

Quality description of in-service training statistics

Labour force survey data and contents

The statistics on in-service training derive from the Finnish Labour Force Survey carried out in accordance with the EU standards during October, November and December 2000. The first Finnish EU-LFS was carried out in the spring of 1995. The purpose of a Labour Force Survey is to chart out matters relating to the employment and working life of the working age population. Similar surveys are carried out in all EU Member States in accordance with the directions of Eurostat, the Statistical Office of the European Communities. The aim is to produce optimally comparable data. The Labour Force Surveys of Statistics Finland were adjusted to comply with the EU regulations after Finland joined the EU.

The publication is based on data collected for national use concerning participation in in-service training during the 12-month period prior to the survey. The Labour Force Survey also contains such questions made in accordance with the EU standards that inquire about studies during the four-week period before the survey. The purpose of the questions is to collect internationally comparable data on in-service training, for example. These questions are not dealt with in this publication.

The time series tables in In-service Training 2000 contain data from 1982 to 2000. Before the EU standardised Labour Force Survey (from 1982 to 1993), data were collected each autumn by means of the Supplementary Surveys to the Finnish Labour Force Surveys, which included data on issues such as working conditions, pay, employment history and unemployment background and duration. The surveys were implemented as supplementary to the monthly Labour Force Surveys. They were carried out annually between 1982 and 1986, and every second year between 1987 and 1993. The in-service training figures produced from the Labour Force Survey concerning the year 2000 are comparable with the previously produced data.

Sampling design, survey implementation and weighting

The target population for the Labour Force Survey consists of persons aged 15 to 74 permanently resident in Finland. The sample was drawn with systematic sampling from the Central Population Register arranged on the basis of domicile codes, by which the sample is divided regionally in the same way as the target population. The sample was first post-stratified by region, gender and 10-year age group into 252 strata. After that the weights were calibrated according to the number of unemployed in the jobseeker register, region, gender and 5-year age groups to correspond with the register data. Calibration produces the correct population distributions for all the auxiliary variables used in the weighting, provided that the calibrated weights differ as little as possible from the original ones (Deville et al. 1992; Deville et al. 1993). Use of additional information increases the accuracy of the results and corrects the bias caused by nonresponse.

In the survey period, that is, during the last quarter of 2000, the size of the LFS sample was 37,168, of whom 31,980 took part in the interview. Of them 16,274 were employees aged 15 to 64 (the target population of the in-service training statistics). Estimation of in-service training data was made similarly as in the Labour Force Survey.

The sampling design also involves a rotating panel, in which the same person is included at three-month intervals. Thus, there is no overlapping in the sample during the three months and each person is included in the in-service training survey data only once.

The standard errors of the survey parameters were calculated using CLAN software. CLAN is an SAS macro written by Statistics Sweden that can be used for calculating standard errors according to the sampling and estimation design.

Reliability of the figures

In a sample survey, each study variable has a random error, called sampling error. The sampling error of a study parameter can be estimated using the standard error. It shows how closely the findings are centred round the parameter to be measured. Sample size and fluctuations in the values of the variables influence the size of the standard error. Using the standard error, a parameter estimate can be given a confidence interval, defining the area within which the value of the variable will, with given probability, fall.

$(1-\alpha)*100\%$ confidence interval means a closed interval within which the true value of the parameter falls with $(1-\alpha)*100\%$ probability, i.e.

$$Pr\{p \in (p - t_{\alpha} d(p), p + t_{\alpha} d(p))\} = 1 - \alpha$$

where $d(p)$ is the standard error

The t_{α} value for a 95 per cent confidence interval would be 1.96 (the t_{α} value for a 99% confidence interval would be 2.58 and, for a 90% confidence interval, 1.65).

Table 4 shows the standard percentage errors by gender and age.

4. Standard percentage errors by gender and age, Labour Force Survey 2000

Gender Age	Participation percentage in in-service training %	Standard error
Both genders	43.3	0.4
15-24	22.3	1.0
25-34	44.8	0.8
35-44	49.5	0.8
45-54	46.1	0.7
55-64	38.5	1.2
Males	41.1	0.6
15-24	22.6	1.4
25-34	43.2	1.1
35-44	45.3	1.0
45-54	43.0	1.1
55-64	39.1	1.8
Females	45.6	0.5
15-24	22.0	1.3
25-34	46.8	1.2
35-44	53.8	1.0
45-54	48.9	1.0
55-64	37.9	1.6

Next is an example of how a confidence interval can be calculated using the standard error table:

According to the 2000 LFS data, 43.3 per cent of 15 to 64-year-old employees participated in in-service training. The standard percentage error of this figure is 0.4 per cent (Table 4). A 95 per cent confidence interval can be calculated as follows: $1.96 \times 0.4 = 0.8$.

