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ADULT EDUCATION AND TRAINING IN COMPARATIVE PERSPECTIVE – INDICATORS OF PARTICIPATION AND COUNTRY PROFILES

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ABSTRACT

Lack of data has been a serious deficiency for comparative research on adult learning until recently. The present paper explores new opportunities based on the European Adult Education Survey (AES). It argues that general indicators of participation in adult education and training must be complemented by more specific indicators revealing sectoral structures and behavioural patterns within the adult learning system. AES as a subject-specific survey can help to understand better “what is behind” a general level of participation in adult learning, as provided in other statistics. Country variations are explored across a set of 16 European countries.

Key words: Adult education; adult learning; continuing vocational training; international indicators; comparative research

Introduction

International comparability has gained growing importance in education statistics. This also holds for the field of adult education and training. However, lack of data has been a serious deficiency for comparative research until recently. The present paper explores new opportunities based on the Adult Education Survey (AES).

The AES is a new component of the European Statistical Programme. The objective is to generate comparable information on participation in adult education and training across European countries. Based on a 2008 Framework Regulation of the Council of the European Union, the first Europe-wide AES will be conducted in 2011–2012 and then repeated every five years. On a voluntary basis a pilot AES was conducted in 29 countries in the period of 2006–2009, for convenience in the following referred to as ‘AES Pilot 2007’. An overview of

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results based on 18 countries was published by Eurostat in May 2009 (Boateng 2009), and results for more countries were released subsequently.

While in most countries the AES is carried out by the national statistical office there are other arrangements in some countries. In Germany the Federal Ministry of Education and Research (BMBF), following an established line of national surveys on the subject, commissions the AES by tender as a research project. The German AES 2007, after intensive reporting on concepts and results at national level (Rosenblatt and Bilger 2008; Gnahn, Kuwan and Seidel 2008) included a follow-up study to take a closer look at AES results in a comparative perspective. As a starting point, the German AES team organized an AES International Workshop, 9–10 November 2009 in Berlin. A first version of the present paper served as input to that workshop, and a revised version was issued after the workshop (Rosenblatt 2009). The author wishes to thank all participants for stimulating contributions. Special thanks are given to the AES team of Eurostat which supported the work in general and by special tabulations of AES data.¹ Responsibility for the analysis, of course, is fully the author's.

1. Adult education statistics and comparative analysis –new opportunities, new challenges

It is a relatively new development that adult learning, or adult education and training, is included as a strategic area for defining objectives and evaluating achievements in education (Sorvillo 2009). The objective is “*to enable all citizens to acquire, update and develop over a lifetime both job-specific skills and key competences...*” (ET2020). This objective is not easy to grasp in statistical terms. There are two conceptual lines. The first one, at international level followed by LFS (Labour Force Survey) as well as AES, is to measure the participation of adults in learning activities. The second one, at international level followed by IALS (International Adult Literacy Study) or PIAAC (Programme for the International Assessment of Adult Competencies) is output-oriented, measuring skills and competences of the adult population.

Political objectives have been defined in terms of participation levels in adult learning. Statistical indicators of participation provide the basis for monitoring progress towards defined target levels, as well as for ranking countries in terms of more or less developed systems of lifelong learning (Commission of the European Communities 2007 and 2009).

We must be aware of the fact, however, that adult learning is a heterogeneous field: learning activities may have different forms and objectives, may be of short or long duration, and may be supplied in different sub-sectors of the educational system, or even outside the educational system. Statisticians tend to cope with

¹ Eurostat published a set of standard tables for 24 countries on its online portal in June 2009. In addition to that, a scientific use file of the data was made available. The present paper, however, is based exclusively on Eurostat tabulations of AES data.

such problems by elaborating comprehensive definitions and classifications. For the AES the respective basis is the Classification of Learning Activities (CLA) (Eurostat 2006). Still the question remains as to what the statistical indicators really measure and how useful the information is.

This is particularly relevant for international comparisons. In a national framework we often have some common understanding of what we are talking about. Cross-country comparisons are more difficult due to country-specific institutional settings, cultural patterns of learning behaviour, and language-specific terminology.

In the European Statistical System, data on adult education and training in the last decade were based on the European Labour Force Survey (LFS, annually) and its 2003 module on lifelong learning. Indicators for international comparison were derived from this data source, in particular the EU benchmark indicator on participation in lifelong learning (Commission of the European Union 2009). The latest EU Council document on objectives and indicators ("ET2020") confirms that monitoring will continue to be based on the LFS-based indicator of participation in lifelong learning – but adding that "benefit can also be drawn from the information on adult participation in lifelong learning gathered by the Adult Education Survey" (Council of the European Union 2009, p.8). The OECD in its handbook of educational indicators used, for European countries, an LFS-based indicator on participation in job-related education and training (OECD 2005 and 2006) but switched to the new AES data base in its latest edition (OECD 2010, indicator A5).

The indicators used show large differences of the levels of participation in adult education and training across Europe. However, they provide little help in understanding and explaining these differences. Obviously then, it is not easy to draw policy conclusions.

The present paper argues that general indicators of participation in adult education and training must be complemented by more specific indicators revealing sectoral structures and behavioural or organizational patterns within the adult learning system. While the LFS as a general household survey cannot provide this, the AES as a subject-specific survey supplies more detailed information about the learning activities in which respondents participate. This can help to understand better "what is behind" a general level of participation.

One may use AES data in the same way as LFS data, providing an overall participation rate in adult education and training, and showing that countries as well as different groups of the population vary in regard to participation rates. In fact, this is what the latest OECD handbook of indicators does (OECD 2010). AES is thus introduced in the international statistical literature as a new data base for adult learning – though used in a traditional way.

Going beyond this, however, there is an innovative potential of the AES for comparative studies of adult learning. Its analytical advantage is that it provides more information about the dependent variable studied, that is, participation in adult learning. The present paper tries to set up a conceptual road map for using

AES data this way. The first part explores different kinds of indicators which can be used. The second part applies this to selected comparative issues in adult education and training.

We would like to add that statistical analysis as presented here can only be a first step, a basis for further debate. It must be supplemented by country-specific background knowledge about educational systems and traditions. National reporting and international comparative studies need linkages. Efforts to establish suitable frameworks or networks for this end should be supported.

In total, 29 countries have contributed data to the Pilot AES 2007. The analysis of the paper, however, will be confined to a short list of 16 countries (see table 1). This is adequate for the present objective, which is not to give a descriptive overview of European results, but to explore the analytical potential of the data for comparative studies. The list of selected countries is systematic insofar as it represents the full range of the main indicator, from the lowest to the highest level of participation in adult learning across Europe. From the Eastern European, formerly socialist countries, three are selected to represent the range of levels of participation: Hungary (lowest level), Slovakia (highest level) and Poland (medium level). Some countries are missing just because their data were not yet available at the time when the analysis was started. In the tables and figures, a European average (referred to as "EU") is given which normally is the "total" figure provided by Eurostat for the 24 countries in the database at that time. Country figures are weighted by population size in constructing the EU average.

No methodological criteria were applied for selecting countries. Though we feel that there are methodological issues of comparability in regard to the Pilot AES 2007, this is not subject of the present paper. We provide, therefore, only the required minimum of methodological information.

Table 1. Selected countries for analysis AES Pilot 2007, net sample size (persons aged 25–64)

Country		Net sample size
Austria	AT	4.675
Belgium	BE	4.850
Finland	FI	4.144
France	FR	15.350
Germany	DE	6.407
Greece	EL	6.510
Hungary	HU	7.494
Italy	IT	27.848
Netherlands	NL	3.326
Norway	NO	3.018
Poland	PL	24.817
Portugal	PT	9.854
Slovakia	SK	5.001
Spain	ES	16.968
Sweden	SE	3.632
United Kingdom	UK	3.528
EU 16 total (countries included)		151.009
EU 24 total (AES data available)		183.887

“EU” is used as abbreviation for “Europe”, independent of membership in the European Union.

National AES surveys are population surveys using random sampling procedures according to country standards. The age range covered may have varied in original surveys but was standardized in the database to represent the population aged 25 to 64 years. National sample sizes in the AES Pilot 2007 differ a lot because some countries incorporated the AES programme in other surveys, such as the national LFS. In Italy, the AES was included in a larger survey of leisure and culture activities. In most countries, however, the AES was conducted as a stand-alone survey, interviewing one respondent per household. The interviewing method was face-to-face in most countries, but some used telephone or internet or a mix of methods.

There was a master questionnaire in English language which was to secure ex-ante harmonization of questionnaires, and a data checking program securing ex-post harmonization of variables. The level of achieved comparability may be lower than desirable, due to the pilot character of the survey, but it seems sufficient for substantial analysis being based on the data. For the first round of

official AES surveys in 2011–2012 the degree of methodological standardization will be somewhat higher. Based on the lessons learned from the Pilot, the AES 2007 standard questionnaire was revised for the next round of surveys. The line of argument presented in this paper, however, will still be valid for the improved official AES.

