



14th CEIES seminar

Measuring lifelong learning

Parma, Italy, 25 and 26 June 2001



EUROPEAN
COMMISSION



THEME 1
General
statistics

A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (<http://europa.eu.int>).

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1st day 25 June 2001

(starting at 9 a.m)

- 9:00 REGISTRATION**
- 9:30 OPENING SESSION**
Welcome to the participants:
Mr J. Lamel, Vice-chairman of CEIES
Opening address:
Mr G. Ferretti, Rector of the University of Parma
Ms V. Egidi, Istat
Keynote speech:
Mr L. Jensen, Director, European Commission, Eurostat

THEME 1:
INFORMATION, DEFINITIONS AND CLASSIFICATIONS
Chair : Mr G Ferretti, Rector of the University of Parma

- 10:00 The producers view:**
Mr E. Marchetti, European Commission, Directorate General Education and Culture
Mr S. Pilos, European Commission, Eurostat
Mr J.L. Heller, OECD
Mr S. Chu, UNESCO

10:40-11:15 Coffee / tea break

- 11:15 The users view:**
Mr B. Pückler, Bundesvereinigung der Deutschen Arbeitgeberverbände, Germany
Ms M.-H. André, European Trade Union Confederation
Mr J. Turunen, President of the European Association for the Education of Adults

12:00 Discussion

12:30-14:00 Lunch break

THEME 2: ISSUES AND PROBLEMS
Chair : Ms A. Verli, European Commission, Directorate General Education and Culture

- 14:00 The producers view:**
Mr W. Hörner, Statistisches Bundesamt, Germany
Mr P. Zamora, Insee, France
Mr S. Leman, Department for Education and Employment, United Kingdom
Ms A. Delhaxhe, Eurydice

15:00-15:30 Coffee / tea break

- 15:30 The users view:**
Mr N. Longworth, European Learning Cities Network (ELCN)
Ms M. Ni Cheallaigh, Cedefop
Mr D. Paparella, CESOS, Italy

16:30 DISCUSSION

17:00 END OF THE FIRST DAY

2nd day 26 June 2001

(starting at 9:30 a.m)

- THEME 3: FUTURE NEEDS AND DEMANDS**
CHAIR : MR L. JENSEN, DIRECTOR, EUROPEAN COMMISSION, EUROSTAT
- 09:30 The producers view:**
Ms I. Blomquist, Statistics Finland
Mr S. Murray, Statistics Canada
Ms A. Micali, Istat, Italy

10:15-10:45 Coffee / Tea break

- 10:45 The users view:**
Ms A. Vegliante, European Commission, Directorate General Education and Culture
Ms S. Waddington, National Institute of Adult and Continuing Education, United Kingdom

11:45 DISCUSSION

12:30-14:00 LUNCH BREAK

- THEME 4: CONCLUSIONS AND RECOMMENDATIONS**
CHAIR : MR J. LAMEL, VICE-CHAIRMAN OF CEIES
- 14:00 Reply from Eurostat**
Mr L. Jensen, Director, European Commission, Eurostat
- 14:15 Round Table Discussion**
CHAIR : MR D. LENARDUZZI, Honorary Director General of EAC European Commission
Mr I. Drymoussis, European Commission, Directorate Employment and Social Affairs
Ms F. Ludovisi, Confindustria, Italy

15:30-16:00 COFFEE / TEA BREAK

- 16:00 Summing up by the chairman of the subcommittee**
Mr L. Frey
- 16:25 Closing up by the chairperson**
Mr J. Lamel, Vice-Chairman of the CEIES
- 16:30 END OF THE SEMINAR**

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INFORMATION, DEFINITIONS AND CLASSIFICATIONS - THE PRODUCERS' VIEW

MARCHETTI Ettore¹

European Commission
DG EAC
B-7 05/30
BRUXELLES
Ettore.Marchetti@cec.eu.int

Introduction

Policy initiatives based on « open coordination methods », brought to the fore in the Lisbon Conclusions (March 2000) are particularly appropriate in the fields of education and training². These aim to observe and encourage the Member States in their seeking of common objectives while approaching them with (potentially) different measures. In this framework, statistics and indicators are essential to

- Allow a broad comparison and understanding of the various national and local systems
- Ensure a way to monitor progress towards the stated objectives
- Identify good practice and particularly effective policies

As a consequence, statistics and indicators are becoming an essential part of every initiative aiming to foster and improve policy making in general and even more so in lifelong learning.

Moreover, indicators, via their formalisation of consistent definitions and classifications, help the debate by providing for concepts for which there is a recognised concrete reference in the national contexts – including, in many cases, reliable and comparable measures. In a nutshell, indicators are an essential, perhaps the main, component of the common language. As an example, consider the idea of apprenticeship, which could be interpreted in several ways and, depending on the interpretation, find several very different examples in the Member States education and training systems. The work carried out to develop the VET data collection has provided us with a concrete characterisation of the « apprenticeships » in Europe – along with data on programmes and participants³.

In view of the above, it is hardly surprising that there is an increasing attention towards indicators and statistics. This trend has been observed since the beginning of the 1990's with the first European efforts to provide for sources specially conceived for education and training statistics⁴. The Continuing vocational training survey (CVTS) (see below) at EU level in 1993 and International Adult Literacy survey (IALS)⁵ at OECD level in 1994/6/8 were the first major international undertakings whose main purpose was that of providing learning indicators.

¹ European Commission, DG Education and Culture. More details on the present note can be found at <http://europa.eu.int/comm/education/leonardo/leonardoold/stat/trainingstatis/index.htm>

² The Treaty establishing the European Community (as amended by the Treaty of Amsterdam) excludes stronger policy initiatives at EU level in education/training (see art 149 and 150).

³ See the Key Data on vocational training – Young people's Training EU-2000. <http://www.trainingvillage.gr/etv/publication/download/keydata/keydata2/keydata.asp>

⁴ Before then there was data from administrative sources (mainly school attendance) and other surveys (for instance, the LFS which focusses on employment).

⁵ The International Adult Literacy survey actually had predecessors in TIMSS, which was however of a different nature. Information on the survey can be found from OECD or Statistics Canada.

As we see below, in spite of these first important successes – and other that followed - and a strong need and backing from the policy-making side, the future presents several challenges and uncertainties.

A brief historical note

Before 1995

Before the 1990's data on education and training was made available by ministries (which yielded the UOE data collection on regular education) and the Labour Force Survey (LFS, which yielded data on educational attainment and participation in recent education/training in the population). There were also national initiatives to collect data on enterprise training and school leaver surveys.

The first training statistics projects at European level were launched in 1991 with the FORCE programme decision which led to the first Continuing Vocational Training Survey (CVTS), prepared in 1992-3 and carried out in 1994; and in 1994, under the PETRA programme, with the pilot data collection on vocational education and training (VET).

1995-1999

The development of the statistics collection system on education and training received a boost by the the Council Decision of 6 December 1994 adopting the Leonardo da Vinci programme. It provided for the financing of projects on the basis of a work programme (Strand III.2.b “Exchange of Comparable Data”). Even though the Leonardo da Vinci programme in general focussed on vocational training⁶, its statistical strand – for pragmatic reasons – helped to develop education statistics as well. A work programme was drafted and made the basis for most development work.

Leonardo da Vinci 1995-1999 – The ten-area statistical programme

1. Develop internationally comparable classifications, in particular concerning level and field of education and training – this led to the revision of ISCED and to a manual on education and training fields
2. Develop a coherent reporting system on initial vocational training, which led to the VET data collection, now an annual collection
3. Study the availability of data on the transition of young people from education and training to active life which led to the LFS Ad-Hoc module of 2000
4. Analysis of the Social and Economic Situation of Students and Participants in Vocational Education and Training Programmes (this was not carried out)
5. Continuing Vocational Training Survey CVTS which led to the second CVTS in 2000, with the participation of 25 countries.
6. Analysis of Training Provision, which led to a classification of education and training provision (CTP)
7. Inclusion of an Internationally Comparable Module on Training in the Already Existing Surveys Co-ordinated by Eurostat.
8. Education and Training Accounts, a first step to harmonise the various sources at EU level on education and training
9. A review of the International Adult Literacy Survey methodology
10. An analysis of Foreign Language Learning statistics needs – and opportunities

Moreover, a specific Working Group on “Education and Training Statistics” was set up jointly by Eurostat and DG XXII, with the participation of all Member States (and associated countries) to

⁶ The corresponding programme for general education was Socrates, which did not have a specific strand for statistics.

- Monitor the implementation of the work programme and related projects, including in general education
- Discuss further information needs
- Plan the dissemination

The Working group ensured that there was coordination between the initiatives at EU level and resources at national level. It played a major role in proposing and launching the second CVTS survey on in-enterprise learning and the involvement of CEEC – now « accession » - countries.

In the second half of the 1990's the European Commission, Eurydice and CEDEFOP prepared the first « **key data** », two separate series of publication on education and vocational training respectively. These are particularly important because they

- Improved awareness of the newly made available data
- Proposed indicators

As the indicators fed back into the policy-making, they were recognised as an essential tool and the need for developing measures for relevant areas was underlined.

2000 - 2006

The new Leonardo da Vinci programme does not allow for launching projects directly at EU level. We must rely on the initiative of project promoters (who spontaneously apply for funds for their projects on the basis of a wide framework) to plan the development. However, **priority areas**⁷ have been identified at EU level and disseminated.

Leonardo da Vinci 2000-2006 – Statistics priority areas

1. Early education and training leavers, aiming to provide information with a view to preventing/reducing ESL (which is also an explicit objective in the Lisbon Conclusions) and to set up remedies in the framework of lifelong learning
2. Analyse the *ad-hoc* module on transition (prepared in 1995-1999 and carried out in 2000, see above), also with a view to suggesting further data collections on the subject.
3. Extend the VET to accession countries
4. Extend the definitions and classifications on the skills base and the dynamics of informal learning, the learning way which is less well known
5. Analyse the results of the second CVTS (learning in enterprises) and propose future CVTS or alternative data collections on the subject. A project has been started in 2000.
6. Study the issue of training financing. Which sources could be used to collect data on government and individuals' spending on lifelong learning ? Which harmonised definitions can apply ?
7. Make use of the Structural Business Statistics for lifelong learning purposes.
8. How can data on learning by subject be collected ?
9. Analyse the skills gap.

These nine areas will be subject to revision at the end of 2002 and 2004 (the programme will run until 2006). The revision of the Leonardo da Vinci statistics priority areas will take into account, *inter alia*, the results of the work of the « Task Force on Measuring lifelong learning », the « Expert group on Indicators on Quality of lifelong learning », the « lifelong learning Action Plan », the « Forum on Quality of vocational training », the « Report on the Concrete Objectives of the education and training systems » and, of course, the projects which will have been launched.

⁷ For more information consult <http://europa.eu.int/comm/education/leonardo/leonardoold/stat/trainingstatis/secondphase/workprog.html>

New Challenges

The rapid development in the 1990's will be difficult to match in the current decade. Whereas (1.) **increased demand and support** from the policy side will probably lead to a larger effort, several factors could hamper the process. These will take the form of

2. knowledge gaps in **difficult areas** (financing, direct skill assessment, transitions, quality and effectiveness) which need to be filled,
3. re-focussing the whole idea of learning, now to be **centred on the learner** and
4. **evolving learning** policies and practice, in particular e-Learning.