With 95 per cent probability, the proportion of those participating in in-service training was between 42.5 and 44.1 per cent ($43.3 \pm 0.8\%$).

Nonresponse

In the last quarter of 2000, nonresponse for the LFS was 14 per cent. Error possibly caused by nonresponse was corrected by weighting the response data to the level of the target population using the calibration method.

If a person to be interviewed was not reached, the information could be inquired of a proxy, who was usually some other person belonging to the household of the target person. As of the 1998 data collection, questions relating to in-service training could also be addressed to proxies. Previously, questions were not asked of proxies, but the data were produced by means of imputing.

Comparison of the definitions, questions and results relating to in-service training in the EU-LFS and in the Adult Education Survey 2000

According to the EU-LFS, 43 per cent of employees participated in in-service training in 2000. Yet, according to the Statistics Finland's Adult Education Survey 2000, 56 per cent of all paid employees participated in in-service training. Some of the reasons for this discrepancy in the obtained data are studied below. At first, an attempt is made to define generally the concept of in-service training. This is followed by a comparison of the definitions used for in-service training in the EU-LFS and in the Adult Education Survey 2000, and a study of how the questions formulated according to these definitions were expected to measure participation in in-service training.

What is meant by in-service training?

In-service training generally means employee training fully or partially paid for by the employer, irrespective of its contents.

Definitions of in-service training in the EU-LFS and in the Adult Education Survey 2000

In the EU-LFS, in-service training refers to such employee training, paid for by the employer, which relates to an employee's occupation or profession or trade union activities, and which an employee attends at full or reduced pay, or against full or partial compensation in money or time off. The training paid for by the employer only relates to the employee's main job.

In Statistics Finland's Adult Education Survey 2000, in-service training refers to training in which an employer supports an employee's participation by compensating fully or partially the costs incurred by the employee from the training, or by allowing the employee to attend the training during working hours. In-service training relating to secondary jobs is also recognised. However, training associated with positions of trust is not included.

In the Labour Force Survey, in-service training is defined by whether the employee has been able to take part in training during paid working time. In the Adult Education Survey 2000, in the definition of in-service training it is also taken into consideration whether the employer has paid for the costs caused by the training.

The definitions of the EU-LFS and the Adult Education Survey 2000 differ from each other in respect of the financial compensation of the costs incurred by the employee. According to the definition of the Adult Education Survey, an employer compensates the costs incurred by the employee fully or partially. The definition of the EU-LFS does not specifically contain this notion. Another difference between the definitions is that, in the EU-LFS, only training relating to the main job is acknowledged, while the Adult Education Survey 2000 also acknowledges training that relates to a secondary job.

The data environment and the composition of questions on in-service training in the EU-LFS and in the Adult Education Survey 2000

Data collection in the EU-LFS focuses on matters relating to employment and the working environment. Consequently, questions relating to participation in in-service training form only a minor proportion of the collected data. In the EU-LFS, the composition of the questions on in-service training is simplified. Data are collected with two questions, the first of which concerns actual participation and the second inquires about the number of training days received during the past 12 months.

In contrast, the objective of the Adult Education Survey 2000 was to determine all education and training a respondent had ever attended in his/her life. Its questions do not relate exclusively to in-service training. The respondents were asked about their participation in education and training in a detailed series of questions covering over 30 forms of education and training. Thus, going through the detailed list, the respondent could more easily recall the ones he/she had participated in. The respondents were further asked to specify their participation in each form according to the following classification: 1) Have never participated, 2) Have participated in the past 12 months, 3) Have participated sometimes in the past, 4) Don't know.

An interviewee is better able to recall the training he/she has attended if information is requested with a series of questions on various forms of training. By increasing the number of questions and asking more detailed questions, participation in training can be measured more accurately and, as a consequence, higher participant figures can be obtained than with just a few, simple questions (e.g. Brick, M. et al. 1997).