The comparative methodology applied in the following analysis is most straightforward. There are figures or tables for all selected variables studied. Countries are always ordered from the lowest to the highest level of participation in adult learning so that a kind of “correlation” between the respective variable and the overall level of participation can be visually assessed.

2. Participation in adult education and training – indicators for monitoring and analysis

2.1. Level of participation

The most common indicator of the level of participation in adult education and training is the “participation rate”. It indicates the percentage of the adult population participating in specific learning activities in a defined period of time.

There are three parameters in this definition which may vary: the learning activities covered, the adult population covered, and the reference period. In fact, the major international indicators used in the field differ in their combination of these parameters:

Table 2. Scope of the information covered by different indicators of participation

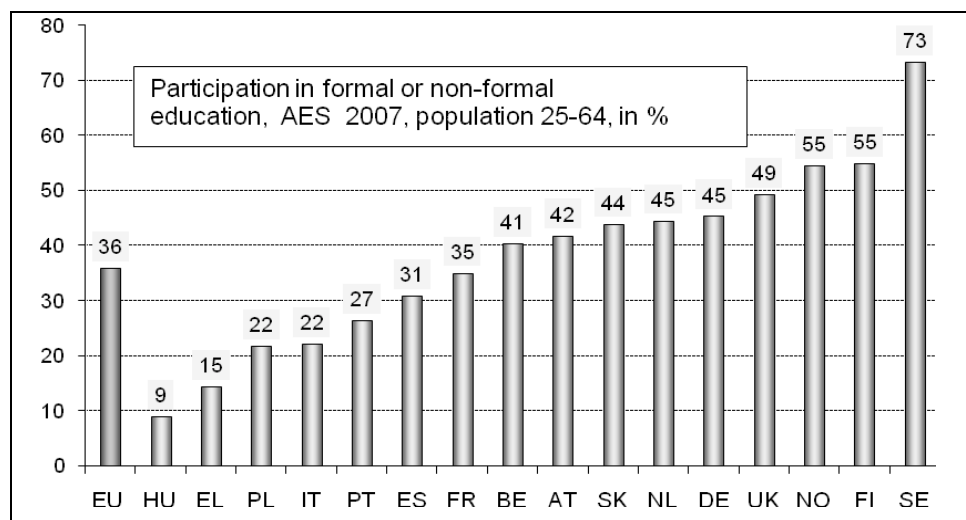
	EU benchmark	OECD /EAG 2005	AES
<i>Data base</i>	<i>annual LFS</i>	<i>LFS Modul LLL 2003</i>	<i>AES Pilot 2007</i>
Range of learning activities covered			
• Formal education (FED)	X		X
• Non-formal education (NFE)			
- Job-related	X	X	X
- Non-job-related	X		X
• Informal learning		o	o
Reference period	4 weeks	12 months	12 months
Adult population	Population 25-64	Active population (labour force)	Population 25-64
	o	excluded from present analysis	

EU benchmark and AES cover formal and non-formal education, job-related as well as non-job-related. The OECD indicator focuses on a specific segment, that is, job-related non-formal education. Informal learning is covered by two of the surveys (LLL 2003 and AES). However, there is some debate as to whether,

for conceptual as well as methodological reasons, it should be included in international indicators of adult learning. In this paper, therefore, we leave informal learning apart. The reference period of the indicators differs, which has substantial effects. Regarding the age range of the population, the choice of 25–64 is not theoretically grounded. In fact Eurostat now recommends the broader range of 18–64 (which is used in some countries, such as Germany), but this was not accepted as the general standard.

The core indicator for international comparison is “participation of the adult population (25–64) in formal or non-formal education”. Both EU benchmark and AES use it, though with different reference periods. OECD EAG 2010, as well, uses it as its main indicator in the respective field. We may call this the “overall indicator” of participation in adult learning. Figure 1 shows this indicator, based on AES data, for the 16 countries.¹

Figure 1. The overall participation rate in adult learning



On average across Europe, 36% of the adult population have participated in some kind of formal or non-formal education in the 12 months period before the survey. However, Europe has by no means achieved common standards in this area. There are huge differences across countries, ranging from 9% participation in Hungary to 73% in Sweden. The general pattern is that Scandinavian countries are at the top; the former socialist countries tend to rank low (HU, PL), but there are remarkable exceptions (SK); Mediterranean countries are all below the European average. The other Western European countries form the medium group, ranging between EU average (FR) and clearly above average (NL, DE, UK).

¹ Figures for all 24 countries are given in the Annex.

The overall indicator covers, as mentioned, both formal and non-formal education. These are normally quite distinct kinds of learning activity though the line between them may not be sharp in all cases, and national terminology may vary to some degree. This is an argument for using the overall indicator for international comparison. Yet one should be aware of the fact that different kinds of learning activities are put here in one basket. According to the Classification of Learning Activities (Eurostat 2006)

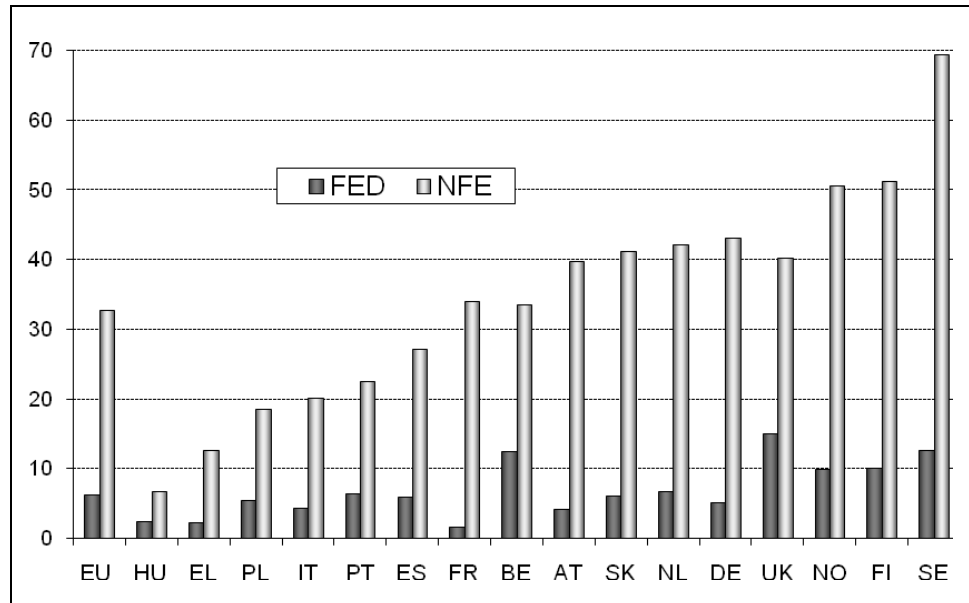
- formal education is defined as education provided in the system of schools, colleges, universities and other formal educational institutions and which normally constitutes a continuous "ladder" of full-time education for children and young people
- non-formal education is defined as an organised and sustained educational activity that may take place both within and outside educational institutions and cater to persons of all ages.

The AES questionnaire specifies the meaning of non-formal education by enumerating more concrete forms of learning activities such as courses, workshops and seminars, guided on-the-job training, private lessons and distance learning. Individual learning activities are identified according to these categories. In the course of the 12 months reference period, a person may have been involved in more than one learning activity. Those engaged in formal education may also report non-formal learning activities. Therefore, if participation rates for more specific categories of adult learning are summed up, the sum is higher than the overall participation rate.

Figure 2 shows specific, or disaggregated participation rates for formal and non-formal education. Considerably more adults participate in non-formal learning activities (EU average 33%) than in formal education (6%). This holds for all countries, but the relative weight of the two forms of learning varies. In some countries, enrolment in formal education is very low among adults (France 2%, Germany 5%). This means that the overall participation rate mainly reflects non-formal learning activities. By contrast, participation in formal education amounts to 15% in UK and 13% in Belgium. One would like to know what is behind these figures. Do they reflect real differences of the educational systems, or just different ways of classifying certain learning activities? Section 3.1 of this paper will explore this issue further.

Saying that one would like to know what is behind the figures applies even more to the non-formal learning activities. We know by definition that they cover courses, seminars, workshops, guided on-the-job training and private lessons. But, more exactly, what do people do – or do not do – under non-formal learning activities in different countries with different levels of participation – such as in Sweden (69%) or Finland (51%) or less in Germany (43%) or France (34%) or Poland (22%), and hardly any in Hungary (7%). Section 2.3 of this paper will explore this issue further.

Figure 2. Participation in formal education (FED) and in non-formal learning activities (NFE) AES 2007, population 25–64, in %



Going back to the overall indicator of participation in adult learning, we can compare the two versions of it that co-exist now in the European Statistical System. One is the AES-based indicator used here as well as in the OECD handbook of educational indicators (OECD 2010), the other is the LFS-based indicator of “lifelong learning” in the EU benchmark system of educational objectives (Council of the European Union 2009; Commission of the European Communities 2009). The range of adult learning activities covered is roughly the same in the two indicators. They differ in (a) the reference period for reported learning activities, which is 12 months in the case of AES and 4 weeks for the EU benchmark, and (b) the data source, which is an issue-specific population survey in one case and a general household survey in the other.