1. Increased demand and support

As a consequence, those who strive to develop lifelong learning statistics and indicators can count on more and more support from the policy-makers and a direct, important use for their results.

At EU level, the Memorandum on lifelong learning (and its foreseen Action Plan) and the report on the « concrete future objectives of the education and training systems » are expected to reinforce the need for statistics and indicators and to call for new exercises aiming to develop them. The Leonardo da Vinci 2000-2006 programme, so far relatively weak on statistics (one mere project launched in 2000) could provide more support on the impetus of a felt policy need (a new call-for-proposals with new priorities is foreseen in 2002).

Moreover, the reinforced joint working among the European Commission, National Statistics Offices (including pre-accession countries'), CEDEFOP and OECD has a great potential which could allow the launching of projects hitherto considered too demanding (such as a European Adult learning or School Leaver survey).

2. Knowledge gaps in challenging areas

The development in the 1990's focussed on key information needs in areas where data collections were most feasible, « the flat, fertile soil ». As a results, certain important areas, which pose « statistical challenges » were left almost untouched. These mainly concern the financing of education and training and the « transitions » (of young people to active life, of women back onto the labour markets, of immigrants). Education and training quality and effectiveness is also a very important issue.

A comprehensive view of all aspects of learning is necessary and filling the « gaps » is not only necessary to offer a more complete service as possible. It is only by collecting information on all aspects of education and training that we have a coherent understanding of its working. For instance we will never be able to follow the ever growing market for education and training provision until we collect reliable information on the public, private and individual financing. Similarly, it will be hard to compare the effectiveness of apprenticeship systems until we have comparable school leaver and transition surveys. In short, « filling the gaps » is necessary to shed an appropriate light on information which we already have but fail to understand fully. Hence the need to till the « mountainous, rocky soil ».

3. Focus on the learner

At the same time, the same concept of learning is undergoing deep changes. In its currently accepted definition, lifelong learning⁸ hinges on a wide concept of learning which calls for new definitions and classifications. In turn, these call for deep changes in the way we collect the information.

The Task Force on Measuring lifelong learning (TFMLLL), which completed its first phase in March 2001⁹, pointed to the need to approach learning from the viewpoint of the learner. This is a major change from a system for data collection whose main sources are the education and training providers (the schools, mainly) and organisers (governments, enterprises).

⁸ Life long learning is seen as encompassing all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence

⁹ http://forum.europa.eu.int/Public/irc/dsis/ceies/library?l=/seminars/measuring_lifelong&vm=detailed&sb=Title

Informal ways of learning play an important, probably increasing, role and must be monitored. These interact with more formal learning and challenge the more traditional *system approach* based on enrolling, pre-requisites, duration, diploma. New concepts and definitions are necessary to illustrate the individual's learning process where all of the above may apply differently than in more traditional learning. Pre-requisites, for instance, may need to be expressed in terms of *acquired knowledge*, as opposed to *previous courses followed*. The concept of *duration* needs to include that of *intensity* and *outcomes* in self-paced training. In sum, basic concepts and definitions need to be revised in view of the need to take all kinds of learning into consideration.

What is more, informal/non-formal learning is particularly important in two of the key basic skills in Europe - foreign languages and information and communication technologies (ICT) – and these are more complex than others and gaining importance.

4. Evolving learning practices and e-Learning

The world of learning is changing and, similarly to other sectors, its most dynamic part is ICT. Mostly because of its dynamics, this sector poses important challenges to statistical data collections.

Firstly, the pace at which the e-learning world changes makes it difficult both to

- set up appropriate surveys – whose methodology may well have become obsolete by the time they are tuned-up, usually after a few rounds of data collection – and
- organise the surveys so that data delivery is sufficiently fast. The fact that UOE data is only available with a 2-3 year lag is not crucial since most aspects of school education do not evolve very rapidly. On the other hand, a 2-3 year lag in delivering data on e-learning would make the information practically useless.

Secondly, e-learning is arising from several diverse initiatives at all levels. Schools are linking to the internet and some of them are offering on-line support, such as syllabuses, contact points, learning material ; many products are provided with on-line instructions or full-fledged training course ; individuals (not necessarily teachers and trainers) offer on-line learning resources ; companies make large use of web-support for internal training purposes. To sum it up, the web allowed a rapid growth in the number and types of education and training providers, as well as forms of provision. As a result, even the basic task of defining the reference population for a statistical survey is a difficult one ; moreover, once definitions and classifications are established, these may need to be frequently revised in view of the changed importance of various aspects.

The two difficulties above are characteristics of ICT learning but affect all other kinds of learning as well. They challenge the traditional ways of working in statistical offices and have so far made it necessary for « e - » indicators to use alternative sources of data¹⁰, often not as reliable or comparable as official statistics. Statistical offices thus need to adapt their methodology and procedures to be able to provide the required timely and relevant data on fast-changing subjects.

Conclusions

After a decade of relatively rapid progress towards a coherent and comprehensive statistical reporting system on education and training, we are faced with major challenges. These originate from outstanding difficulties and the evolving nature of learning and it will be necessary to revise the basic concepts, definitions and classifications. The Task force on measuring lifelong learning has moved its first steps in this direction and more is left to be done. The policy initiatives on lifelong learning will ensure that the drive on the right track continues with the necessary motivation.

As the challenges affect deeply the ways surveys are launched and carried out, the statistical offices all face the need to revise their operations and improve their timeliness while keeping guaranteeing high quality standards. Such a revision could be eased by seeking best practices and mutual support at international level to introduce the necessary changes.

¹⁰ For an example, consult the report of the ESDIS on « employment in the information society », at http://europa.eu.int/comm/employment_social/social_dial/info_soc/esdis/documents.htm

REPORT OF THE EUROSTAT TASK FORCE ON MEASURING LIFELONG LEARNING

PILOS Spyridon

European Commission
DG ESTAT
Directorate E, Unit E3
BECH D2/722
L-2920 LUXEMBOURG
Spyridon.pilos@cec.eu.int

Executive summary

Remit

The Task Force on Measuring Lifelong Learning (TFMLLL) was set up to propose ways of measuring lifelong learning to meet the policy requirements of the European Commission. They were to take into account the current information sources so as to prevent duplication of effort at the European and international level.

Moreover, as policy-making lifelong learning in Europe gained new impetus with the new 2001 Employment Guidelines and the Memorandum on lifelong learning, it was felt necessary to support these processes with the necessary information background.

Lifelong Learning (LLL)

According to the European Union definition, LLL encompasses all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. The TFMLLL agreed that purposeful learning could be divided into three categories: Formal education, Non-formal education and Informal learning. Boundaries and criteria for delimiting these three types of learning are proposed in *Section 2*.

Existing Sources of LLL statistics

Existing European statistical sources on learning are detailed in *Section 3*. These surveys focus on participation and attainment within the formal education and training systems and on the labour market outcomes of this education. The TFMLLL recommends that these surveys should be modified to recognize the importance of learning outside the formal education system (*see section 5.2*).

The present report does not examine issues involving the direct assessment of skills or specifically targeted surveys e.g. youth surveys, early school-leaver surveys etc as there are currently no such activities within the European Statistical System (ESS).

New approach

LLL is a large and complex area, so measuring should be focused on clearly delimited areas of policy interest. The best source of information on LLL seems to be the individual (rather than education/training providers) and the ideal solution would be a dedicated, harmonized, household-based lifelong learning survey. The next

step towards this broader survey should be a *European Adult Education Survey*. The data requirements of such a survey are listed in *Section 4*.

Next Steps.

The TF/MLLL recommend the following actions (*see section 5.2*):

1) **Modify existing European surveys** to include questions covering both formal and informal aspects of LLL. The action needed on specific surveys is as follows:

- The first priority is to develop the ad hoc module on lifelong learning for the 2003 Labour Force Survey. This would be an opportunity to improve the core LFS questions on education and training, as well as develop the standard module proposed for use in different ESS surveys.
- Include questions on education and learning in the “European Union Statistics on Income and Living Conditions” (EU-SILC) survey that is going to replace the European Community Household Panel in 2003.
- Clarify the coverage of the UOE data collection and its capacity to collect information on flexible forms of education (e.g. modular programmes, open and distance learning, etc).
- Examine the positioning of VET information in the lifelong learning framework, including reconciling results with UOE, LFS and CVTS.
- Review the results of the 2nd Continuing Vocational Training Survey so as to improve the coverage of LLL in subsequent surveys.
- Explore the possibility of including more explicit questions/items on education and training in other Eurostat surveys such as the Time Use Survey and the Structural Business Survey.

2) Develop a **classification of learning activities** covering all types of formal and non-formal education and informal learning.

3) In the medium to longer term, **design a new European adult education survey** with a view to developing a comprehensive European lifelong learning survey.

The ultimate goal for Eurostat is to create an integrated **European Statistical Information System** (ESIS) on education and learning. This should make it possible to combine information coming from different sources so as to shed light on different aspects of LLL. This statistical information should also be complemented by contextual information.

1. Introduction

1.1 Background

1. Lifelong learning has been an issue in the political arena for quite some years now. It has increasingly become a priority area in policy making and its importance for social and economic development as well as for social cohesion and active citizenship in the knowledge society and economy has been widely acknowledged. Education and training constitutes a major element in the European Employment Strategy underpinning several Employment Guidelines. This recent focus, combined with the inclusion of education and training among the Community competencies for the first time in the Maastricht and Amsterdam Treaties¹, has created an increasing demand for statistics in the area of lifelong learning.
2. The process towards pan-European indicators in education and training began many years ago but has gained momentum in the 1990's. The contribution of the intensified international cooperation has been fundamental for this development. In February 2000, the European Commission created a Task Force on measuring lifelong learning (TFMLLL). Representatives from different Directorates General (Education and Culture, Employment and Social Affairs, Research, Eurostat), from 5 Member States (Germany, Netherlands, Portugal, Finland, UK), from the European Centre for the Development of Vocational Training (CEDEFOP), the European Unit of the Eurydice network of Ministries of Education, the Advisory Committee on Statistics in the Economic and Social Spheres (CEIES), the Organisation for Economic Cooperation and Development (OECD) and the UNESCO Institute for Statistics (UIS), the International Labour Office (ILO) as well as two experts in the field from Denmark and Switzerland (see list at the end of the document) have participated in the work of the TF.

