97.

Table 3. Distribution of educational attainment in Spain by year, EU-LFS (in per cent)

	2002		2003		2004	
	detailed	main levels	detailed	main levels	detailed	main levels
Less than ISCED level 1 or no formal	1.60	1.60	1.45	1.45	1.36	1.36
ISCED 1	30.21	30.20	27.75	27.75	26.09	26.09
ISCED 2	25.20	25.20	26.98	26.98	27.75	27.75
ISCED 3C (<3 years)	0.37		0.42		0.46	
ISCED 3C (>3 years)	0.05	19.73	0.05	20.00	0.03	20.34
ISCED 3 (A, B)	19.31		19.53		19.85	
ISCED 4C	0.00	0.00	0.19	0.19	0.15	0.15
ISCED 4	0.15	0.15	0.00	0.00	0.00	0.00
ISCED 5B	6.80		6.91		7.06	
ISCED 5A	16.05	22.85	16.44	23.35	16.97	24.03
ISCED 6	0.28	0.28	0.28	0.28	0.29	0.29

Source: European Labour Force Survey, Q1, respondents aged 25–64.

Table 4. Distribution of Spanish population from age 25 to 64 by educational attainment according to the Spanish Labour Force Survey EPA^a

	ISCED-97			2002	2003	2004
	EU-LFS	OECD	ideal			
A Illiterate		0		1.58	1.46	1.39
B Primary education				31.91	29.09	27.22
11. Non completed primary studies		1		6.61	5.35	4.92
12. Completed primary studies		1		25.29	23.74	22.30
C Vocational training not requiring a secondary education degree ^b		1		0.14	0.13	0.09
D First stage of Secondary Education		2		24.92	26.32	26.46
22. First stage of Secondary Education without title or diploma	2	2A		1.78	2.26	2.65
23. First stage of Secondary Education with title or diploma (<i>graduado escolar</i> or equivalent)	2	2A		23.15	24.07	23.81
E*Garantía Social/Iniciación Profesional ^c		3C	2C	0.00	0.01	0.01
E Education or training for getting access to the labour market that requires the first stage of secondary education ^d		3C	2C	0.27	0.31	0.37
F Second stage of Secondary Education		3		16.78	17.56	18.24
32. <i>Bacallaureate</i> (upper general education)		3A		11.00	11.77	12.17
33. Vocational training (intermediate level) (<i>Formación Profesional I, Ciclos Formativos Grado Medio</i>)	3B	3C	2B	5.74	5.75	6.04
34. Music and dance	3B	3C	2B	0.04	0.04	0.03
G Education or training for getting access to the labour market that requires the second stage of secondary education ^e		4B		0.13	0.14	0.12
H Vocational Training (advanced level) (<i>Formación Profesional II, Ciclos Formativos Grado Superior</i>)	5B	4A/5B	3C	6.68	6.87	7.01
I Not official university titles and further training requiring completion of upper vocational training				0.21	0.24	0.26
52. Not official titles granted by universities ^f		4B		0.11	0.15	0.17
53. Further training programmes requiring upper vocational training diplomas ^g	5B		4B	0.10	0.08	0.09

Table 4. Distribution of Spanish population from age 25 to 64 by educational attainment according to the Spanish Labour Force Survey EPA^a (continued)

	ISCED-97			2002	2003	2004
	EU-LFS	OECD	ideal			
J University studies (lower and higher degrees)		5		16.96	17.43	18.33
54. University studies (lower degrees or first cycle of higher university degrees)	5A	5A medium		7.7	7.94	7.97
55. University studies (higher degrees)	5A	5A long		9.26	9.49	10.36
K Post-graduate studies (official titles)	5A	5A long		0.10	0.12	0.14
L Post-graduate studies (PhD programmes)		6		0.31	0.33	0.35

Notes:

^a Numerical levels are a second-order level, in relation to capital letters. The categories C, E, G and 53 all belong to a type of vocational training not controlled directly by the Ministry of Education, but by the Ministry of Labour. They are mainly aimed at the unemployed population, in order to enhance employability.