The shorter reference period of the LFS indicator (EU benchmark) has two effects. Nearly by definition, one effect is a lower level of reported participation in adult learning: 9.5% (LFS) versus 36% (AES) of the adult population. Of course, statistical analysis may use one or the other reference period. As a measure of individual learning behaviour, however, the 36% rate of the AES seems to provide a more meaningful picture. It shows that substantial numbers of adults do engage in some organized learning activity at some time during a year. Non-learners in the short term perspective of the LFS may well be learners in a more extended time perspective.

Besides the level effect there is a structural effect. Formal education (FED) is normally a long-term activity, while non-formal learning activities (NFE) are often short-term and distributed over time (see section 2.2 for empirical

evidence). The longer the duration of the activity is, the longer the probability of an activity to come into sight in a short observation period rises. By consequence, FED activities have a higher probability of being represented in the LFS indicator than NFE activities. Prolonging the reference period to 12 months, as AES does, brings up the reported participation only moderately in FED, but much more so in NFE (see table 3). Partly this may also be caused by a more detailed specification of NFE activities in the AES. Consequently, the LFS indicator reflects relatively more the level of participation in FED, while the AES indicator reflects relatively more the level of participation in NFE.

Table 3. Components of the overall indicator: formal (FED) and non-formal education (NFE). Participation rates in %, EU average

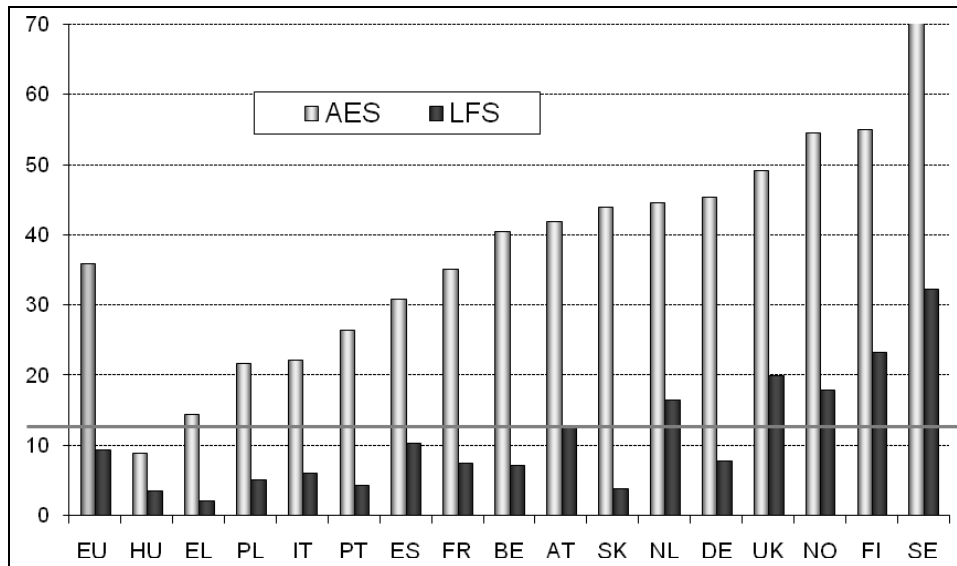
	LFS	AES
FED	3.1	6.3
NFE	7.2	32.7
Overall	9.9	36.0

Source for LFS: Commission of the European Communities (2007b), p. 81

Figure 3 compares the two indicators across the 16 countries. The general pattern of the EU benchmark is similar to the AES indicator, showing large differences within Europe. Participation rates range from 2% in Hungary to 32% in Sweden. The grey line in the chart marks the 12.5% line which was the EU target for 2010 (now substituted by a 15% target for 2020) (Council 2009). Most of the countries are far below the line.¹

¹ Exact figures are given in the Annex, showing the full list of countries with the latest available results.

Figure 3. Overall participation according to AES and LFS (EU benchmark) 2007, population 25–64, in %
AES: past 12 months, LFS: past 4 weeks



Some countries score surprisingly low in the EU benchmark, compared to their relative position according to AES. This mainly holds for Germany, Slovakia, Belgium, Portugal and Greece. There must be measurement problems behind this (either in the AES or the LFS, or in both), which cannot be resolved here. It is clear, however, that diverging results such as these cause irritation, as they suggest different conclusions for policy-makers.

To illustrate the meaning of divergent results one may spell out the message of the two statistics for Germany. The EU benchmark would read, and in fact is read, as follows: “Lifelong learning is a key issue for a competitive, knowledge based economy and an inclusive society. Germany is a poorly developed country in this respect, and far from reaching the European targets. There is an urgent need of catching up with international standards in the field.” By contrast, AES results would read as follows: “In Germany, compared to other European countries, participation in adult education and training is quite well developed. Some countries, in particular the Scandinavian countries and UK, show higher levels of participation. This may encourage all actors involved to follow the government’s policy line of further increasing the participation in adult learning.”

The best way of dealing with divergent results of alternative indicators would be to disaggregate the overall participation rate in order to find out which segments of adult education and training are covered differently in the two sources. The problem is that LFS data do not include sufficient detail to show what is behind the overall indicator.

Finally we just mention the third international indicator of participation in adult learning which has gained importance, i.e. the LLL 2003 indicator as reported in the OECD handbook of educational indicators (OECD 2005). The Lifelong Learning module (LLL) of LFS 2003 is a kind of forerunner of AES, using the same classification of learning activities (formal, non-formal, informal) and a reference period of 12 months. The most prominent indicator derived from the data is the participation rate of adults (labour force) in job-related non-formal education. (See overview of indicators in the Appendix.) Results can be compared to those of an AES-based indicator defined correspondingly (OECD 2010, table A5.5). Levels of participation according to both indicators are nearly the same in some countries (e.g. Finland, UK) but diverge heavily in others. In particular Germany, Spain, Portugal and Italy score much lower using the LLL 2003 data compared to AES 2007 data. It seems that the LFS-based LLL module captured respondents' learning activities of the past 12 months more successfully in some countries than in others. This may be regarded as statistical history. However, it is worth mentioning because recent comparative research literature on adult learning still refers to LLL 2003 as data source (e.g. Müller/ Kogan 2010, p.264; O'Connell/ Jungblut 2008, p. 112).

2.2. Volume of participation

The participation rate does not distinguish between longer or shorter learning activities. A student in a full-time educational programme of three years, covering all 12 months of the reference period, is counted in the same way as a person attending a seminar of three hours. This is an apparent weakness of the "participation rate" indicator.

Information on the duration or volume of learning activities may be used for two objectives. First, it is a fundamental aspect in descriptive terms. We need volume information in order to know what we are talking about. Second, individual cases of participation may be "weighted" by the time factor. The "volume of participation" may be regarded as a more comprehensive indicator of participation than the participation rate.

As a measure of volume, the AES uses "instruction hours", that is, not the total time devoted to learning activities¹. Instruction hours are the basic information, representing also a relevant organizational aspect of the supply side of adult education.

The number of instruction hours asked in the survey refer to single learning activities as described by the respondent. Starting from this, other indicators can be generated via aggregation. Relevant dimensions of volume are:

1. the duration of single learning activities (instruction hours)

¹ The AES Pilot included, as a separate variable, information on preparatory time as well, but this was skipped for the AES 2011/12 and will not be considered here.

2. the number of learning activities an individual participates in within the reference period of 12 months
3. the cumulated annual instruction hours of individual respondents
4. the percentage of the population participating in adult learning within the reference period of 12 months (participation rate)
5. the aggregated volume of participation, that is, the number of instruction hours per head of the population (per capita).

Starting at the first level, table 4 shows the duration of single learning activities, with classes defined identically for formal and non-formal learning activities.

Table 4. Duration of learning activities (instruction hours) AES 2007, population 25–64, all-European sample, in %

number of hours	NFE	FED
1-10	39	6
11-40	39	16
41-100	14	16
101-200	5	15
201-500	2	20
500-800	1	10
801+	0	15
Total (valid cases)	100	100
Item non-response rate (%)	5	21

Non-formal education and training (NFE), covering courses, seminars, workshops, on-the-job training and private lessons, is mostly of short duration. Nearly 40% of the reported learning activities are short activities of up to 10 hours, which will normally be a one day or two day activity at most. Another nearly 40% has a duration of 11 to 40 hours (the upper value meaning a week if organized full-time). But there are longer courses also: 22% above 40 instruction hours, 3% above 200 instructions hours. So there is a large range, but mostly we are talking here of short units of instruction.

By contrast, formal education programmes are more long-term. Certainly there are measurement problems here when the duration of participation is to be given in hours. In the questionnaire this may be broken up into weeks or months plus average hours per week. Yet there are a lot of missing values in the data

(21%)¹. One must also be aware of the fact that for any programme lying partly outside of the reference year, only the duration falling within that year is recorded. The actual length of the programmes may be longer than reported here.