3. According to its mandate the objective of the TFMLLL was “to propose ways to measure lifelong learning, covering its multiple aspects.” This had to be done “in a way that will cover the policy requirements of the European Commission in the international context (eg in terms of providing input to the Memorandum on lifelong learning and implementation of the European Employment Strategy) and will provide an overview of the current situation at European, international and national level; a major concern shall be to avoid duplication in the development of ways to measure lifelong learning at international and European level.” The Task Force was to make recommendations on approaches to be adopted within the European Statistical System (ESS²) taking on board the statistical implications of explicit needs for indicators expressed in official EU policy documents such as the action programmes on education and training (Socrates 2 and Leonardo da Vinci 2), the Employment Guidelines and the Joint Employment Report³. Moreover, the Memorandum on lifelong learning⁴ gave new impetus to reviewing existing policies in lifelong learning, including the development of the statistical information system. In the course of the task force’s work additional policy initiatives had to be taken into account: the Lisbon Conclusions⁵, the communication “Strategies for jobs in the information society”⁶, the e-Learning initiative⁷, the report on the quality of school education⁸, as well as in the Synthesis report presented to the European Council in March 2001 in Stockholm and the Structural Indicators that are related to it. The active participation of UNESCO and OECD in the work of the TFMLLL ensured the greatest possible involvement of the international organisations active in the area of education statistics.
4. The Final Report of the TF includes a methodological discussion on lifelong learning combining almost all available information at international level. Experience at national level has also been taken into account through the participation of national experts in the TF. Different proposals were made to improve existing ESS sources and to develop new sources. The TFMLLL has provided input to the Memorandum on lifelong learning since the annex of that document was based on its work. A follow-up seminar on MLLL is organised jointly by DG education and Culture, CEIES and Eurostat on measuring lifelong learning on 25-26 June 2001 in Parma, Italy which is part of the structured debate on the Memorandum and will be the follow-up of the work of the Task force, although it will not only be limited to that. The work of the Task force will also be used for the development of the 2003 LFS ad hoc module on LLL as well as for the development of a module on Continuing Education and training by Network B of the OECD Indicators for Educational Systems (INES) project.
5. The Task Force has played a very successful role in the mandate agreed by the European Commission inter-service group in February 2000. In order to assure the efficiency of the Task Force it was decided not to examine the following areas:
 - Information and Communication Technologies in education: To avoid duplication with parallel activities under the e-learning initiative and the development of a coherent approach to Information Society Statistics in the European Statistical System, it was deemed preferable to wait for the outcome of these activities.
 - Direct assessment of skills: As Eurostat is not involved in such surveys they were not included in the final remit of the TFMLLL. As far as basic skills (as well as “new” basic skills, including foreign languages and digital literacy) are concerned only proxies and self reported skills are covered. The necessity of launching such projects in the framework of the ESS should be evaluated by the Statistical Programme Committee,
 - School surveys: Also in this case Eurostat is not involved in such surveys (school surveys, early school leavers’ surveys, youth cohort surveys etc). That is why these have not been explored by the TFMLLL. On the basis of the analysis made in the final report and the policy needs for which gaps have been identified, the Statistical Programme Committee may decide that the ESS should be involved.
6. Although the work of the Task Force was not focused on the development of any new indicators, it has proposed ways to do this and it is up to the members of the European Statistical System to decide on the implementation of the approach proposed. Eurostat will continue to work closely with DG Employment in the framework of the Employment Committee indicators group and with relevant groups of DG Education and Culture to develop an EU set of LLL indicators that would then be fed into the Employment Strategy monitoring process, the Synthesis Report and other benchmarking activities at EU level.
7. Since the beginning of the work of the TFMLLL several developments have also taken place in the European Statistical System itself. Among them :

- It has been decided that the EU-SILC (Survey on Income and Living Conditions) will be a cross-sectional survey that will replace the European Community Household Panel in 2003;
 - the decision to include an ad hoc module on lifelong learning in the Labour Force Survey in 2003 has been confirmed
 - a questionnaire on Information Society Statistics has been developed which includes questions related to ICT on education
 - The Continuing Vocational Training Survey II has been carried out in 2000 and the results are expected to be in Eurostat in spring 2001.
8. The TFMLLL has tried to keep track of these changes and be as responsive as possible to them. Nevertheless the need for using the full artillery of tools available in the ESS to cover the multiple facets of LLL has been stressed on several occasions.

1.2 Scope for developing indicators

9. Existing statistics on education and training focus on the formal education and training systems (UOE⁹ and VET¹⁰ data collections), on educational attainment within these systems and on the labour market outcomes of education (LFS¹¹, ECHP¹² etc). This system approach is complemented with some additional data on individuals and enterprises. For example data on participation of adults in education and training (LFS) are also collected, though there is a clear focus on formal education and job-related training. Information is also available on work-related training offered by enterprises (CVTS¹³) as well as on the household expenditure on education (HBS¹⁴), but the typologies used for educational services or products do not allow appropriate exploitation of this information. Efforts have also been made for the direct assessment of skills through different international surveys like IALS¹⁵ on the literacy and numeracy of adult education, TIMSS¹⁶ which is a curriculum and school based survey and, recently, PISA¹⁷ which is a school but not curriculum based survey. The IEA¹⁸ survey on CIVICS¹⁹ could also be considered in the context of lifelong learning since it is an attempt to “measure citizenship”.
10. The present change of perspective, where lifelong learning is given more weight not only in the area of education but also in the areas of employment, economic growth, social exclusion etc is expected to change the perspective of analysis of most of the above mentioned sources. It will help unveiling hidden information that has not been exploited in the past since there was no policy need clearly expressed. Moreover, these sources may be modified in this new perspective to provide improved coverage of different aspects of LLL.
11. LLL, however, is not just a simple summing-up of traditional education programmes and modern learning opportunities. There are also fundamental differences in educational content and perspective: While traditional educational institutions have been (and still are) primarily concerned with transmitting knowledge, modern learning opportunities and the LLL approach put the emphasis on the development of individual capabilities and the capacity of the person to learn. At the heart of the LLL concept lies the idea of enabling and encouraging people “to learn how to learn”.
12. In this context, LLL implies a paradigm shift from the dominance of traditional education institutions to a diverse field of traditional and modern learning opportunities that are more process and outcome oriented as well as of a modular structure. At the same time, responsibility for education and learning shifts from the public (state) to non-governmental organisations as well as to the individuals themselves. In order to monitor and assess the implementation of a comprehensive LLL strategy (e.g., by providing an adequate institutional, financial and legal framework) there is a need for an analysis of current education and learning structures that is based on reliable and cross-country comparable data.
13. Lifelong learning is presently being given more weight not only in the policy area of education but also in areas of employment, economic growth and social exclusion. To monitor change in key learning activities and assess progress towards implementation of education, employment and social policies related to lifelong learning requires identification of appropriate indicators and production of comparable statistical measures. More specifically in the area of employment policy, the importance of education and training has been widely recognised in recent years. Education and training policy constitutes a major element in the European Employment Strategy, underpinning several Guidelines for implementation by the Member States. LLL is a key factor for addressing effectively the challenge of lifelong employability, for facing the increasing skills gap problem and for improving adaptability of the workforce. Several Guidelines and all the

National Action Plans of the Member States implementing these guidelines deal with education and training covering a broad range of educational domains in a framework linked to employment.

14. The Lisbon Summit shaped a long-term agenda for the European Union on a number of key employment issues and gave a very strong political signal for strengthening employment, economic reform and social cohesion in the context of the knowledge-based economy. In line with the Lisbon Summit conclusions, the education dimension of the Luxembourg process has been strengthened in order to make education and training (lifelong learning) the driving force for developing a more active employment policy. LLL, through employment guidelines 2001, has become a horizontal objective of the employment strategy. The specific guidelines are more focused and more specific commitments were made for developing comprehensive strategies in an integrated approach framework.
15. Commonly-agreed indicators and benchmarks in the field of employment had not been well developed when the Luxembourg process started in 1997. Explicit needs for indicators were expressed in policy debates and documents that are mentioned in subsection 1.1. However, in practice, it is difficult to grasp this concept in the form of a single synthetic indicator since it involves a large number of education and training activities over the different stages of learning across an individual's life span. In order to monitor the implementation of these guidelines, a number of empirical indicators on lifelong learning have been developed by the Employment Committee indicators group. Conceptually, these indicators are based on the broad definition discussed in the present report (subsection 2.1).

1.3 Emerging statistical needs

16. A statistical monitoring of LLL requires also taking into account relevant learning activities outside the formal education system such as self-directed learning, on-the job training etc. In the LLL frame, formal obstacles for access to education might be of less importance in the future. On the other hand, the volume of time and money that individuals are able and willing to invest for their own learning might be a central point. Hence, the **situation of the individual** within the broader social and economic context is of growing importance from a political as well as from a statistical point of view.
17. Today more information is needed on **the way people of all ages learn** in formal and non-formal settings but also through informal activities like self-learning. Skills may be acquired in several ways and it is essential to monitor acquisition, upgrading and renewal of skills – as well as skill erosion. We need to be able to assess the **societal outcomes of learning** (e.g. citizenship-related outcomes, environment, consumer protection) as well as the employment-related and personal outcomes in a wider sense (e.g. basic skills, employability, quality of life, economic well-being, physical and mental health, satisfaction). Notions like **motivation**, **expectations** and **satisfaction** are essential for lifelong learning, while personal investment in time and money is a major issue in the debate. The role and involvement of the different actors of learning provision (educational institutions, enterprises, NGOs, professional bodies, regional and local authorities, state and of course individuals) also need to be clarified.
18. The area of education and learning statistics seems to be overlapping in its non-formal and informal areas with statistics on time use, on culture (DG EAC and Eurostat in cooperation with UNESCO and the UN Economic Commission for Europe have progressed recently in the area of cultural statistics; Eurostat has produced a report on cultural statistics in the EU²⁰) as well as statistics on audiovisuals, Information Society and intangible investment in structural business statistics. As a market for education and training is taking shape, there is a need to collect information on the providers and the economics of providing teaching/training, the cost and availability of supply. Learning systems have remained substantially stable for several decades and have recently undergone radical changes. Effective policy-making requires monitoring and even anticipating these changes. These represent alternatives that would supplement the direct sources on LLL and require harmonised and ad-hoc approaches to make best use of them.
19. The whole effort should culminate in a set of indicators to be used for understanding monitoring lifelong learning. To be useful, the required set of indicators should take into account the following aspects:
 - Different levels and multiple settings (“formal and non formal” education and “informal learning”)
 - multiple data sources to provide the information needed for measurement

- agreement at the international level on methods, definitions and classifications for indicators on measuring education and learning

2. Definitions and classifications

2.1 Definition of lifelong learning

20. The European Union definition of lifelong learning has been adopted by the Commission and the Member States²¹. According to this lifelong learning is seen as:

encompassing all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence²².

21. The concept of lifelong learning, as defined here includes all learning activities:

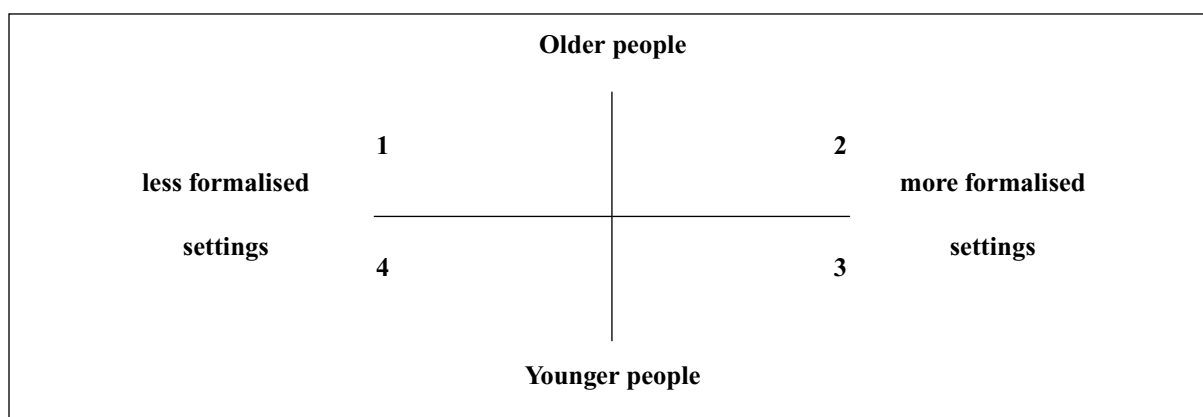
- that are purposeful, that is activities which are undertaken with the purpose of “improvement in behaviour, information, knowledge, understanding, attitude, values or skills”²³;
 - that are undertaken on an ongoing basis, which means that they are not incidental or random but have “the elements of duration and continuity”²⁴, in principle without any lower duration limits;
 - independent of whether they are formal or not; includes different types of learning like apprenticeships, second-chance schools, on-the job or off-the job education and training, self-learning etc;
 - independent of source of funding, that is funded either by the private sector, the public sector or the individual
 - independent of mode of provision (using traditional or modern means, such as Information and communication technologies)
22. This notion of learning also encompasses the entire population independent of age and independent of their labour market status. It includes in principle all kinds of activities ranging from early childhood education to leisure education for the retired persons.
23. The terms “knowledge, skills and competence” are not limited to work related outcomes of education and learning but also to societal and personal outcomes.