^b Exceptional training programmes to get direct access to the labour market that do not require the completion of lower secondary education

^c Programmes generated by the LOGSE and targeted at young people who fail to meet the objectives of compulsory education. They are mainly aimed at integrating people into working life.

^d Exceptional training programmes to get direct access to the labour market that require the completion of lower secondary education

^e Exceptional training programmes to get direct access to the labour market that require the completion of upper secondary education, but they are considered neither upper vocational training nor university studies

^f Titles granted by universities but not officially considered as either lower or higher university degrees

^g Exceptional training programmes to get direct access to the labour market and that require the completion of upper vocational training.

Sources: EPA (Spanish Labour Force Survey, Q1, 2001–2004 & Boletín Oficial del Estado, RD 269/2000 (February 25th)).

Table 5a. Educational attainment among Spanish population from age 25–64 according to the first round of the European Social Survey

National categories 2002/2003	ISCED-97 (OECD)	ESS ISCED-97 (<i>edulvl</i>)	Detailed (in %)	ESS ISCED-97 (in %)
"No studies/illiterate"	0	Less than	3.03	11.33
"Not completed primary education"	0	ISCED 1	8.30	
"Primary education"	1	ISCED 1	18.42	18.42
"Degree of primary education"	2	ISCED 2	21.21	21.21
"Vocational education, first cycle"	3C	ISCED 3	7.64	20.70
"Secondary education"	3A		13.06	
"Voc. Education second cycle"	4A/5B ^a		8.34	
"2 or 3 years of higher education (not leading to a university degree)"	5B	ISCED 4	0.58	8.92
"Polytechnical studies, short cycle (3 years university degree)"	5A medium		6.03	
"Other short cycle university degree (3 years)"	5A medium		2.18	
"Polytechnical studies, long cycle (5 years university degree)"	5A long	ISCED 5	1.16	18.67
"Other long cycle university degree (5 years or more)"	5A long		8.53	
"Postgraduate studies"	5A long		0.77	
"Polytechnical studies, short cycle (3 years university degree)"	5A medium		6.03	
"PhD"	6	ISCED 6	0.75	0.75

Note:

^a 4A under LGE, 5B under LOGSE. The current way of collecting the data does not allow a distinction between the old and the new qualifications.

Source: European Social Survey, first round, 2002–2003 (Jowell and the Central Co-ordinating Team, 2003), provided by the Norwegian Social Science Data Services (NSD); weighted data.

Table 5b. Educational attainment among Spanish population from age 25–64 according to the second round of the European Social Survey

National categories 2004/2005	ISCED-97 (OECD)	ESS ISCED-97 (<i>edulvl</i>)	Detailed (in %)	ISCED-97 (in %)
"No schooling/Illiterate"	0	Less than	11.85	15.83
"Not completed primary"	0	ISCED 1	3.98	
"General Basic Education, No graduate"	1		7.85	
"Five years of general basic education"	1	ISCED 1	0.37	16.31
"Former primary education (5 years)"	1		8.09	
"General Basic or Compulsory Secondary Education, graduate"	2		14.76	
"Former lower secondary education"	2	ISCED 2	5.38	24.20
"Vocational Training I"	3C		4.06	
"Higher secondary education"	3A	ISCED 3	9.10	17.75
"Vocational Training II"	4A/5B ^a		8.65	
"Post-secondary, non tertiary"	5B	ISCED 4	1.24	1.24
"University degree, 3 years technical"	5A medium		1.15	
"University degree, 3 years"	5A medium		9.03	
"University degree, 5 years technical"	5A long	ISCED 5	1.28	23.91
"University degree, 5 years"	5A long		11.59	
"Postgraduate studies"	5A long		0.86	
"PhD"	6	ISCED 6	0.76	0.76

Note:

^a 4A under LGE, 5B under LOGSE. The current way of collecting the data does not allow a distinction between the old and the new qualifications.

Source: European Social Survey second round, 2004–2005, (Jowell and the Central Co-ordinating Team, 2005), provided by the Norwegian Social Science Data Services (NSD); weighted data.