Most FED activities are of medium or long duration. Nearly 80% are above the line of 40 instruction hours, and 25% are above 500 hours. More surprising are the short durations: 22% of the reported FED activities are in the range of up to 40 instruction hours, and 6% even in the range of up to 10 hours. This is to a large extent country-specific, indicating a non-uniform understanding of what kind of learning activities are “formal” (which will be explored further in section 3.1). Not surprisingly, the borderline between formal and non-formal education is empirically not as sharp as in the abstract definition. This may be an argument for using an overall indicator, including both forms of adult learning, in comparative studies across countries.

Returning to non-formal education, table 5 provides the detail of information required for analysing the volume dimension. For the European average, figures read as follows: One third of the population has participated in the past 12 months in some kind of non-formal learning activity. Those who did, report two different learning activities on average. The average duration of individual NFE activities is 35 instruction hours. For two activities in the 12 month period, this amounts to an annual average of 70 instruction hours per participant. Relating this to the total adult population, including non-participants in such learning activities, the aggregate volume of participation in non-formal education and training per capita is 23 hours.

¹ The level of missing values varies considerably across countries. For NFE the range is between zero (DE, HU) and 23% (BE). For FED it is between 1% (PL) and about 30% (EL, BE, DE) or even 88% in France. The Netherlands did not provide any data for this variable. For the next AES, better data quality at this point should be strived for. This includes methods of imputation which can be used here. Imputation may have been used for AES 2007 in individual countries, but there is no detailed information on national procedures.

Table 5. Components of the volume dimension in non-formal education and training AES 2007, population 25–64

	(1)	(2)	(3)	(4)=(2)*(3)	(5)=(4)*(1)
	Participation rate NFE %	Average number of activities	Average hours per activity	annual hours per participant	annual volume (hours) per capita
EU	33	2,0	35	70	23
HU	7	1,2	95	111	8
EL	13	1,3	65	86	11
PL	19	1,5	54	82	15
IT	20	3,4	14	48	10
PT	23	1,5	61	93	21
ES	27	1,5	74	112	30
BE	34	2,2	52	114	38
FR	34	2,3	25	57	19
AT	40	1,9	49	92	37
UK	40	1,6	30	48	19
SK	41	1,8	33	58	24
NL	42	2,1	28	59	25
DE	43	2,0	39	76	33
NO	51	2,7	29	78	39
FI	51	2,2	43	95	49
SE	69	3,1	24	73	51

Countries are ranked here according to their participation rate in NFE (column 1).

Country variations show the following patterns:

- The higher the country's participation rate in non-formal adult learning (column 1), the higher tends to be the reported average number of learning activities per participant within the past year (column 2). Hungary has the lowest participation rate (7%) and the lowest number of reported activities per participant (1.2). At the other end, Sweden has the highest participation rate (69%) and at the same time a very high average number of learning activities (3.1 per participant). One exception is Italy which has a relatively low participation rate but the highest number of reported learning activities (3.4 per participant).
- The more learning activities are reported (column 2), the shorter tends to be the duration of the single learning activity (column 3). Hungary has the longest average duration (95 hours), whereas Sweden (24 hours) and Italy (14 hours) have the shortest.

- This means, by and large, that an increasing level of participation in non-formal education is not just “more of the same”. It goes along with a tendency to have more but shorter learning activities.
- Because of the inverse relationship between frequency and duration of learning activities, the cumulated annual instruction hours of participants (column 4) show no clear correlation with the country’s level of participation.
- The aggregate volume of participation in terms of instruction hours per head of the population (column 5) is determined by the amount of time devoted to learning activities as well as the participation rate among the population. The latter tends to be the strongest determinant. Therefore, the ranking of countries based on the volume indicator is similar to that based on the participation rate (column 1). At the lower end there is Hungary with 8 hours of non-formal learning annually per head of the population. At the upper end there is Sweden with 51 hours. However, for some countries the time dimension changes their comparative position.
- UK is an interesting case in this respect. UK seems to spread the overall volume of non-formal education and training to a high number of people, but with a relatively low intensity as measured in terms of instruction time. The participation rate is high, but the aggregate volume of participation is below the European average.
- On the other hand, there are countries like Belgium, Austria and Spain. Based on the participation rate they rank at a medium level of participation in non-formal education and training. However, due to relatively long instruction time per participant, they score clearly above the European average in regard to the aggregate volume of non-formal adult learning.

Similarly, one can analyse the volume dimension of formal education (FED). The European average figures read as follows (table 6):

- Among adults of 25–64 years 6% have participated in some programme of formal education during the past 12 months (column 1). The average number of instruction hours falling in this period is 382 hours (column 2). Assuming a weekly duration of 30 hours this would amount to three months.
- Calculated per head of the population the aggregate volume of participation in formal education is 24 hours (column 3). This is about the same volume as for non-formal education where it is 23 hours. The composition of the overall volume, however, is different in the two sectors: In FED the volume is made up of few participants with a long duration of learning activities, in NFE it is made up of many participants with a short duration of learning activities.

Table 6. Components of the volume dimension in formal education (FED) AES 2007, population 25–64

	participation rate % (1)	annual instruction: hours per participant (2)	annual volume: hours per capita (3)=(1)*(2)
EU	6	382	24
FR	2	339	6
EL	2	405	9
HU	3	487	12
AT	4	532	22
IT	4	367	16
DE	5	905	47
PL	6	420	23
ES	6	413	25
SK	6	326	20
PT	7	543	35
NL	7	:	:
NO	10	379	38
FI	10	399	41
BE	13	230	29
SE	13	515	65
UK	15	121	18

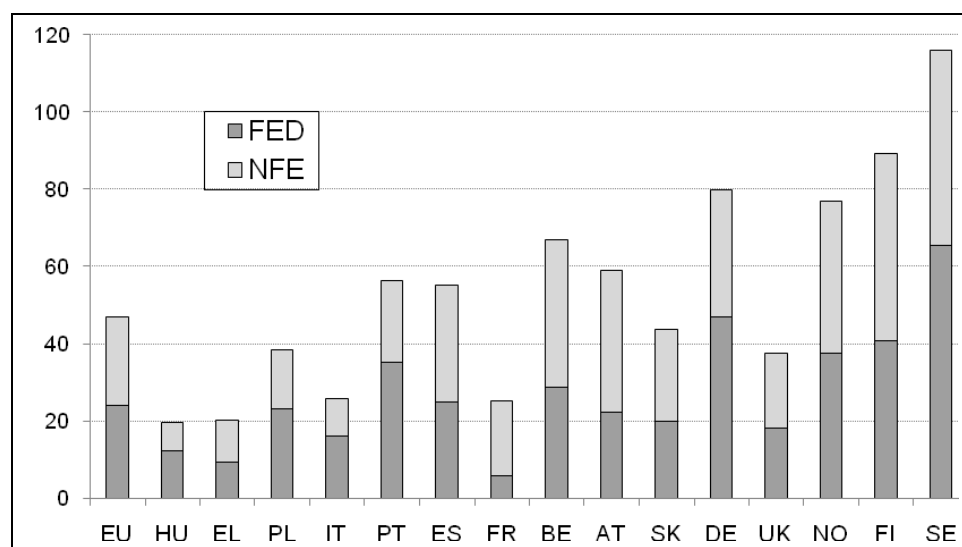
Countries are ranked here according to their participation rate in FED (column 1).

Country variations show the following patterns:

- There is no clear correlation between the participation rate in formal education (column 1) and duration in terms of instruction hours (column 2).
- At the lower end, with short durations, there is the UK again with annual instruction hours of 121 hours per participant. This is a surprisingly short duration which some other countries (ES, BE) show for non-formal learning activities.
- At the upper end there is Germany with 905 instruction hours on average. Assuming a weekly duration of 30 hours, this amounts to about seven months, which is not unrealistic if most participants are full-time students in long-term educational programmes.
- The aggregate annual volume of formal education (column 3) varies from 6 hours per head of the population in France up to 65 hours in Sweden. The contrast between Sweden and UK is interesting: the two represent equally high levels of participation, but the average duration of programme participation is much longer in Sweden than in the UK.

The aggregate volumes of formal and of non-formal education may be summed up to form one overall indicator of the volume of participation in adult learning. It is true that, when putting formal and non-formal education in one basket, we mix things which mostly are quite different. Yet the overall volume indicator seems meaningful, representing the total amount of instruction time for adult learning activities, formal and non-formal. Figure 4 shows the aggregate indicator with its two components (FED and NFE) across countries. Countries are ranked according to the overall participation rate.

Figure 4. Aggregate volume of formal and non-formal education (FED/NFE): annual instruction hours per head of the population (25–64)



The European average of the overall volume of participation in adult learning is 47 hours per head annually. Country variations range from 20 hours (HU, EL) up to 116 hours (SE). The position of countries in the comparative ranking is by and large similar to the picture we know from the overall participation rate (figure 1). However, some countries rank much lower if the time dimension is included (IT, FR, SK, UK).