2.2 The ‘lifelong-lifewide framework’

24. Often the **time dimension**, highlighted already in the overall concept, has dominated the discussion of LLL. It underlines the important fact that learning activities occur in different phases over the lifespan. However, there is also a **lifewide dimension** to be recognised, which takes into account that learning takes place in a multitude of settings and situations in real life:

Figure 3.1 : The lifelong-lifewide framework’

Source: Adapted from National Agency for Education, Sweden: Lifelong learning - an indicator framework²⁵.



25. With respect to the time dimension of LLL (vertical axis) the sequence of different learning processes within the life cycle is of primary concern. The lifewide dimension (horizontal axis) refers to the different institutional and social settings in which learning takes place (*lifewide learning*).
26. Today, in the discussion of LLL the ‘lifelong-lifewide framework’ is gaining ground. Using it we may see for example that what may be called regular or school education is localised in quadrant 3 since it takes place in formal settings and the focus is on young people. However while the policy interest and the interest of the society in quadrant 3 but also quadrant 2 (which is what may be called continuing education and training in some countries) is already sufficiently present, activities in quadrants 1 and 4 are just starting to enter the policy discussion. This is an important issue since the main focus of education policy is changing and seems to be shifting for example from formal public education, which is highly regulated and to a large extent compulsory, to the other quadrants, representing more flexible learning activities.

2.3 Formal/non-formal education and informal learning

27. Different terms have been used in the discussion on education: regular education, formal education, non-formal education, non-formal learning, informal learning etc.
28. By **convention** we will discuss the issue of lifelong learning as it has been defined above using the terms
- formal education,
 - non-formal education and
 - informal learning
29. In the subsequent analysis of this report the term *education* will refer to formal and non-formal organised learning while the term *education and learning* will comprise formal, non-formal and informal learning.
30. According to the Glossary of the International Standard Classification of Education (ISCED97) formal education refers to “...the system of schools, colleges, universities and other formal educational institutions that normally constitutes a continuous ‘ladder’ of **full-time** education for children and young people, generally beginning at age five to seven and continuing up to 20 or 25 years old.” In some countries, however, these age limits need to be extended. Non-formal education, on the other hand, comprises “any organised and sustained educational activities that do not correspond exactly to the above definition of formal education. Non-formal education may therefore take place both within and outside educational institutions, and cater to persons of all ages.” Based on these definitions Hörner/ Ruß use the term *informal learning*, a notion never used as such in ISCED97, to refer to very different learning activities and/or situations that cannot be classified as formal or non-formal education. Informal learning activities are characterised by a relatively low level of organisation and may take place at the individual level (e.g. self-directed learning) as well as in groups of people (e.g., at the workplace or within the family). Some of these activities may be methods (for example, computer based learning modules or other structured learning material) that make them seem similar to a large extent to non-formal programmes while others, such as learning within the family or learning by visiting cultural events, may be very difficult to capture statistically.
31. The three different types of education and learning may then be distinguished using a set of criteria proposed for this reason in the 1996 UNESCO “Manual on Non Formal Education”, in the following table²⁶:

Table 3.1. Criteria for distinguishing the different types of education/learning

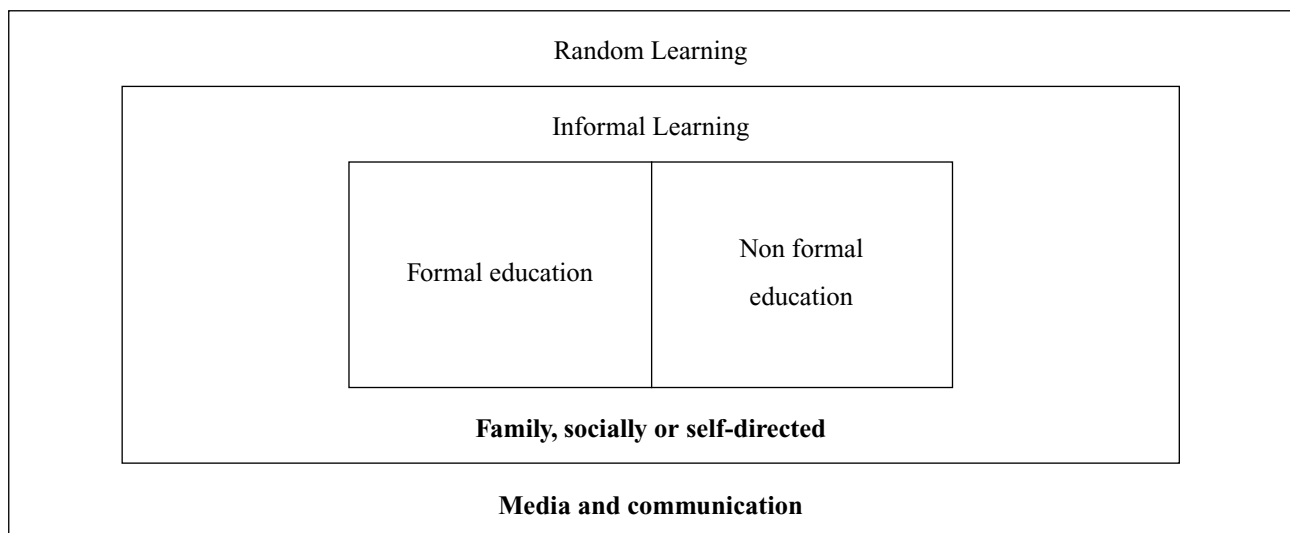
	Criterion	Formal	Non-Formal	Informal
(a)	Intentionality	x	x	x
(b)	Organisation	x	x	
(c)	institutional framework and location	x	x	
(d)	hierarchy level-grade structure	x		
(e)	admission requirements	x		
(f)	Registration	x		
(g)	teaching/learning methods (predetermined/not flexible)	x		
(h)	duration (regular school year) and scheduling	x		

32. Applying the above criteria the 3 types of education and learning can be defined as follows:

- **Formal education** can be characterised as intentionally organised learning events, with regular fixed duration and schedule, structured hierarchically with chronological succession of levels and grades, admission requirements and formal registration, held within established educational institutions and using pre-determined pedagogical organisation, contents, methods and teaching/learning materials.
 - **Non-formal education** refers again to intentionally organised learning events, which take place in an institutional setting but do not fulfil one or more of the conditions (d) to (h) above. The existence of an institutional setting involving a teacher and a learner (independent of the means and spatial and temporal proximity of the involvement of these persons) and the possibility to apply the notion of educational programme, which implies planning the activity in advance, are the common characteristics of what is called in this report (formal or non-formal) “**education**”.
 - **Informal learning** on the other hand is generally intentional but it is less organised and less structured learning and may include for example learning events (activities) that occur in the family, in the work place, and in the daily life of every person, on a self-directed, family-directed or socially directed basis.
33. Figure 2.2 represents the whole scope of education and learning. This includes also “random” which is called sometimes also incidental learning, because it does not have the element of intent. This type of learning is outside the scope of this report on the basis of the LLL definition mentioned under 2.1.

Figure 2.2 : The Scope of education and learning

Source: UNESCO (1996): Manual for Statistics on non-formal education, Paris 1996.



34. On the basis of the above definitions certain similarities in the statistical tools to be used for covering formal and non-formal education may be identified:

- **ISCED97**, which is a programme based classification, may be used for classifying both formal and non-formal educational activities in terms of levels and fields of education and training. ISCED though needs to be further developed if it is to be used for non-formal education. The **Classification on Training Provisions** developed by Brandsma/Kornelius under a Leonardo da Vinci project²⁷ may be used to cover also other aspects of formal and non-formal education and training (providers, financial arrangements, modes of delivery).
 - The fact that there is usually an institutional setting makes possible in principle the use of administrative sources for collecting some information on education. However, the fact that these areas need to be approached differently from a policy perspective (since they involve different types of actors and pursue different objectives) means that they must be clearly distinguished when data is collected from a single source e.g. the UOE data collection²⁸.
35. The situation concerning informal learning activities is even less clear. In this area there is practically no information at international level, while only a few countries in the world have tried to cover it in the past. There certainly seems to be a need for the development of specific **classifications of non-formal and in-**

formal learning activities. This would make it possible to cover the whole range of learning using the ESS sources. The development of such classifications should take into account:

- the **ISCED97** classification of **fields** of education and training
 - the revision of the **NACE/CPA**²⁹ classifications
 - the development of the education part of a **Time Use Survey** classification
36. Ideally, this developmental work would result in improvements to the coverage of learning activities (in particular of non-formal education and informal learning) in all the above-mentioned classifications (and particularly ISCED). This would improve the potential of the statistical sources using these classifications to cover more aspects of lifelong learning.
 37. **This classification of learning activities** is the tool needed to be able to measure the time and money spent/invested in learning, two issues which will be of central policy interest in the framework of lifelong learning. An idea that has been proposed explicitly by both Hörner/Ruß³⁰ and Borkowsky³¹ is to use time as the unifying dimension that would allow us to combine information coming from different sources but also to combine information on all 3 types of learning. For example the time dimension should be included also in the study of formal education, by collecting information for example on *average learning time in formal education*. A decision to develop classifications of learning activities would have repercussions on different areas of work of the ESS.
 38. **Time Use Surveys (TUS)** could be used for measuring personal time investment in learning, as also proposed by Hörner/Ruß. It is not possible to implement this idea at this stage for the harmonised European TUS, since it has been launched in spring 2000; it is impossible to distinguish learning activities on the basis of the classification of activities used for the current EU-TUS (see annex). Nevertheless the possibility of using TUS at a later stage should also be taken into account in the development of a classification of learning activities.
 39. The personal financial investment in learning (cost) could also be dealt with (probably in the long run) through the **Household Budget Surveys (HBS)**. In this case too, a classification of learning activities could be the starting point for collecting the required information, although a lot depends on the level of aggregation to be used in the surveys.
 40. The inclusion of certain **cultural** activities is an additional element. Eurostat is currently developing the area of cultural statistics in cooperation with UNESCO and the Member States and the work done in this area should also be taken into account when discussing a classification of learning activities.
 41. Intangible investment in enterprises (where knowledge/learning should be included) and the future development of this area under **Structural Business Statistics** within the ESS are other important arguments in favour of developing a classification of learning activities. These activities may provide the link for measuring return to investment in learning by enterprises, both for the individuals and through them for the enterprise, while it would contribute to the discussion on general returns to education and learning.
 42. This classification should also be taken into account in the development of subsequent **Continuing Vocational Training Surveys**. The definition of training activities is already rather broad in CVTS2 (2000) where less structured forms like conferences, job rotation, on-the-job training and self-study are included. An additional improvement, however, would be the inclusion of valuable information concerning the age of participants in a subsequent CVTS.
 43. An opportunity to test a first harmonised list of learning activities, that could lead in the longer run to a classification of learning activities, will be given in the **2003 EU Labour Force Survey ad hoc module on lifelong learning**. The development of this module, which is expected to cover mainly employment related aspects of LLL, might be considered as the first step towards measuring lifelong learning.
 44. Although the need to always distinguish clearly the three types of learning (formal education, non-formal education and informal learning) is not accepted by everybody and in all contexts, the conventions and classifications/typologies proposed offer a selection of approaches best suited to each situation without losing comparability between sources, as far as possible.