The data collection times and methods of the EU-LFS and the Adult Education Survey 2000 also differ from each other. The data for the EU-LFS were collected in autumn (October to December) whereas those for the Adult Education Survey 2000 were collected in spring (February to June). The EU-LFS was conducted as telephone interviews, while the Adult Education Survey 2000 was carried out as personal interviews. When a survey is implemented as personal interviews, the interviewer is able to spend more time going through and explaining any questions the interviewee finds for some reason difficult to answer.

The EU-LFS questions relating to in-service training, and serving as the basic data for in-service training statistics, and the corresponding Adult Education Survey 2000 questions have been formulated in a different way. The data collection contexts, times and methods of the two surveys also differ from each other. These factors can be assumed to influence the discrepancies in the data on in-service training in the two surveys.

Labour Force Survey 2000 questions on in-service training

Next I will ask about employer-sponsored training

P29

Have you attended paid training in the last 12 months?

RELATES TO MAIN JOB

Yes.....1

No.....2

Don't know.....9

If P29=1(Yes)

P30

For how many days have you been in-service training during the last 12 months?

Number of days _____

Don't know.....999

RECORD INCOMPLETE

DAYS AS COMPLETE ONES

Adult Education Survey 2000 questions on forms of training and number of training days

32. Next I would to ask you what kinds of studies and courses you have taken in Finland in your lifetime. – Please take into account only those studies that have lasted altogether a minimum of 6 hours. – Studies that have been interrupted are also to be included.

ANSWER ALTERNATIVES IN QUESTION 32:

Never studied	1			
In the past 12 months	2			
or only earlier?	3			
Don't know.....	9			
01 Primary school or lower secondary school?.....	1	2	3	9
02 Comprehensive school or middle school?.....	1	2	3	9
03 Upper secondary school?.....	1	2	3	9
04 Evening school (adult or evening upper secondary school or middle school)?.....	1	2	3	9
05 Apprenticeship training? (Periods of courses taken at vocational adult education centres or vocational education institutions.)	1	2	3	9
06 An employment-promoting course paid for by labour authorities (labour policy training)?.....	1	2	3	9
07 Training for youths at vocational or professional education institutions?.....	1	2	3	9
08 Training arranged specially for adult at a vocational education institution or a vocational adult education centre (polytechnic education and private students included)?.....	1	2	3	9
09 Military institute (not conscript service)?.....	1	2	3	9
10 a folk high school or folk academy in order to get a vocational or professional qualification ?.....	1	2	3	9
11 a folk high school or folk academy for other purposes?	1	2	3	9
12 a conservatory in order to get a vocational or professional qualification or in a music school or college (not in the adult application)?.....	1	2	3	9
13 the music-school level adult department (former folk conservatory department) at a music school or college)?	1	2	3	9
14 a college of physical education (sports institute) in order to get a professional or vocational qualification?	1	2	3	9
15 a sports institute in other training?.....	1	2	3	9
16 for a basic degree at university?.....	1	2	3	9
17 for a post-graduate degree at university?.....	1	2	3	9
18 at university or its continuing education centre in a further training course?.....	1	2	3	9
19 at university or its continuing education centre for a separate degree or open university courses?.....	1	2	3	9
20 at summer university?.....	1	2	3	9
21 an adult education centre?.....	1	2	3	9
22 a language school or institute in Finland?.....	1	2	3	9
23 a correspondence school?.....	1	2	3	9
24 training provided by an organisation, union or association?.....	1	2	3	9
25 courses or a study circle arranged by a study circle centre?.....	1	2	3	9
26 a separate typing or word-processing school?	1	2	3	9
27 a dance school or institute (modern or jazz dance or ballet)?.....	1	2	3	9
28 a driving school.....	1	2	3	9
29 studied by regularly following an educational programme series on the radio or television?.....	1	2	3	9
30 training provided by your employer at your workplace, in the employer's training facilities or in other training units (also applies to secondary jobs)?.....	1	2	3	9
31 training provided by a separate training enterprise or training centre (business-based training centres, consultants, etc.)?.....	1	2	3	9
32 conferences, seminars or other similar training?.....	1	2	3	9

44. EVERYBODY WHO PARTICIPATED IN ADULT EDUCATION AND TRAINING:
**Please estimate how many days altogether you participated in this training
in the past 12 months (6 lessons = 1 day)?**
(Please estimate how many hours altogether you were in this training?)