For international comparative studies, volume based indicators of participation in adult learning may be attractive because they incorporate more information than just the number of people involved.

In policy terms, one may ask whether 47 hours of adult learning is a satisfying volume. Related to the volume of annual working hours, for instance, the amount of time invested in learning activities is still marginal. It is true that simple quantitative measures such as these are not sufficient for evaluating lifelong learning and skill formation in modern societies (for a broader discussion see Müller and Jakob 2008). However, comparative research needs some simple

measures. Adding the time dimension to statistical indicators of participation in adult learning would at least bring in the aspect of intensity of learning – one step towards including quality issues in the debate.

2.3. Profiles of participation

Overall indicators of participation in adult learning – referring to participation rates or volume – are quantitative measures in the sense of higher or lower, more or less. Countries are located at a specific point on a scale which is interpreted as a continuum from poor to excellent.

This is an important item of information. When trying to understand the countries' adult education system, however, we must look for more qualitative information. This is often derived from other types of policy studies. The present paper argues that a database such as the AES has a potential for more qualitative information in itself. The comparative analysis can reveal "profiles of participation" in individual countries. The more we know about such profiles, the more we can evaluate the significance of the different levels of participation observed.

Profiles can be explored regarding different aspects or dimensions of adult learning. To illustrate the concept, we are selecting three aspects which are relevant in terms of policy options:

1. Time-related profiles (patterns of intensity)
2. Sector-related profiles (patterns of institutional structure)
3. Group-related profiles (patterns of social inequality)

The first of these profiles builds on the analysis of the preceding section regarding the volume of participation. We will only briefly take up some thoughts here.

The second profile builds on a typology of adult education and training specifying the main sub-sectors. We will briefly present the typology here. Sections 3.1 (role of formal education) and 3.2 (role of enterprises) will look more closely into selected types or sectors.

The third profile refers to the fact that we observe very different levels of participation in adult learning not only across countries, but also across groups of the population within countries. Age groups will be examined in the present section, while section 3.3 will look at the importance of educational background.

We are discussing the three aspects separately. In fact they may be interrelated. This would have to be explored in more elaborated studies.

Time-related profiles (patterns of intensity)

A certain volume of adult education and training can be distributed over the population in different ways: either relatively few persons are involved in time-intensive studies, or many persons take part in shorter learning activities. This is a two-dimensional perspective, considering the number of persons involved

(participation rate) and the amount of time devoted to learning activities by participants. Constructing a simple typology leads to four possibilities:

	Participation rate		Invested time	
			short	long
		low	A	B
		high	C	D

Tables 5 and 6 above have shown examples of all four combinations. In countries with low levels of participation there is a tendency towards type B. Distinct cases are Hungary in regard to non-formal education (NFE) and Germany in regard to formal education (FED). However, there are also cases of type A: France in regard to FED, and Italy in regard to NFE. The UK was already identified as a distinct case of type C (in FED as well as NFE). The Scandinavian countries tend towards type D, with most pronounced values in Sweden. It should not be precluded, however, that some of the observed differences across countries may have been affected by non-uniform measurement and classification.

It is evident that adult education policies in a country cannot just switch from one type to the other. In principle, however, the time-related patterns can be viewed as options for policy directions.¹

The most advanced country in terms of participation rates in adult learning is Sweden. Figures tell that it is quite normal for an adult to engage in some course or seminar. The individual learning activities are fairly brief units of instruction, but participants attend several of them in the course of a year. This is a pattern one may call “the normality of lifelong learning”.

Sector-related profiles (patterns of institutional structure)

The adult education system is more heterogeneous than other fields of the educational system, say schools or higher education. Often it is not even perceived as one policy field, and political competences may be split for different sub-sectors such as vocational training and general interest education for adults. There is a multitude of actors and providers in the field. Transparency is often low, even at national level. Across countries, the picture will be even more heterogeneous.

¹ For example, as noted by Steve Leman, “Turning to the policy aspect: is UK practice an optimal situation – spreading the resources widely so that more people benefit? Or is it a poor use of resources – not enabling individuals to make significant advances in their knowledge and skills? What can we learn from other countries’ experience?” (Leman 2009, p.2).

The conclusion drawn from this could be to refrain from any attempt to structure the field, apart from distinguishing between formal and non-formal education. On the other hand, this would mean we do not know a lot when saying that country X has a certain participation rate. Participation in what? And is the spectrum of learning activities behind the participation rate the same in country X and country Y? Or are we comparing apples and oranges? This is a question in all comparative studies, but certainly it seriously applies to adult education.

We therefore need some empirically feasible structuring of the field. Criteria for defining sub-sectors should reflect institutional structures, as far as possible. Our proposal for a sector typology is shown in table 7.

Table 7. Sector typology of adult learning

Level 1	Level 2	Level 3
All learning activities (FED and NFE)	Formal education (FED)	Sector 1: FED below tertiary level
		Sector 2: FED at tertiary level
	Non-formal education (NFE)	Sector 3: Employer-sponsored training
		Sector 4: Other job-related training (off-the-job)
		Sector 5: Other adult education (general interest)

The typology maintains the basic distinction between formal and non-formal education (level 2). It is true that the two forms of learning as introduced in the international Classification of Learning Activities (CLA) are originally not meant to define “sectors” of the adult education system. Yet the distinction between the two forms is mainly based on institutional criteria, and one may well regard formal and non-formal education as two sectors within the adult education system (keeping in mind that formal education is mainly targeted to younger age groups). For the next level of disaggregation (level 3) criteria must be sought in the data set so that operational definitions can be made.

In formal education, sub-sectors can be defined according to the level of educational programmes. For the age group studied here it is sufficient to distinguish two levels: below tertiary (“sector 1”) and tertiary or higher education (“sector 2”).¹

¹ Alternatively, one could distinguish between vocational and non-vocational programmes. This variable, however, is not available in the Pilot AES.

In non-formal education, the main requirement is to identify company-based or employer-sponsored training (“sector 3”). Criteria are whether the learning activity takes place during paid working time or the employer pays for it in another way (discussed more closely in section 3.2). The remaining non-formal activities are sub-divided according to the criterion of being job-related or not. The distinction is based on the subjective view of the respondent – whether the reasons for participating are “mainly job-related” or “mainly personal, non-job-related”. It must be underlined that this does not necessarily correspond to the distinction of “vocational training” versus “general adult education”. Off-the-job but job-related training is “sector 4”, all other adult education (general interest) is “sector 5”.

The overall participation rate in adult learning can be disaggregated to show participation rates in individual sectors. Table 8 provides the numbers. The sum of the sector-related participation rates at EU level is 43%, that is, it is higher than the overall participation rate of 36%. The reason is that individual respondents, in the course of 12 months, may participate in more than one learning activity, and different activities may fall in different sectors.¹

¹ This is an aspect of the methodological design which has important implications for data analysis. In the Pilot AES 2007, the general rule was that respondents describe up to three non-formal learning activities in detail. If they reported more than three activities, the selection of three activities was made at random. This affects the results concerning a disaggregated participation rate. This measure can be calculated only for the set of activities which are described in detail. If a respondent has reported more activities than described, one cannot say reliably whether he or she participated in a certain sub-sector. Therefore, the calculated participation rates for sub-sectors represent minimum values. This problem gets more serious if less than three activities are described in detail. Unfortunately, in the AES Pilot, there were national surveys describing only one activity in detail (FR, IT, UK). For the next round of AES surveys in 2011–2012 the rule is that a minimum of two activities (if reported) must be described.

Table 8. Participation rate in adult learning, disaggregated according to sectors AES 2007, population 25–64, in %

	total FED/NFE	FED		NFE		
		sector 1	sector 2	sector 3	sector 4	sector 5
		below tertiary	tertiary	employer sponsored	other job-rel. training	general interest
EU	36	2	4	23	7	7
HU	9	0	2	4	2	1
EL	15	0	2	7	5	3
PL	22	1	5	16	0	3
IT	22	1	3	10	5	5
PT	27	3	4	18	3	5
ES	31	2	4	15	8	10
FR	35	0	1	23	9	3
BE	41	7	6	26	7	9
AT	42	1	4	27	11	12
SK	44	0	6	37	4	6
NL	45	2	4	34	6	11
DE	45	2	3	31	13	10
UK	49	9	6	26	5	7
NO	55	3	7	45	6	10
FI	55	4	7	38	11	17
SE	73	7	6	59	7	24

Results of the sector-related disaggregation may be summarized as follows:

1. Employer-sponsored or company-based training (sector 3) is by far the largest sector. At EU level, 23% of the population take part in such training within the 12 month reference period. Participation rates in all other sectors are much lower. As regards country variations, the sector of company-based or employer-sponsored training shows the largest range across countries, from 4% participation in Hungary up to 59% in Sweden. It is this sector which determines most strongly the overall participation rate in adult education. The conclusion is that, when we are looking for core issues of adult education in a comparative perspective, we have to explore the role of the employer- or company-based sector. Section 3.2 of this paper will take up this subject.
2. Within this overall pattern, countries have their individual profiles. For instance:
 - Regarding formal education, in most countries adult education is mainly located at tertiary level. In some countries, however, the focus is more on the below-tertiary level (UK, BE, SE).