4.1 Less than ISCED 1 and ISCED 1

ISCED 1 constitutes around 30% of the sample in the EU-LFS and EPA. However, the two rounds of the ESS show some striking differences compared to both EPA and EU-LFS. First, 'Not completed primary education', the category in the ESS equivalent to 'Less than ISCED 1' in the EU-LFS, constitutes 11.3% and 15.8% of the sample for the first and second round of the ESS, respectively, which is too much. ISCED

1 ('Primary or first stage of basic') in turn is too low in both rounds of the ESS, compared to the corresponding category in either the EU-LFS or the EPA.

Quite meaningfully, although both categories in the two rounds of the ESS are different from the corresponding ones in EU-LFS and EPA, the sum is roughly equivalent to their sum in EU-LFS or EPA: 29% for ESS1 (2002–2003) and 32% for ESS2 (2004–2005). It would be tempting to conclude that the lowest category in the ESS includes some individuals who should have been coded as ISCED 1. In fact, as it may be seen in Tables 5a and 5b, 'Less than ISCED level 1' (ESS) consists of both 'Illiterate/No schooling' and 'Not completed primary', according to the more detailed recording of educational attainment also provided in this survey for the Spanish case.⁴ Yet, those who have "non-completed primary studies" in the EPA are not more than 7% in 2002. Moreover, those with "completed primary studies" in the EPA are roughly 25% of the sample, a much higher percentage than ISCED 1 in any round of the ESS.

It seems as if 'completed primary studies' is underestimated in the ESS, in comparison with EU-LFS or EPA; and the sum of 'illiterate' and 'not completed primary' is in turn overestimated. Paying attention to the ESS2 we may find out why. Two categories in the more detailed recording of the Spanish educational attainment variable in the ESS are too similar to each other: 'Not completed primary' and 'Five years of general basic education'. This latter category, in fact, is used to classify those who did not finish 'general basic education' (*Educación General Básica* or *EGB*), according to the law repealed by the LOGSE reform. Both categories are similar enough to have induced mistakes: People might have interpreted "not completed primary" as "not completed EGB", and it is possible that many individuals who should have been included in the latter (and thus ISCED 1) were not included in this category, but rather in the former (and thus ISCED 0).

In sum, the comparison of these surveys is useful for understanding the difficulties of classifying those strictly included in the lowest category of the classification (ISCED 1), and distinguishing them from those below it. The limit between the former and the latter is quite blurred. Quite fortunately, the group of 'illiterate', not so long ago important in the Spanish active labour market population, is currently disappearing.

4.2 ISCED 2

Not surprisingly, figures from the EU-LFS and the EPA are again similar for this category. The percentage of those classified as ISCED level 2 in the EU-LFS (Table 3) is quite similar to those with the "First stage of secondary education" in the EPA (Table 4). This is not the case with the second round of the ESS, which shows some re-

⁴ Variables EDLVAS and EDLVAES ('Highest level of education, Spain')

vealing differences with respect to both the EU-LFS, the EPA and the first round of the ESS: In ESS2, lower vocational training was included in ISCED level 2 (see Table 5b), although it is classified as ISCED 3C by the OECD, included in ISCED level 3 in the first round of the ESS (see Table 5a) and in ISCED 3A/B in the EU-LFS,. The Spanish ESS team possibly followed the correspondences between educational titles proposed by the INE and shown in Table 2 in the second round of the ESS. This shows the difficulties of classifying Spanish vocational training titles and diplomas according to the ISCED-97.

4.3 ISCED 3

Comparing tables 3 and 4, we may see that the EU-LFS and EPA show again similar percentages for the aggregated ISCED level 3, although the former yields slightly higher ones. The composition of ISCED 3 however differs: The EU-LFS did not follow the OECD/Eurostat mappings and classified lower vocational training as ISCED 3B rather than 3C, so it ends up in the same category as the academic track (EU-LFS category 3A/B). The Spanish Labour Force Survey shows that most of those with upper secondary education in Spain have followed the academic track (ISCED 3A), which cannot be seen in the EU-LFS data.