3. Sources

3.1 Types of statistical sources

45. The first column of the following table presents the principal data channels for collecting information on education and learning. In the second column of the table are indicated the existing ESS sources, which correspond to each type of data channel; more information on these ESS sources is provided in subsection 3.2³².

Table 3.2: Data channels Adapted from the UNESCO Manual on NFE statistics

Data collection/Survey type	ESS survey
Census of formal/non-formal agencies, institutions and programmes	UOE, VET
Sample survey of the general population and/or the labour force using household and labour force surveys	LFS, ECHP
Sample survey of current and past learners	-
Sample survey of teachers of formal/non-formal programmes	-
Sample survey of formal/non-formal programme organisers/personnel	-
Sample survey of employers	CVTS
Sample survey of community leaders	-
Registers	-

Stratified sample surveys may be organised to cover the whole population, or subgroups with specific social-economic-cultural backgrounds. It is particularly important to make use of **existing national household surveys**, labour force surveys, and other regular data collection mechanisms, by introducing additional enquiries regarding past, current and planned participation of the population in learning activities.

46. Borkowsky distinguishes three types of sources: (a) individuals, (b) education and training providers (“institutions”) and (c) enterprises. Enterprises have a dual role to play since they may be providers or buyers of education and training. The following synoptic table proposed in the same document gives an overview of the data sources and the types of information to be gathered from each source. The number of XXs is used to indicate the degree of appropriateness of each source.
47. Employers can provide unique information on investment in training and its perceived effectiveness. A CEDEFOP project on effectiveness of training indicators formulated some questions to assess the perceptions of employers. Such indicators could be produced as part of enterprise surveys like CVTS, using specific ‘modules’; questions could focus on perceptions of employers and the extent to which the following outcomes can be attributed/related to training:
- staff retention,
 - improved productivity,
 - increased profits,
 - improved management skills,
 - decrease in staff absenteeism,
 - improved adaptability of work force,
 - improved job-related knowledge,
 - improved problem solving capacities of employees,
 - facilitated innovation,
 - improved personal/social skills of workforce [only where this was an objective] [e.g. team work – to be expanded at a later date].

Table 3.3: Overview of data sources and types of information to be gathered from each source

Information	Data source and reported statistical unit			
	Individual: Participants and Enrolments	Providers: Enrolments	Enterprise = provider: Enrolments by employees	Enterprise = buyer: Enrolments by employees
<i>Characteristics of participants/enrolments</i>				
Basic socio-demographic data (gender, age)	XXXX	XXXX	XXXX	XXXX
Labour market status	XXXX		XXXX	XXXX
Complex socio-demographic data	XXXX			
Subjective data	XXXX			
Number of events	XXX	XXXX	XXXX	XXXX
<i>Characteristics of each activity</i>				
Content	XX	XXXX	XXXX	XXX
Place in national education system	X	XXXX	X	
Volume	XXXX	XXXX	XXXX	XXXX
Motivation	XXXX	XXX	XXXX	XXXX
<i>Characteristics of provision</i>				
Type of provider	XXX	XXXX	XXXX	XX
Personnel		XXXX	XXXX	
Expenditures		XXXX	XXXX	XXXX
Opportunity costs			XXXX	XXXX
<i>Characteristics of workplace of participants or persons enrolled</i>				
Enterprise (size, industry)	XXX		XXXX	XXXX
Skill demands	X		XXXX	XXXX
CET policy			XXXX	XXXX

48. Let us go back to the conventional distinction between formal education, non-formal education and informal learning. Table 3.4 represents schematically the sources (individual vs. institution/provider) and the classifications (on the basis of the relevant discussion in section 2 on “definitions and classifications”) that may be used for collecting information on education and learning. :

Table 3.4: Sources and classifications

		formal/non-formal education	informal learning
Sources	Individual	✓	✓
	Institution	✓	-
Classifications	ISCED97		
	levels of education	✓	-
	ISCED97		
	Fields of education and training	✓	✓
	Classification of Training Provisions	✓	(✓)
	Informal Learning activities	-	✓

✓: to be used, (✓) may be possible to use, - cannot be used in its current form

49. The clear conclusion from Tables 3.3 and 3.4 is that the **best source of information for lifelong learning is the individual**. At European level and within the ESS such a survey would take the form of a harmonised household learning survey. This idea is discussed in the next section. A complementary source of information could also be a survey of individuals in institutions (school survey, survey of employees, survey of teachers etc) but this has not been tried so far within the ESS. Nevertheless such a possibility should not be excluded.

3.2 Existing ESS sources and possible improvements

50. Although lifelong learning has been present in the policy discussion for almost thirty years now, the focus of policy making and consequently of statistics and indicators produced to support it was on the logistics of the education and training systems and on the labour force. The following gives a quick overview of what exists in terms of sufficiently comparable statistics and indicators from ESS sources and proposes several improvements to them.

a) Education (joint UOE (UNESCO-OECD-Eurostat) questionnaire)

Type : administrative data collection (annual)

Statistics collected/reported:

- Number of participants (age, sex, citizenship) by level and field of education, vocational or general orientation, region
- Number of entrants
- Number of participants taught foreign languages in school
- Number of teachers (age, sex) by level of education
- Expenditure on education

Possible improvements:

51. The statistical data currently available (and their analysis) are based on the following traditional model, which reflects what is understood under the term “regular education”: **Teachers** working for *instructional educational institutions* teaching **students enrolled** for a continuous period in these institutions to attend specific *programmes* which they will **complete** and become **graduates** and holders of qualifications. This sequential ladder model will need to be modified to include developments such as interruptions, modular programmes and open/distance learning. The latter is an interesting example. Open and distance learning is one of the more modern means of education in this field. It offers opportunities, which are not restricted by geographical distance, or by time. The same is true with respect to most of what is called informal learning. Digital networks, in particular, allow for a high level of independence concerning time and space (e.g., Computer Based Training – CBT, Internet Based Training - IBT, Tele Learning). The growing flexibility of distance learning, which is possible because of progress in modern information and communication technologies, leads to an integration of non-formal and informal learning in this area. Hence, in some cases, a strict differentiation between the two might be difficult. In any case, indicators for measuring the influence of ICT in education have still to be developed to cover increasing demand.
52. Furthermore, the way to implement the notions of formal and non-formal education should be clearly defined and identified (this is the issue of the coverage of the UOE data collection). Data on formal education on the one hand and non-formal education (which in this case mostly corresponds to what is often called adult education) on the other should be reported and presented separately. This may also imply modifying the way the UOE questionnaire and data collection are organised, after defining clearly the coverage of the separate parts.
53. The operational use of definitions of *early childhood programmes* should be improved. UOE seems to be the only source available in the short to medium term for this information.
54. Data comparability on *expenditure on education* should be improved both in terms of general coverage and in terms of elements reported. National accounts systems and the classifications used should be adapted to the need for more detailed, comparable and reliable information on expenditure on education. This infor-

mation should be combined with information from other sources (e.g. Household Budget Surveys). The issue of defining the coverage/scope of the UOE data collection also influences the part on finance.

55. The UOE data collection includes, on top of the joint questionnaire, several tables specific to the EU Member States, which may be used to complement information on specific subjects. Currently these tables are used to collect regional information and information on foreign language learning.

Limitation:

56. It is not possible to capture all non-formal education using administrative/institutional sources. These source should be considered as complementary to information coming from individuals.

b) Initial vocational education and training (Eurostat VET data collection)

Type: administrative data collection (annual)

Statistics and indicators:

- Number of participants (age, sex) by level and field of education
- Access requirements
- Continuation possibilities
- Contact with workplace during training
- Percentage of apprentices³³
- Number of teachers

Possible improvements:

57. The main challenge is to combine the VET data with UOE data so as to focus even more on issues that are specific to initial vocational training. The possibilities of using VET data in combination with data coming from LFS or collected in the Labour Market Policies database should be further explored.

Limitation:

58. It is has not been possible up to now to assess the employment possibilities opened for VET participants or to what extent VET participants take advantage of the continuation possibilities offered by the programmes they participate in.

c) Continuing Vocational Training in enterprises (CVTS)

Type: sample survey in enterprise (ad hoc - last one: 2000)

Reported variables:

Enterprises

- Enterprises and trainees by type of training provided
- Enterprises with/without a training plan providing/not providing CVT

Employees/ Participants

- Employees by gender working for trainers/non-trainers
- Employees and rate of access in CVT courses by gender
- Total number of participants

Hours

- Total hours worked and hours per employee by gender
- Hours worked and hours for training in CVT courses by gender – training hours per 1000 hours worked
- Hours spent in CVT courses and participants by gender – training hours per participant

Costs

- Direct and indirect labour costs of trainers³⁴ and non-trainers, training costs of trainers.
- Labour costs of trainers and non-trainers – labour costs per employee

Improvement proposed:

59. More information on the opinion of employers on the efficiency of training is needed as well as more information on the way training is organised/planned. A classification of training/learning activities is needed to improve the detail on types of training. In subsequent CVTS, information on the age structure of participants should also be collected.

Limitations:

60. CVTS is a relatively heavy and costly survey and each question that is added increases the burden on enterprises and countries.

d) EU Labour Force Survey (LFS)

Type: household sample survey (quarterly since 1999)

Participation in education and training by level and type

Educational attainment of the population

All information may be broken down by age, sex, labour market status, occupation, region, educational attainment of parents

Improvement proposed:

61. LFS is a long established survey and the main reference for employment related issues. A major improvement would be to add information on the field of education and training as well as on the social and economic background of parents.

The possibility to include ad-hoc modules should be used as much as possible. Already a module on transition from education to work has been included in 2000 (and may be repeated in 2004) while a module on lifelong learning will be developed in 2001 and will be included in the 2003 LFS. The experience gained from the LFS ad-hoc module and other similar activities like the Continuing Education and Training module that is under development in Network B of OECD should be fed into the revision of the LFS core questions on education and training but also of the existing “Eurostat standard module on education and training for use in European Harmonised Surveys”³⁵ in a lifelong learning perspective.

Limitations:

62. The focus is on employment and unemployment issues and thus the questions on education and training are more of a complementary nature.
63. Questions cannot be very detailed since the respondent is reporting also on other members of the household (proxy interview)

e) European Communities Household Panel (ECHP)

Type: panel sample survey (annual)

64. The ECHP has not been used extensively so far. The data collected under its’ current form may be used for measuring the societal and personal outcomes of education and learning, although the freedom for crossing variables is limited because of the limited sample size.