- Regarding non-formal education, participation in off-the-job training (sector 4) is below 10% in most countries. In some countries, however, this sector plays a larger role (DE, AT, FI).
- The sector of non-job-related, general interest education (sector 5) has a very different size across countries, ranging from a participation level of 1% in Hungary up to 17% in Finland and 24% in Sweden.

The sector typology provides relevant information on what is behind the overall participation rate in adult education. Knowing a country's sector profile contributes to a more profound understanding of its comparative position.

Group-related profiles (patterns of social inequality)

Disaggregating the participation rate in adult education by groups of the population is the most common line of analysis. A lot of studies show that there are differential participation rates in adult learning according to social characteristics of the respondents. For instance, Eurostat standard tables on AES results, as published on the Eurostat portal, comprise breakdowns of participation rates (for FED, for NFE and for FED/NFE) by sex, by age groups, by education attained, by labour status, by occupation and by degree of urbanisation. Other breakdowns can be found in the OECD handbook of educational indicators (OECD 2010).

When studying the comparative tables, the first impression is that general patterns are fairly similar across countries. However, for two reasons this needs a second look:

- Descriptive figures at group level may be misleading because of underlying factors. A common example is the participation of men and woman, or of different age groups, in adult learning. The “real” explaining factors of group differences must be explored, e.g. by further disaggregating the figures or by multivariate analysis.
- The pattern of group-related differences may be similar across countries, but the magnitude of difference may vary. If we regard group differences of access to adult education as a form of social inequality, the magnitude of differences is a measure of the degree of inequality.

We focus on the second aspect. The relevance of educational will be explored later in section 3.3. Here we take a look at age groups. Age is an important dimension because it directly relates to the “lifelong” in lifelong learning. To what extent can we identify patterns of participation across countries in this aspect?

Table 9 provides the figures. Countries are ranked, again, according to their overall participation rate in adult education (FED and/or NFE). Participation rates of age groups are shown in their relative position in regard to the country's total. At EU level, the younger age group (25–34 years) has a score of 1.26, that is, the overall participation rate of the group is 26% higher than that of the total population. The middle age group is near the average at large. The elder group

(55–64) has a score of 0.60, meaning that its participation level is 60% of the total population average.

In all countries the participation level of the elderly is lower than that of the total population. However, their relative position varies considerably across countries, in a range of 0.28 in Hungary to 0.83 in Sweden. The relative position of the youngest age groups varies inversely. Adult learning in Hungary is strongly concentrated on early stages of adult biographies, while in Sweden it is maintained at a relative stable level over the (working) life course.

It would need more in-depth studies to analyse background factors, such as the employment rate of the elderly in the respective countries. For the present paper we just note that there is a clear relationship of the age-group related pattern with the overall level of participation in adult learning. The higher the overall participation rate, the more equal is the distribution of participation across age groups. One may take this as another aspect of what we have called “the normality of lifelong learning”.

Table 9. Relative participation rate of age groups in adult learning (FED/NFE) AES 2007, population 25–64

Country	Participation rate (%)	Relative participation rate (index, total = 100)		
	Total	Age 25–34	Age 35–54	Age 55–64
EU	33	1,26	1,04	0,60
HU	7	1,76	1,00	0,28
EL	13	1,57	0,97	0,35
PL	19	1,56	0,95	0,31
IT	20	1,37	1,04	0,53
PT	23	1,52	0,96	0,41
ES	27	1,28	1,00	0,55
BE	34	1,37	1,02	0,46
FR	34	1,39	1,04	0,58
AT	40	1,12	1,09	0,61
UK	40	1,16	1,10	0,54
SK	41	1,34	1,01	0,65
NL	42	1,17	1,07	0,62
DE	43	1,19	1,02	0,75
NO	51	1,19	1,02	0,75
FI	51	1,20	1,07	0,69
SE	69	1,10	1,04	0,83

3. Comparative issues in adult education and training

The set of indicators described in previous sections is a kind of tool kit which can be applied to the comparative analysis of more specific issues in adult education and training. “Comparative issues” as discussed here relate to aspects or sub-sectors of the overall field of adult learning which appear to be crucial for identifying what exactly is different in particular countries. This is the prerequisite for evaluating different levels of participation, and to ask what kind of policy conclusions may be drawn from the figures.

Naturally a multitude of comparative issues can be defined. We are selecting three for more in-depth discussion here, building on starting points provided above: (1) the role of formal education in adult learning, (2) the role of enterprises in adult education and training, and (3) social inclusion – participation of the lower educated in adult education and training.

3.1. Comparative issue (1): the role of formal education in adult learning

According to the AES Manual, following the UNESCO Manual for statistics on non-formal education, a learning activity is considered to be formal when upon its completion it leads to a learning achievement (qualification or award) that can be positioned to the National Framework of Qualification (NFQ). By and large, this means enrolment in regular institutions of the educational system, such as schools, colleges, universities or (in some countries) apprenticeships.

The overall participation rate in formal and non-formal adult education mainly reflects the non-formal part of the spectrum. Enrolment in formal education is relatively rare in the age group of 25–64. The interesting point is, however, that there is considerable variation across countries in this respect (see figure 2 above and table 10 below).

The average participation rate in formal education (FED), using a reference period of 12 months, is 6%. Participation rates in individual countries range from below 2% in France or Greece up to 15% in the UK. Other countries with participation rates above average are Belgium and Sweden (12–13%) as well as Norway and Finland (10%). Such figures are surprising, looked at from the perspective of countries at the lower end, including Austria or Germany, where the level of participation in formal education among adults is reported to be much lower (about 4–5%).

AES data provide additional information, or FED profiles, put together in table 10. The first aspect is the age distribution of participation in FED programmes. Table 10 presents this in the form of relative participation rates (like in table 9).

Not surprising, participation in formal education is mainly found in the lower age group of the 25–34 years old respondents, but it also occurs in the middle and even in the higher age group. In the lower age group it may partly be the final stage

of “initial education”, e.g. for university students. Higher participation rates in this age group might indicate ineffective organisation of tertiary education, instead of continued learning in adulthood. Unfortunately, the comparative AES data do not include information on this crucial distinction. The German AES 2007 showed that about one third of formal education in the age group above 18 (!) years is not “initial” but “further” education, that is, part of a second phase of education after some time of employment (Rosenblatt and Bilger 2008, pp. 48–52).

Countries with a higher overall participation rate in FED tend to show higher participation rates in all three age groups. Findings clearly indicate different patterns of the role of formal education in peoples’ educational biographies. While in some countries formal education is largely restricted to the early years of adulthood, in other countries it is part of the repertoire of options for lifelong learning.

One would expect that this goes along with changing forms and content of the respective educational programmes. We examine this by looking at the volume of annual instruction hours and the ISCED level of the respective educational programme (right-hand columns in table 10).

Table 10. Profiles of participation in formal education (FED) AES 2007, population 25–64

	Relative Participation rate for age group (index, total=1.0)			Total participation rate (%)	Average annual instruction hours	% distribution of all FED activities by level of programme	
	25–34	35–54	55–64			below tertiary	tertiary level
EU	2.3	0.8	0.3	6	382	38	62
FR	2.5	0.5	0.0	2	339	19	81
EL	3.0	0.5	0.0	2	405	12	88
HU	2.3	0.7	0.0	3	487	16	84
AT	3.0	0.5	0.0	4	532	22	78
IT	3.3	0.8	0.3	4	367	44	56
DE	3.0	0.6	0.4	5	905	35	65
PL	2.2	0.5	0.0	6	420	55	45
ES	2.0	0.7	0.3	6	413	15	85
SK	2.2	0.8	0.0	6	326	13	87
PT	2.0	0.7	0.1	7	543	58	42
NL	2.1	0.7	0.3	7	:	8	92
NO	2.1	0.8	0.2	10	379	32	68
FI	2.4	0.9	0.1	10	399	35	65
BE	1.7	0.8	0.5	13	230	27	73
SE	2.1	0.8	0.2	13	515	36	64
UK	1.5	1.0	0.5	15	121	59	41

The volume aspect was already discussed above in section 2.2. Regarding the level of educational programmes, the majority of FED activities take place at

tertiary level (62%). In a number of countries, all of them with low or medium participation rates, the share of tertiary level programmes is above 80% (up to 92% in NL). By contrast, there are three countries where the majority of FED activities in adult age (25+) take place at below tertiary levels, namely Poland, Portugal and the UK.