Yet, as in the previous ISCED level, ESS2 shows some remarkable differences with respect to the EU-LFS, the EPA and ESS1. The composition of ISCED 3 in the second round of the ESS is different from the other surveys: ISCED 3 in ESS2 includes “higher secondary education” and “vocational training II” (upper vocational training) instead of “vocational training I” (lower vocational training), which was moved to ISCED 2 (see above). Again, the correspondences established by the Spanish Statistical Agency seems to have been followed for classifying upper vocational training in ESS2.

We may notice this criterion was not followed in the first round of the ESS, where upper vocational training was classified as ISCED level 4 (in the EU-LFS, it is even classified as 5B). This is because the OECD classifies FP II as 4A, and *Técnico Superior* as 5, but the data do not differentiate between the two and a choice has to be made. It could be argued that in the ESS1, the OECD recommendations have been followed more closely than in the EU-LFS, because most respondents in the sample will have completed FP II rather than *Técnico Superior*. ESS2 in contrast made use of the correspondences between different vocational training titles established by the Spanish Statistical Agency (INE), shown in table 2, with respect to FP II, and coded it as ISCED 3 (see above). In any case, the difficulties of classifying upper vocational training in Spain in accordance to the ISCED-97 are again revealed. In the three cross-national surveys, FP2 is classified as ISCED 3 (ESS2), ISCED 4 (ESS1) or ISCED 5B (EU-LFS).

Even if the rules of the ISCED-97 are followed in a strict way, doubts remain with respect to how individuals and employers regard the two cycles of vocational training that currently exist in Spain. It is an empirical question if their return, in terms of wages and prestige, is different from FP1 (*Formación Profesional 1*) and FP2 (*Formación Profesional 2*), classified as ISCED 2B and ISCED 3C by the Spanish Statistical Agency and 3C and 4A by the OECD. Questions such as these would only be testable if Spanish data differentiated between FP1 and *Técnico Elemental* on the one hand and FP2 and *Técnico Superior* on the other, which unfortunately is not the case.

4.4 ISCED 4

ISCED 4 appears artificially inflated in the first round of the ESS (9%), whereas in the EU-LFS, this category is almost empty. In the ESS, advanced vocational training was coded as ISCED 4 in the first round, whereas the respective qualifications are coded as 5B in the EU-LFS.⁵ Consistent with what was said in the previous section, the percentage of ISCED 4 in the second round of the ESS is much lower (1.2%), because the advanced level of vocational training was moved to ISCED 3.

4.5 ISCED 5B

Again, there is a correspondence between the frequencies of ISCED 5B in the EU-LFS (6.8%, for the first quarter of 2002) and the frequencies of 'Vocational Training, Advanced Level' in the EPA (6.6%, for the same period). Although the ISCED variable in the ESS does not differentiate between ISCED 5B and 5A, this can be reproduced from the national variables. As it may be seen in both tables corresponding to the ESS, the Spanish national team did not include advanced vocational training in the category corresponding to ISCED 5. Even so, the frequencies of 'Vocational Training, Second Cycle' in ESS1 and ESS2 constitute a similar proportion of the sample as in EU-LFS and EPA: 8.3% and 8.6%, respectively.

4.6 ISCED 5A

Around 16% of the Spanish population between age 25 and age 65, both in the EU-LFS and EPA, are university graduates (Tables 3 and 4). The figure is slightly higher in the first round of the ESS (18.6%), and substantially higher in the second round (23.9%). It is difficult to know the reasons of this difference between the two rounds of the ESS.

⁵ See note 3, above. According to this allocation made by the OECD, upper vocational training under the LGE should be classified as ISCED 4A, whereas the same stage under the more recent LOGSE should be classified as ISCED 5B.

Another problem posed by the ISCED-97 for the Spanish case relates to the fact that it does not differentiate between medium and higher university degrees very well, since the subcategories within ISCED level 5 (medium and long degrees) are not really used in any cross-national survey.

The Spanish Labour Force Survey (EPA) reveals the magnitude of the problem: approximately 40% of university graduates have lower university degrees, whereas 60% of them have upper ones. This roughly corresponds with the detailed figures of university graduates that the European Social Survey provides: 38% of the university graduates who appears in the Spanish sample in the ESS1 have lower university degrees; 41% of the ones who appear in the Spanish sample in the ESS2 have this type of degree.