Proposed improvement:

65. The ECHP is under revision. The new ECHP will start most probably in 2003 and it is quite open to new questions; there is the intention to include some questions on education, a small number of questions on training and to ask for more detailed information on education and training in a specific ad-hoc module to be added for one year. The overall main focus of the future ECHP will be on living conditions and social exclusion. Since one of the key areas of the discussion on LLL is its contribution to active citizenship and social inclusion, the new ECHP may be used for issues relating education and learning to social exclusion problems.

Limitations:

66. For the time being there are no plans to extend the geographical coverage of ECHP to candidate countries.
67. The ECHP is a relatively new survey and the amount of data analysis, particularly in the field of education and learning, is rather limited

68. The sample size of ECHP is small compared to LFS. It should only be used as a source when information is not available from other sources (in particular LFS).

EU-SILC : The successor of the household panel (2003)

69. The new ECHP, called EU-SILC (EU Statistics on income and living conditions) is to be implemented after 2002. This is to be developed on the basis of (a) Future users' needs, (b) European Community Household Panel (ECHP) previous experience, (c) Harmonisation of concepts and variables. The instrument :
- will give priority to high quality cross-sectional data,
 - will have a limited longitudinal dimension centred on income and some social exclusion indicators while
 - timeliness will be a priority.
70. The EU-SILC should become the EU reference source for income and Social Exclusion. A regulation is planned for EU-SILC, but it should remain flexible using as much as possible existing national surveys / registers. Education and basic training, lifelong learning information, language skills, Information and Communication Technology use and self-reported skills are to be included in the core of the survey. An ad hoc module with detailed information on training could be added to the survey in regular intervals (for example every 3 years).

4. New approach

4.1 The learner in the centre

71. As already mentioned above, the focus of LLL is on the individual, i.e. the learner himself/herself. However, the **risk** of moving away from the old discourse of education to the new one of learning should be pointed out. That is why both formal and non-formal education (intentional and organised) and intentional informal learning³⁶ should be taken into account and the information collected up to now for the educational system, possibly with certain improvements to accommodate the need for a lifelong learning perspective, should not be undervalued.
72. Which questions are relevant to lifelong education and learning under this perspective? The following list presents some of them:
- What kind of educational programmes or learning activities are available? Where? When? For whom?
 - Who are the organisers/providers/sellers/buyers of educational programmes and learning activities?
 - Who are the learners? (sex, age group, socio-economic profile, preferences)
 - How do they participate in education and learning activities? (access, completion, learning)
 - What is the impact (outcomes) of participation on education and learning activities on the individual labour market situation, status, career and citizenship?
 - Why are potential learners not participating in education and learning?
73. In addition, there is the need for information on the adequacy of human, financial and material resource inputs into education and learning and their use for attaining the learning objectives in both quantitative and qualitative terms. System-based data should be complemented/enriched by **learner-centred** data that also takes formal, non-formal and (intentional) informal learning needs into account. To cover most of the issues raised in the previous paragraphs for which gaps exist, the ideal approach seems to be a **dedicated lifelong learning survey**. Several alternative sources could also be used to cover LLL in all its dimensions.

4.2 Developing a European adult education survey

74. Building on the experience gained from the development of the 2003 LFS ad hoc module on LLL as well as on similar and parallel work at the international level³⁷, the next step towards a lifelong learning survey is a harmonised **adult education survey**. The target group of such a survey would be the **16+ year olds** and the reference time should be one year. Questions on learning activities of even younger people (going down to early childhood) might be added at a later stage with a view to having a fully fledged lifelong learning survey that will capture learning across the whole life cycle. The proposed EU-AES would include information on the following aspects (transversal for formal and non-formal education and informal learning):

ON THE INDIVIDUAL

Demographic data

Age, sex, nationality/citizenship/ethnicity/ main residence,

Educational and social profile

family situation (work, children, caring)

educational attainment (level and field of education and training),

educational background of the parents

disability (physical, mental)

Labour market information

labour status (employed, unemployed, inactive, self-employed, voluntary work)

current/last job (including occupational category)

employer/enterprise (NACE sector, size)

income

Other personal information

Self reported basic Skills (*digital literacy and ICT familiarity, foreign language skills*)

Social/Civic Participation

PARTICIPATION/ACCESS

Incidence

participation (number of events)

Volume

time spent in education and learning (volume) within working hours/beyond working hours

Unmet demand

perceived personal demand (needs and interests)

Access/obstacles/equity

perceived obstacles to participation

transparency of learning offer (information and advice/guidance)

CHARACTERISTICS OF EACH ACTIVITY

Content

type of learning activity, field of study, purpose/aim

Place in national education system (for formal/non formal education)

Recognition of learning outcomes

Volume duration

Characteristics of provision

Type of provider

subjective evaluation of activity

perceived motives (job-related, societal, personal)

perceived benefits (job-related, societal, personal)

financing

source of financial support (public, employer, individual learner)

75. In order to implement this approach, some methodological tools need to be developed: a specific classification of learning activities (which should take into account inter alia the existing classifications of fields of education and training³⁸, the classifications of economic activities revised to cover educational goods and services³⁹ the education classifications for use in Time Use Surveys as well as the Classification of training provision developed under a Leonardo I project⁴⁰); a typology of obstacles to learning and a typology of expected outcomes (job-related, societal and personal).
76. The EU-LLLS should be designed in a way that would allow for the study of different population groups (educationally and socially disadvantaged persons, young people etc). It should also be possible to identify different types of socio-economic background taking into account the work on the European Socio-Economic Classification.
77. An ideal design of such a survey would be to conceive it as a **chain of interrelated modules** that can be developed gradually as ad hoc or standard modules locked into suitable existing surveys. Although this sounds a sensible approach, its implementation in practice is a very complex issue and the feasibility of this solution should be proven before launching the ESS in such an scenario. Already the LFS 2003 ad-hoc module on LLL, which could be the first link in the chain, will provide the opportunity to develop the necessary methods and test some of the concepts and definitions.
78. **Time** may be used as a unifying dimension, also in the adult education survey, to measure the importance given by people to learning in their life. However the time invested in a learning activity will not give us any information on the quality or the outcomes of this learning activity, an aspect that should not be overlooked⁴¹.

4.3. Information on investment in human resources

79. To obtain more information on investment in human resource development, both in terms of time and in terms of financial resources, the following should also be done:
 - harmonised information on time investment on learning by individuals (for example through Time Use Survey); this information needs to be combined with contextual information on working arrangements, child-care facilities etc. with a view to assessing the obstacles to learning in terms of time availability;
 - harmonised information on household expenditure on educational services and products through Household Budget Surveys;
 - change the treatment of public spending on education in public sector accounts and treat it as capital, not current expenditure; development of satellite accounts on education covering more than spending in formal education; inclusion in the analysis of expenditure on “LLL infrastructure” (e.g. communication networks and learning centres);
 - investment in human resource development (Structural Business Survey, Labour Cost Survey); investment by enterprises in training should be considered as intangible investment and be given equal treatment, also in statistics, as capital investment;
 - improve the coverage of education as an economic activity in Business and Information Society statistics so as to evaluate the offer of educational services and products and their market value (content development, guidance services, educational material production etc).

4.4 Alternative sources

80. Additional alternative sources could also be used. The inclusion of **cultural** statistics modules should be considered (currently under development by Eurostat in cooperation with DG Education and Culture, UNESCO and Member States) covering different types of activities like educational audiovisuals, educational travel, cultural experience etc.
81. Use could also be made of the administrative structures that are put in place for the implementation of the European Union strategy on lifelong learning. Such structures should include already in their conception an **in-built statistical analysis component** that would be used for monitoring and evaluating progress made towards their predefined targets and would make possible the collection of information and statistical data at the source. The **Eurobarometer** could also be a useful source, in particular for all subjective data in cases where there is no other statistical source available. This tool, although it is an opinion poll and

not a statistical survey, could probably also be used to test the formulation or sequence of rather subjective questions (for example on unmet demand for learning where the source is the individual) before launching a pilot or a full scale survey.

82. Some of these developments are clearly long-term objectives. On the basis of the needs for policy making the developments needed should be put in a priority order, starting with those that can improve existing tools.

5. Conclusions and recommendations

83. Although some statistical information exists already on LLL, there are still important gaps, which are highlighted by every step made towards the development of a concrete policy. The notion of lifelong learning is vast and to study it requires a clear identification of the themes that need to be explored as a priority. We should also recognise that certain aspects are not measurable. Statistical information must be complemented by contextual information so as improve our understanding and information on the process of learning and its outcomes should be related to the best policies. It is important to reach agreement on the priorities for lifelong learning and discuss their operationalisation in terms of statistical needs. Once this process is under way, benchmarks can be set to evaluate progress towards clearly set targets.^{42xix}

5.1 Conclusions

The TFMLLL has drawn the following conclusions:

- 1) LLL is a vast notion so measuring should be focused on clearly delimited areas of policy interest, for example, adult education, second chance schools, formal education and lifelong learning, continuing training for disadvantaged groups, early childhood education etc.
- 2) The full potential of existing ESS sources has to be explored; they will have to be reviewed and if necessary revised from a lifelong learning perspective.
- 3) Investment in learning both in terms of money and time should be measured . However additional information is needed to assess the quality of lifelong learning.
- 4) New classifications/typologies are needed to cover the emerging needs. For example a classification of learning activities that would include informal learning seems necessary.
- 5) The best source of information on LLL seems to be the individual and the best solution to cover most of the information needs seems to be a dedicated harmonised household lifelong learning survey. The next step towards this survey would be an European Adult Education Survey. The cost-effectiveness of this solution should be carefully assessed.
- 6) The present report does not examine issues like the direct assessment of skills or specific types of surveys (for example youth surveys, early school-leaver surveys, school surveys etc), since Eurostat is not involved in such activities at international level for the time being. Nevertheless these activities may be possibilities to examine in the longer run for the European Statistical System.

5.2 Recommendations – next steps

The following action plan is proposed for the ESS.

A: LFS

1: Development of the LFS 2003 ad hoc module on lifelong learning (2001)

First priority for the year 2001 is the development of the *LFS 2003 ad hoc module on lifelong learning*. In the context of the preparation of this module harmonised lists of learning activities and obstacles to access to LLL opportunities should be developed.

2: Revision of LFS core questions on education and training (2002)

The lessons learnt from the development of this module should be used to re-evaluate and improve the standard education and training questions included in LFS.

Remark: A major actor in the implementation of the above actions will be the subgroup of the education and training statistics working group focusing on “Education in LFS” (LFS-E). The needs in terms

of indicators are to be defined in consultation with expert groups on indicators such as the Employment Committee indicators group (DG Employment).

B: The European Community Household Panel and its successor (2000-2001)

1. ECHP 1993-2002)

Calculation of indicators and evaluation of the questions related to education and training that are already included in the current ECHP; analysis, mistakes and lessons learned for future surveys

2. EU Survey on Income and Living Conditions (EU-SILC)

The inclusion of questions on education and learning in the new European Community Household Panel should allow the evaluation of personal and societal outcomes of learning. The new Panel should be launched in 2003.