There are no clear correlations between participations rates and volume or level of the FED activities, but there are clusters or types of countries. Low or medium participation rates tend to go along with higher instruction hours and restriction to tertiary level programmes (seen most clearly in EL, HU, AT). At the upper end of the comparative list, the group of countries with high participation rates in formal education does not show a consistent pattern at all. There is the distinct case of the UK where a large number of adults are involved in formal education, with low volumes of instruction and the majority of programmes below tertiary level. There is Belgium with relatively low instructions hours, though focus on tertiary level programmes. There are the Scandinavian countries where about one third of the programmes are below tertiary level and instruction hours at a medium position, except Sweden with a higher volume of instruction hours.

At this point of the analysis it is difficult to draw conclusions in terms of evaluating the different systems. Should countries with lower participation rates in formal education among adults move in the direction of countries with higher participation rates? The Scandinavian countries seem to provide the most inspiring model. Their high participation rates in formal adult education are clearly supported by policy measures, such as obligatory supply of adult learning centres at communal level, financial support of participants, and guaranteed return to the job after an educational leave (for Sweden see, for instance, Stenberg 2009). It is a “culture of second chance” which may well serve as a model for other countries.

For further analysis of the subject one would also have to look at problems of comparability. Countries may differ to some degree in classifying educational programmes as “formal” or “non-formal”. There is evidence that AES data in Sweden, for instance, classify some learning activities as “formal” which in other countries probably would be reported as non-formal education (e.g. Swedish for foreigners, labour market training via the employment office) (Löfgren and Svenning 2009). The same may hold for the UK. One may regard this as a methodological source of non-perfect comparability. On the other hand, it may reflect differences in the educational system which are real, incorporating a broader set of learning activities in the National Framework of Qualifications and thus giving a higher level of recognition to them.

Finally, formal education institutions may also play a role in non-formal education and training (NFE). Schools, colleges, universities etc. provide “regular” educational programmes as their main business, but they may in addition supply specific courses for other target groups. AES data include information about the provider of reported NFE activities. For 10% of all non-

formal education and training activities the provider is a “formal education institution”. The relative role of formal education institutions in NFE is the smallest in Sweden (4%) and Germany (5%). It is clearly above average in Greece, Belgium and Slovakia (15–17%), and in Belgium it arrives at a remarkable percentage of 38%.

One would like to have more information at this point, for instance, about the role of universities in the market of non-formal education and training. Unfortunately, the comparative data do not show the required detail (though national data sets may offer additional information). More specific studies are needed here.

3.2.Comparative issue (2): the role of enterprises in adult education and training

Enterprises play a prominent role in providing continuing training for adults. The European system of educational statistics comprises a separate survey on this issue, the “Continuing Vocational Training Survey” (CVTS) which will be conducted parallel to the AES every 5 years. Yet the AES has to play a role for this topic as well. Whereas the CVTS is based on a survey of enterprises (of at least 10 employees) and thus limited to training activities of enterprises, the AES has a comprehensive approach. It can show the contribution of enterprise-based training within the overall field of adult education. Moreover, AES data view this segment from the individual employee’s perspective, in contrast to the employer’s perspective reflected in the CVTS. The two surveys can complement each other in a fruitful way, provided they are sufficiently harmonized.¹

The first task is to identify, in the AES data, which learning activities shall be classified as “company-based” or “employer-sponsored”. Results were provided already in section 2.3 where employer-sponsored training is presented as type 3 within the sector typology of adult learning (tables 7 and 8). Here we discuss more closely matters of definition and content.

A basic point is that employer-sponsored or company-based training is conceptualized as a sub-category of non-formal education (NFE). This is not self-evident, and it is a restriction. The workplace is a major environment for informal learning as well. This may be learning-by-doing or it may be semi-organized in work teams, and providing opportunities for informal learning may be part of a company’s training policy. Employees tend to report this as their most important source of learning while more formal learning arrangements (here covered as “non-formal learning”) rank far below (Müller and Jakob, 2008, p.139). It is difficult, however, to include these forms of learning in a statistical concept which

¹ An improved concept of harmonizing the two surveys was discussed in the two parallel Eurostat Taskforces for AES and CVTS and will be reflected in Commission Regulations for the next round of surveys in 2011–2012.

tries to identify individual learning activities, as AES does.¹ Company based learning analysed here is restricted to learning activities that can be classified as “non-formal”. Similarly, CVTS focuses on non-formal training in “courses” though some information on learning activities other than courses (as far as they are organized by the employer) is included.

Non-formal education, according to the AES Manual, requires “an organization providing structured arrangements (which must include a student-teacher-relationship), especially designed for education and learning”. More specifically, the AES questionnaire addresses three kinds of organized learning which are relevant here: (1) courses, (2) workshops and seminars, (3) guided on-the-job training.

While it is evident that guided on-the-job training is a company-based learning activity, this does not apply to courses, seminars and workshops. Additional criteria must be sought, therefore, to identify the segment of company-based learning. AES data include three potential criteria:

- (A) the provider of the learning activity is the employer
- (B) the learning activity takes place during working time
- (C) costs of the learning activity are paid for by the employer.

Table 11 shows for what percentages of all non-formal learning activities these characteristics apply. Figures do not represent participation rates, in this case, but refer to the structure of the total of NFE activities.

Employers are the leading providers of non-formal education and training activities.² 38% of the activities are directly provided by the employer. One can add to this another 9% for suppliers of the employer (which we assume covers mainly training for new equipment or software). Together they account for nearly one half of all NFE activities (column A). Beyond this, the employer may have contracted out training activities to professional providers. More comprehensive, therefore, is criterion (B): About 60% of all non-formal education and training activities take place fully or mostly during paid working hours. In about as many cases costs of the training activity (“for tuition, registration, exam fees”) are fully or partly paid for by the employer (criterion C).

The conclusion is that we define a non-formal learning activity as being employer-based training (“sector 3”) if either criterion B or criterion C applies.³

¹ AES questions on informal learning do cover learning at the workplace, but this is explicitly restricted to intentional learning (“to teach yourself anything at work or during your free time”), and informal learning at the workplace cannot be identified as such.

² See Boateng (2008) for more information on providers.

³ Note that for the purpose of definition we do not explicitly include criterion (A) because country-specific institutional arrangements would need more specific investigation. Yet this is an important aspect. In a number of countries the employer’s role as a direct provider of training is small even within the sector of employer-sponsored training. According to the data, this applies in particular to Hungary and Poland. In Hungary, the main providers are employers’ organisations and (less so) trade unions. In Poland the main providers are (formal and non-formal) education and training institutions. More country-specific analysis is required to explore the institutional aspects.

Applying this definition, 70% of all non-formal learning activities are assigned to this sector (column D in table 11). We call it “employer-sponsored training” because this term indicates best the full range of what is covered. Taking place during paid working hours is the main criterion (contributing 59%), another 11% are contributed by including the criterion of financing. An advantage of this broad definition is that it comes close to the range of training activities covered by CVTS.

The essential finding is that non-formal education is largely work-related and employer-based. This is true in all countries. The minimum share of employer-sponsored training in non-formal education is found in Italy, Greece and Spain, where it amounts to about 50%. The percentage rises up to more than 80% in Norway and Sweden on the one hand, and Slovakia and Poland on the other hand.

Table 11. Defining “employer-sponsored training” – Characteristics of all reported NFE activities, in % AES 2007, population 25–64

	A	B	C	D
	Provider: Employer or supplier	Fully or mainly during working hours	Costs: Paid for by employer (fees etc.)	Sector 3: „Employer-sponsored training“
EU	47	59	61	70
IT	36	46	29	48
EL	50	48	41	55
ES	25	42	50	55
HU	4	58	42	62
AT	40	53	57	64
UK	50	63	62	66
FR	:	:	66	66
DE	56	62	54	69
FI	37	66	59	70
BE	51	71	65	75
NL	39	65	69	76
PT	49	74	73	78
SE	63	77	63	81
NO	:	67	80	84
SK	48	85	85	86
PL	27	86	87	87

Opportunities for adults to take part in organized learning processes are mainly bound to the work environment. As already shown in section 2.3 (table 8), employer-sponsored training is by far the largest sector of adult learning. On average in Europe, 23% of the adult population have participated in employer-sponsored training during the past year. However, country variations are enormous, ranging from 4% in Hungary to 59% in Sweden.

Findings may also be summarized by saying that the leading position of the Scandinavian countries in regard to the overall participation in adult education

and training is not only, but mainly due to their well developed supply of work-related, employer-provided training opportunities. By contrast, the lack of employer-provided training in countries like Hungary and Greece is a severe deficiency in their development of opportunities for lifelong learning.

A next step of analysis could be to investigate which groups of the workforce are involved to a higher or lower degree in employer-provided training (for Germany see Rosenblatt and Bilger, 2008, pp. 82–85). Here we instead follow the guideline of “looking behind the figures”. Which kind of learning activities are supplied in employer-sponsored training?