5 Conclusions

The most obvious shortcoming of the ISCED-97 classification for the Spanish case possibly lies in the inability to visibly differentiate between lower and upper university degrees. This difference may be economically and sociologically relevant, as approximately 40% of Spanish university graduates have a lower university degree.

Beyond that, the contrast between the European Social Survey, on the one hand, and the European and Spanish Labour Force Surveys, on the other hand, has proved useful in order to see other problems that recent and successive changes of the Spanish system of education may pose for the application of the ISCED-97 to the Spanish case.

As we have seen, the lowest categories of the ISCED-97 classification could suffer from the blurred lower limit of ISCED 1. We have seen how the subsequent coding and classification could lead to important differences between both rounds of the ESS, on the one hand, and the EU-LFS and EPA, on the other hand. There always exists the risk of excluding some individuals from ISCED 1 because they did not finish a prolonged primary education. This could have happened with many individuals who were classified as ISCED 0 instead of ISCED 1 in the first and second round of the European Social Survey.

As regards vocational training, the upgrading of lower and upper vocational training as a result of the 1990 LOGSE reform raises doubts as regards which is the right way of classifying individuals with such kind of training. We have seen how, whereas in the first round of the ESS the first cycle of vocational training was classified as ISCED 3, strictly applying the norms of the ISCED-97 classification, this level of vocational training was moved to ISCED 2 in the next round of the survey. This measure may be criticised, but it should be borne in mind that all those who had finished FP1 in the sample would have been formally classified as ISCED 2 when their diplomas were issued. Possibly, the Spanish team of the ESS did not want to

assign a different category to lower vocational training under the new reform (LOGSE), although nowadays the corresponding title is granted after more years of general schooling. Their holders are now requested to have completed a longer, compulsory cycle of secondary education, but the content of their training is the same.

In sum, there is a functional or a normative (ISCED-97) criterion to follow. Which one of them should prevail? The answer may depend on the kind of study carried out. For some topics, like educational attainment, education functions as an indicator of 'cultural' capital, and thus as an absolute, non-positional good. Strictly following the ISCED-97 criteria would be possibly more appropriate then. For other topics, like earnings, education rather functions as an indicator of 'technical' abilities, operating in a market according to their relative position. When education is a positional good, the functional criterion could be more adequate.

It should be borne in mind, though, that in most Spanish surveys education has been coded according to a functional equivalence, thus ignoring the academic differences. Moreover, this practice might persist in the future. In other words, quite often the decision has already been taken in favour of functional criteria. As it has been the case in the past, it is also quite likely that in the future most people will be classified in the same ISCED category in accordance to a functional equivalence established between vocational training levels in the three systems of education. Which should be then this ISCED category: the one corresponding to the most recent reform (LOGSE), or the one corresponding to the system affecting most people in the survey? Although the former is the official criterion nowadays, I advocate the latter; first, precisely because it would consider the system of education the majority of the members in the sample have gone through; second, because it would prevent some odd decisions, as raising *maestros industriales*, academically below *bachilleres*, to the same ISCED level as university graduates. It is not a totally satisfactory solution, though, since the amount of people affected by the LOGSE reform would increase over time in any sample of the Spanish active population.

There might be a third, more rigorous solution in order to tackle the problems derived from the successive and recent changes of vocational training in Spain; namely, assigning a category to each vocational training diploma according to how it should be classified under the corresponding reform. In fact, something of the sort seems to have been done by the OECD when classifying upper vocational training under the current system (*Ciclos Formativos de Grado Superior*, regarded as ISCED 5B) and under the prior one (*Formación Profesional II*, regarded as ISCED 4A). Such an alternative would be grounded on the fact that each one of these supposedly functionally equivalent titles were granted after an *increasing* number of years of general education. Yet, this would require databases where educational attainment categories were so detailed as to include all the possible titles ever granted by the Spanish system of education in the last decades. Quite unfortunately, it is a

very rare to count on such a rich register of educational attainment in Spain. Another option in this line would consist on using age as a proxy for which educational system people were confronted with. In this way, members of the sample affected by the pre-LGE, LGE or LOGSE system of education could be identified.

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