C: Review of existing administrative sources from a lifelong learning perspective(2001)

1: UOE

The main issue in this context for the UOE is the clarification of its coverage and its capacity to collect information on flexible forms of education (modular programmes, open and distance learning etc).

Remark: Decisions on this issue should be adopted by all three international organisations and their Member countries. A major actor in this discussion on behalf of the ESS will be the UOE subgroup of the Education and training statistics working group.

2: VET

For VET the positioning of VET information in the lifelong learning framework (including conciliation of results with UOE, LFS, CVTS results) should be studied.

Remark: A proposal on the future use of VET will be prepared by the end of 2000. This will be discussed with the members of the VET subgroup and with CEDEFOP and the data collection will be resituated in the LLL framework.

D. Classification of learning activities(2001-2002)

A classification of learning activities which would include informal learning should be developed. Such a decision should be taken by the Statistical Programme Committee. The possibility to include cultural activities in this classification should be explored. In the meantime a harmonised list of activities to be used in different ESS surveys should be developed.

E. Continuing Vocational Training Survey (2001-2002)

Evaluation and analysis of CVTS2 data with a view to improve the content of subsequent CVT surveys by taking into account current needs in the area of continuing vocational training in enterprises.

F. European Adult Education Survey(2002)

The design of a European adult education questionnaire to be used in a European survey should be considered as a medium to long term. The need and feasibility for such a survey should be assessed by the Statistical Programme Committee. A proposal will be developed in 2002 taking into account the development of the LFS ad hoc module on LLL, the CET module developed by OECD INES Network B in cooperation with Eurostat and the development of the education part of the EU-SILC.

G. Explore other ESS sources.(2001-)

The possibility of including more explicitly education and training in other Eurostat areas like the Time Use Survey or the Structural Business Survey should be explored. No precise timetable can be given since the timing depends on the work programmes of Eurostat in other areas and the priority given in those contexts to education and training.

The actions above are presented in order of priority for the next 2 years (2001-2002):

February 2001-June 2001

A1: Development of the LFS 2003 ad hoc module on lifelong learning (2001)

C2: VET - review

G. Explore other ESS sources.(2001-)

July 2001-December 2001

A1: Development of the LFS 2003 ad hoc module on lifelong learning (2001)

B2. EU Survey on Income and Living Conditions (EU-SILC)

C1: UOE - review
C2: VET - review
B1.ECHP (1993-2002)
G. Explore other ESS sources.(2001-)

January 2002 - December 2002

A2: Revision of LFS core questions on education (2002)
C1: UOE - review
E. Continuing Vocational Training Survey (2001-2002) recommendations for future
F. European Adult education survey(2002)
G. Explore other ESS sources.(2001-)

5.3 The ultimate goal: establishing an integrated statistical information system

84. It has been suggested on several occasions that an integrated system for monitoring is needed. This has been the objective of a project under the Leonardo da Vinci I programme (System of Education and Training Accounts – SETA); the conclusions of the SETA project are available on the internet⁴³. The project examined the possibility of combining information coming from different sources on participation. The final report suggests some ways to compile data for each country and it does not provide a universal solution although some methodological hints are given. The results of this project have to be re-evaluated on the basis of the implementation of ISCED97 in both institutional data collections and household surveys, the new LFS questionnaire and the CVTS2 methods.
85. An “integrated system of statistics on continuing education and training”⁴⁴ or a “CET account” is also proposed by Borkowsky. In this system “the basic unit would be the hour of participation and the main source would be the individual”. These notions refer to sample household surveys and panel surveys. A problem in this case may be the missing coverage, since younger persons and older persons living in institutions are usually not covered, although the population covered is usually 16-64 year olds. The solution proposed is a standard CET module to be added in vehicle surveys, which would be designed to provide internationally comparable data for **key indicators** on CET, including the level of CET participation, the intensity (duration) of participation, providers of CET, incentives and barriers to participation, and important types of participation (such as formal versus informal, required versus voluntary).
86. For Eurostat the ultimate goal of the attempt to measure lifelong learning is to create an integrated **European Statistical Information System** (ESIS) on education and learning. This should make it possible to combine information coming from different sources so as to shed light on different aspects of LLL. Statistical information must always be complemented by contextual information so as to improve our understanding and information on the process of learning and its outcomes should be related to the best policies.
87. Some of the developments discussed below are clearly long-term objectives. On the basis of the needs for policy making the developments needed should be put in a priority order, starting with those that can improve existing tools. The aim should be to combine the interests and needs of the different stakeholders involved in implementing LLL in a way that would allow an appropriate portrayal and monitoring of what is undeniably a complex reality.

List of members of the task force on measuring lifelong learning

Experts from Member States

Germany	Mr Walter Hörner (<i>Statistisches Bundesamt</i>) Mr Rainer Wilhelm (<i>Statistisches Bundesamt</i>)
Netherlands	Mr Dick Takkenberg (<i>Centraal Bureau voor de Statistiek</i>) Mr Max van Herpen (<i>Centraal Bureau voor de Statistiek</i>)
Portugal	Mr Vitor Cabeço (<i>Ministério da Educação – DAPP</i>)
Finland	Ms Irja Blomqvist (<i>Statistics Finland</i>) Mr Hannu Virtanen (<i>Statistics Finland</i>)
United Kingdom	Mr Peter Vallely (<i>Department for Education and Employment</i>) Mr Tim Thair (<i>Department for Education and Employment</i>)

Invited experts

Ms Anna Borkowsky	Federal Statistical Office - Switzerland
Mr Karsten Kuehl	Statistics Denmark
Mr Eivind Hoffmann	International Labour Office

CEDEFOP

Ms Pascaline Descy

Eurydice European Unit

Ms Patricia Wastiau-Schlüter

CEIES

Ms Ineke Stoop

UNESCO Institute for Statistics (UIS)

Mr S.K.Chu

OECD

Mr Jean-Luc Heller

European Commission

DG Education and Culture

Ms Lynne Chisholm

Mr Ettore Marchetti

DG Employment

Mr Yannis Drymoussis

DG Research

Ms Godelieve Van den Brande

Eurostat

Mr Michail Skaliotis

Mr Spyridon Pilos

Mr Joaquim Silva Pereira

Mr Alois Van Bastelaer

Ms Anne-France Mossoux

End notes

¹ Articles 149 and 150 of the Amsterdam Treaty

² The ESS is a network made up of all the government bodies which, at the various levels - regional, national and Community - are responsible for drawing up, processing and disseminating the statistical information needed for the economic and social life of the Community. The education section of the ESS includes not only the fifteen Member States of the EU but also the remaining EFTA countries, the pre-accession countries of Central and Eastern Europe as well as South-East European countries. The Community focal point for the European Statistical System is Eurostat, the Statistical Office of the European Communities.

³ Every year the Commission drafts a report on the progress on employment guidelines on the basis of national reports. The JER 2000 and Guidelines for 2001 make explicit reference to the need to develop indicators, in particular in lifelong learning.

⁴ <http://europa.eu.int/comm/education/lifeindex.html>

⁵ The Conclusions of the special European Council meeting on 23-24 March 2000 in Lisbon call (para 36) for structural indicators to be provided in annual Synthesis Reports.

⁶ COM (2000) 48 http://europa.eu.int/comm/employment_social/soc-dial/info_soc/news/en.pdf

⁷ COM (2000) 318 final « eLearning : Designing tomorrow's education »

⁸ The new 'European Report on Quality Indicators in Education', requested by Ministers of 26 European countries in Prague in 1998, presents sixteen indicators relating to the quality of educational systems from 26 European countries. The report is intended to act as a starting point for discussions for assisting national evaluation of school standards across Europe. It can be found at: <http://europa.eu.int/comm/education/indic/rapinen.pdf>

⁹ Annual joint UNESCO-OECD-Eurostat data collection of statistics on students, teachers, graduates, expenditure; main focus is the regular education system

¹⁰ Annual Eurostat data collection of statistical and contextual information on initial vocational education and training; includes information on apprenticeship training, financial arrangements and work-based programmes

¹¹ The Community Labour Force Survey is a quarterly harmonised sample survey on the situation of the labour force in Europe; it is one of the main instruments for measuring participation in education and training and educational attainment of the adult population (15-year-olds and above). The questions on participation in education have recently been updated.

¹² The European Community Household Panel is an annual survey that collects data from the same group of people (that is the panel) allowing for a longitudinal analysis of their characteristics; the main problem is that the sample is very small so a lot of the information on education, attitudes and social situation cannot be combined to a great level of detail.

¹³ Continuing Vocational Training Survey is an ad-hoc Eurostat Survey held twice (in 1994 and 2000); it collects information from enterprises on the training they provide to their employees

¹⁴ Household Budget Survey is an annual Eurostat survey; the level of detail of educational expenditure does not permit detailed analysis of results

¹⁵ The International Adult Literacy Survey has been held between 1994 and 1998 at least once in a number of countries. Data have been published by Statistics Canada and OECD.

¹⁶ The Third International Mathematics and Science Survey was a school based survey of the International Association for Educational Assessment (IEA- to check) in (to be completed). A TIMSS repeat is under preparation.

¹⁷ The Programme for International Student Assessment is held for the first time in 2000; it is an OECD-led school based survey that will be repeated in 2003 and 2006; all EU Member States participate in PISA in 2000..

¹⁸ International Association for the Evaluation of Educational Achievement (IEA: <http://www.iea.nl/>)

¹⁹ http://www2.hu-berlin.de/empir_bf/iea_e.html

²⁰ Final report of the Leadership Group (LEG) on cultural statistics http://forum.europa.eu.int/Public/irc/dsis/cvts/library?l=/cultural_statistics/final_report/final_report&vm=detailed&sb=Title

²¹ See Employment Guidelines 2001 and Report to the Cologne Council "Common indicators for monitoring Guidelines", Council doc 8745/1/99 rev1, 31 May 1999 as well as the "Memorandum on lifelong learning".

²² The terms "informal" and "formal" learning activities used in this policy definition are not identical to the terms conventionally defined for use in LLL statistics later on in this section. The policy term "informal learning activities" includes both "non-formal education" and "informal learning".

²³ ISCED 97, par. 9 - definition of education

²⁴ ISCED 97, par. 11 - definition of education

²⁵ Report of Network B ad-hoc group on lifelong learning and proposals for indicator development, July 1999

²⁶ The table presents an adapted version of the criteria proposed in the "Manual on NFE". The full time attendance criterion and the age target group criterion (6-25) additionally for formal education have been dropped, as they were not considered adapted to the modern situation. It has to be made clear that even this adapted list of criteria does not resolve all ambiguities and complexities, either conceptually or operationally, but it provides a systematic starting point for distinguishing between different sectors of learning and teaching.

²⁷ <http://www.europa.eu.int/comm/education/leonardo/leonardold/stat/trainingstatis/areas/area6.html>

²⁸ This is the underlying issue of the discussion of the coverage of the UOE data collection survey.

²⁹ NACE= Classification of economic activities/CPA= Classification of products by activity

³⁰ Hörner Walter – Ruß Ingo, Monitoring lifelong learning - towards the construction of indicators (May 2000)

³¹ Borkowsky Anna, Indicators on Continuing Education and Training. (September 2000)

³² Existing sources that could be used within the new approach presented under section 4 (TUS, HBS, SBS etc) are not included in this table.