Learning activities are not necessarily organized in the form of “courses” or “seminars”. Enterprise-based training activities can be planned and conducted “near to the workplace”. This tends to facilitate access and to support motivation as well as transfer of what participants have learnt. A common term for such forms is “guided on-the-job training” (GOJT). This type of training is characterised “by planned periods of training, instruction or practical experience, using normal tools of work, either in the immediate place of work or in the work-situation or with the presence of a tutor. It is usually organised by the employer to facilitate adaptation of (new) staff, including transferred, re-hired and seasonal/temporary staff in their new or current jobs. It may include general training about the company (organisation, operating procedures, etc.) as well as specific job related instructions (safety and health hazards, working practices).” (AES Manual 2009, p.9). One may note that the boundary line between “non-formal education” and “informal learning” is certainly not clear-cut at this point. But it may be exactly this feature which makes the training effective. Experts regard this form of learning often superior to traditional classroom instructions.

AES data permit to define three sub-categories of employer-sponsored training:

Type 3a: Guided on-the-job training (GOJT)

Type 3b: Courses/seminars conducted during working hours

Type 3c: Courses/seminars outside working hours, but sponsored by the employer.

Findings are provided in table 12. Column 1 shows, as a reminder, the very different levels of participation in employer-sponsored training. Columns 2 to 5 change the perspective to show the structure within the sector, taking all reported activities of employer-sponsored training as the basis for percentages in the three sub-categories.

Table 12. Three main forms of employer-sponsored training (“sector 3”) AES 2007, population 25–64

	participation rate in sector 3	all learning activities in sector 3	of which		
			Type 3a	Type 3b	Type 3c
	%	%	%	%	%
EU	23	100	39	47	15
HU	4	100	61	33	6
EL	7	100	55	33	12
IT	10	100	40	54	6
ES	15	100	34	42	24
PL	16	100	98	0	1
PT	18	100	80	15	5
FR	23	100	26	74*	:
BE	26	100	47	47	6
UK	26	100	68	28	5
AT	27	100	22	62	16
DE	31	100	21	69	10
NL	34	100	32	53	15
SK	37	100	92	6	2
FI	38	100	15	80	6
NO	45	100	24	55	21
SE	59	100	18	77	4
* France: Sum of type 3b and 3c (variable “during working time” is lacking).					

The largest part of employer-sponsored training activities consists of courses, seminars or workshops conducted during working hours (47%, type 3b). Nearly as many are reported as “guided on-the-job training” (39%, type 3a). A smaller part consists of courses or seminars conducted outside working hours but fully or partly sponsored by the employer (15%, type 3c).

Regarding country variations one must be aware of the fact that the category “guided on-the-job training” is not self-explanatory as a response category in a survey, so that results will be affected by the wording in national questionnaires. Figures in table 12 provide empirical evidence of the problem. In some countries, nearly all employer-based training is reported as “guided on-the-job training”: 98% in Poland, 92% in Slovakia, 61% in Hungary. This may be due to terminological traditions in ex-socialist countries. But there are also other countries where the GOJT category makes up for the majority of employer-sponsored training activities, such as Portugal (80%), UK (68%) and Greece (55%). In the majority of countries, by contrast, the most common form of training covers courses, seminars or workshops, while guided-training-on-the job

is regarded as a specific form of instruction. This is clearly the case in Scandinavian countries as well as in Germany, Austria and France where the share of GOJT varies in a range of 15% to 26%.

Large country variations also apply to the third sub-category (type 3c), that is, training activities outside working hours but sponsored by the employer (type 3c). In a number of countries this form hardly plays a role, while in Norway (21%) and in Spain (24%) it seems to be a common way of organizing training activities. Data do not show exactly what kind and amount of financial contribution the employer makes. Nor do they show whether the training activity is initiated by the employer (but conducted outside working hours) or initiated by the employee (but sponsored by the employer). However, findings draw our attention to a point of interest, calling for additional information to explore the matter.

3.3.Comparative issue (3): social inclusion – participation of the lower educated in adult education and training

All studies on the subject show that participation in adult education and training is not equally distributed across social groups of the population, and that educational background and qualification are strong determinants to explain the inequality. The general pattern is that less educated persons participate less in adult learning. While this may be true in all countries, it does not apply to the same degree in all countries. Some countries are more successful than others in including the lower educated groups of the population in adult education and training.

AES data strongly confirm these findings (table 13). As before in table 10, figures for sub-groups are shown as relative participation rates, i.e. relative to the total. Three levels of educational attainment are distinguished, defined by ISCED levels 1–2, 3–4 and 5–6. This may not capture the stratification of educational levels very well in all countries but is sufficient for the present analysis. Figures refer to non-formal education and training; including formal education would even accentuate the pattern. The index may be regarded as a measure of inequality within countries regarding access to adult learning.

Table 13. Participation rate in non-formal education and training by highest level of education attained (ISCED levels) AES 2007, population 25–64

Country	Participation rate (%)	Relative participation rate (index, total = 1,0)		
	Total	Education levels 0–2	Education levels 3–4	Education levels 5–6
EU	33	0,5	1,0	1,6
HU	7	0,3	0,9	2,1
EL	13	0,3	1,0	2,2
PL	19	0,2	0,7	2,5
IT	20	0,4	1,3	2,3
PT	23	0,6	1,6	2,6
ES	27	0,6	1,1	1,6
BE	34	0,5	0,9	1,6
FR	34	0,6	1,0	1,6
AT	40	0,5	1,0	1,6
UK	40	0,7	1,1	1,3
SK	41	0,3	0,9	1,4
NL	42	0,6	1,0	1,4
DE	43	0,4	1,0	1,4
NO	51	0,7	1,0	1,3
FI	51	0,7	0,9	1,4
SE	69	0,8	1,0	1,2

In all countries the well-educated participate considerably more in adult learning than the population at large. Their relative index at EU level is 1.6, which means that the participation rate is about 60% above average. Correspondingly, in all countries the lower-educated participate much less in adult learning than the population at large. Their relative index at EU level is 0.5, which means that the participation rate is about 50% of the average.

Absolute values (not shown in the table) indicate an interesting pattern of inequality across European countries. Differences across countries are less pronounced among the higher educated than for the population at large (not regarding the extreme lower end, i.e. HU and EL). This indicates a “convergence of the elites”, while societies at large differ more strongly. Differences across countries are even more pronounced if you look at the lower-educated population. Participation rates here range from 2% in Hungary to 52% in Sweden. Inequality across Europe is stronger within the low-educated segment of populations than for the population at large.

The most marked inequality in access to adult education and training is found in Poland. The relative participation index ranges from 0.2 for the lower-educated to 2.5 for the well-educated. At the upper end, again, there is Sweden. Here, the relative participation index only ranges from 0.8 for the lower-educated to 1.2 for the well-educated. Looking at the whole list of countries there is a clear pattern,

showing an inverse relationship between inequality and the overall level of participation in adult education and training. The higher the overall participation rate, the lower the inequality.

In policy terms one may turn it the other way round: social inclusion of the lower-educated is a prerequisite for reaching higher overall participation rates in adult education and training. Policy makers have recognized this and devoted special attention in their programmes to fostering participation of the lower-educated in adult education and training. This is true at EU level (“Action Plan on Adult Learning”, 2007) as well as for policies at national level in individual countries, e.g. in Germany.

As mentioned, the relationship between educational background and participation in adult learning over the life-course has been widely noted and discussed in the research literature on adult education and training. A pronounced summary of findings reads like this: “Continuous Vocational Training thus usually does not compensate for a lack of initial training. During the life course there is no equalization in educational and training differences between individuals; differences rather increase, and this is true for all countries” (Müller and Kogan 2010, p. 268). One may not disagree with this. However, one may wish to arrive at a more specific insight. Country variations show that political, economic and cultural conditions can modify the general pattern to a great extent.

4. Concluding remarks

Adult education and training is a key element in lifelong learning. Increasing levels of participation are an objective of European educational policies. Statistical indicators have been set up to monitor the situation in individual countries as well as the development over time. They show that Europe is far from realising common achievements in this field. There are enormous differences in the level of participation in adult learning across European countries. Moreover, indicators show that progress in this field is not easily accomplished. Europe-wide, the level of participation in adult education and training has hardly increased in recent years.

The present paper argues that statistical indicators should not just monitor the development. They should contribute to understanding what is behind overall participation rates in adult learning, and what are the meanings and effects of different levels of participation as measured by overall indicators. To this end, data must be sufficiently detailed to enable more specific indicators and analysis. The newly established Adult Education Survey provides a data base that opens new prospects for comparative research along these lines.

The AES database as set up by Eurostat is accessible for research purposes (notwithstanding any technical problems). This is highly welcome. Recent research literature articulates needs that call for a comparative database: “Although research exploring the huge differences between countries in the extent

of further training participation and lifelong learning is growing, more work is needed on the systematic explanation of these differences. Research needs not only long-term longitudinal observations, but also more specific measures (e.g., the general or vocational character or the curricula, field of study, or attributes of the educational institution)” (Müller and Jakob 2008, p.144 and p.162). The present paper outlined a number of specific measures and ways to analyse country profiles, trying to demonstrate the potential of the new statistical database for a better understanding of adult education and training across Europe.

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