³³ VET definition

³⁴ CVTS2 definition

³⁵ <http://europa.eu.int/comm/education/leonardo/leonardold/stat/trainingstatis/areas/area7.html>

³⁶ TFMLLL definition

³⁷ Network B of OECD focusing on labour market outcomes of education will develop in parallel and in close cooperation with Eurostat a broader module on Continuing Education and Training of adults to be included in “carrier” surveys.

³⁸ Classification based on ISCED97 and developed jointly by Eurostat, OECD and UNESCO.

³⁹ NACE/CPA

⁴⁰ Classification of Training Provisions was completed in 1999 under the Leonardo da Vinci programme. It can be found at <http://europa.eu.int/comm/education/leonardo/leonardoold/stat/trainingstatis/areas/area6.html>.

⁴¹ See for example European report on the quality of school education
<http://europa.eu.int/comm/education/indic/backen.html>

⁴² An example of such an approach is the work carried out in the context of the European Employment Strategy. An expert group, set up by the Employment Committee, has defined a number of indicators used in the monitoring of progress and assessing implementation of Employment Guidelines related to lifelong learning (covering both education and training).

⁴³ <http://www.europa.eu.int/comm/education/leonardo/leonardoold/stat/trainingstatis/areas/area8.html>

⁴⁴ For the first germ of these ideas see also Borkowsky, Anna (1997). “Switzerland: Growing Demand, Fragmented Responses.” In: Belanger, Paul & Sofia Valdivielso (eds.) *The Emergence of Learning Societies: Who participates in Adult Learning?* Pergamon.

INFORMATION, DEFINITIONS AND CLASSIFICATIONS

POINT OF VIEW OF PRODUCERS: CONTRIBUTION BY OECD

HELLER Jean-Luc

OECD

2 rue André Pascal

F- 75775 Paris Cedex 16

FRANCE

Jean-luc.heller@oecd.org

Introduction

When it comes to statistical data and defining measurement tools, the OECD is in fact a user as much as a producer. An entire part of the work of the OECD secretariat is devoted to analysing situations and policies in the member countries and updating best practices and possible recommendations. It is true that, as a basis for these analyses and conclusions, statistics and indicators have to be produced. This production is done internally by the organisation's secretariat, but what is produced is also disseminated and available externally. It is in this sense that there is involvement in producing data, statistics and indicators.

As it is an inter-governmental organisation now comprising 30 countries on a basis of association - which distinguishes it from other internationally-minded organisations that are more closely knit with common rules - the work of production takes a wide variety of forms. It ranges from helping to draft internationally accepted standards and classifications to conducting international surveys either directly or in collaboration, and includes the collection and processing of existing data, involving a large amount of advance definition of concepts and subsequent harmonisation of results.

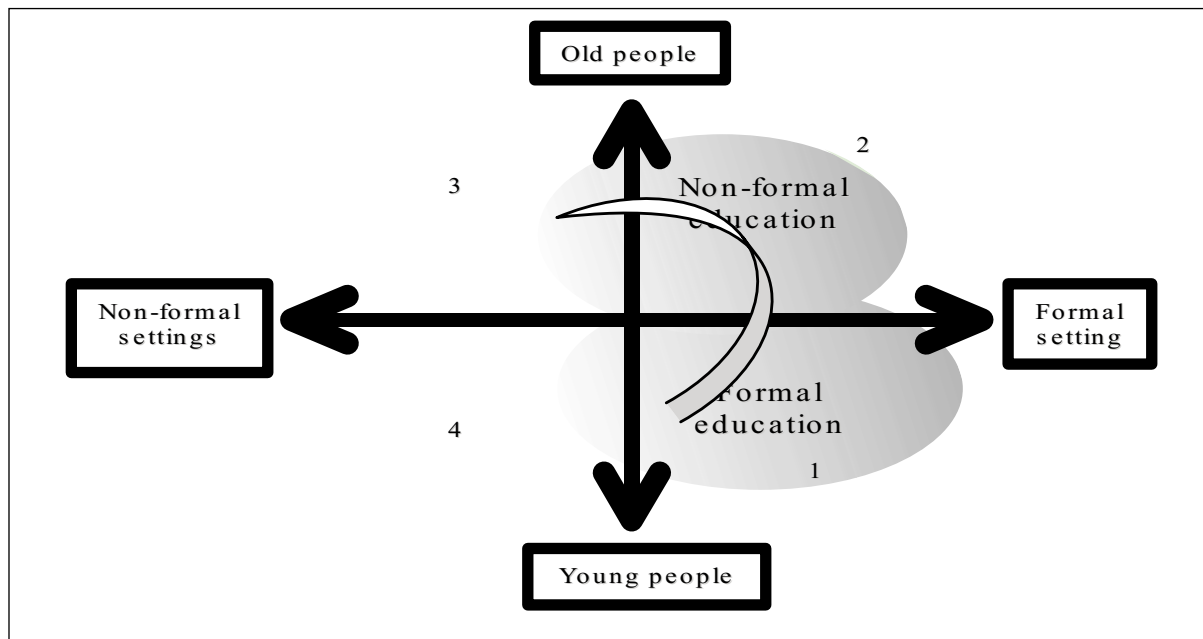
Lifelong learning has been a major topic at all the meetings that have been organised recently by the OECD. Between the meeting of education ministers in 1996 and the meeting that was just held in April 2001, some clarification has emerged at the same time as all the implications and facets of the subject have been highlighted. While the political significance of the topic has been confirmed - and indeed emphasised and expanded - the needs and gaps in terms of information have also been spotlighted. There is a big gap between what is needed in terms of monitoring and assessing policies and the supply of relevant, reliable and comparable indicators. The gap is even more significant in that recent discussions have all led to an extension of the idea. The determination to tackle the issue of lifelong learning in its various forms accentuates the difficulties that already exist with regard to the production of relevant indicators. Grey areas are expanding and demarcation problems arising, while the production of quality indicators requires investment that will bear fruit only in the medium term.

In order to meet this need for indicators allowing circumstances in countries to be compared and progress towards stated objectives to be monitored, the OECD must inevitably adopt a multiple approach to data production. The range of fields and issues requires a range of methods and tools to deal with them, the first step being the adoption of common definitions and classifications.

A generally accepted approach to identifying fields to be covered and gaps in information

The well-known diagram with two axes is now generally accepted and provides the best idea of what has to be covered. It is a matter of knowing the learning activities that occur throughout life: this is the vertical axis, from childhood to old age. The other axis refers to activities in all their various settings, from formal to non-formal. The consequences of this broad understanding of lifelong learning are clearly shown in the diagram itself.

Diagram 1: Lifelong learning, more or less well known



The various quadrants cover fields that are unequally treated by the indicators and analyses. The quadrant covering formal activities for young people refers fairly directly to the traditional system of education in the form of initial schooling. For older people, formal activities tend to mean adult training schemes, whether vocational or other. The least formal activities are those that are least well known, occurring in early childhood or later, alongside school or university learning, or even later in life.

The first quadrant relating to the most formal training of young people, i.e. initial schooling in education establishments, has already been extensively described. Based on well established international classifications and equally tried-and-tested systems for collecting data and conducting international surveys, the indicators and studies that they produce are beginning to acquire a definite reputation and a high level of quality. However, there is of course still a lot to do with regard to covering the various aspects of initial schooling and to ensuring comparability.

In the second quadrant, some of the features of work-related adult training are more or less defined and known. It is fairly generally agreed that adult vocational training has the following characteristics:

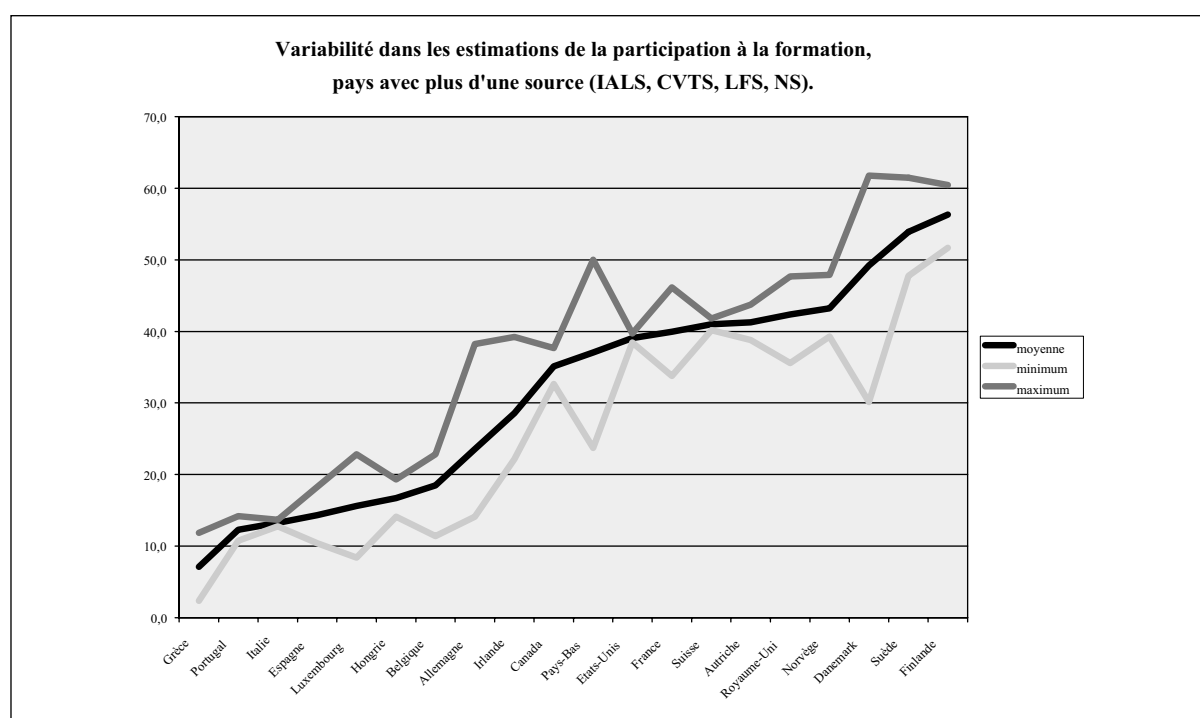
- it is increasing on account of new and increasingly complex tasks and because of job mobility;
- it is more common in large firms, the public sector and in sectors such as services, banking or finance;
- it tends to involve full-time or more established workers in a firm;
- it is more prevalent for management and senior posts than for executive or unskilled jobs;
- young people tend to receive more training than older workers;
- all things being equal, there is little difference in men's and women's access to training;
- the most striking and most common feature is that training increases in line with the level of initial qualifications: training leads to training.

It can be seen that some of these remarks refer directly to features of employment, while others relate more specifically to those of individuals. The two are of course related: qualification levels and job levels usually match. However, the two approaches need to be reconciled and the significance of each needs to be assessed. If there tends to be more training for those in more important posts, does it indicate higher maintenance costs for more complicated jobs, or a specific aptitude on the part of those who have progressed further in the education system and an inclination to enrol for further training?

Having said that, we do not know very much about the overall involvement of adults, even in the most formal work-related training. Depending on the sources, there is a wide range of figures for a given country. This is illustrated by the diagram below. Designed to show the rate of participation in training as indicated by various

sources¹ (business survey - CVTS, labour force surveys - LFS, international surveys - IALS², specific national surveys), it can be interpreted optimistically or pessimistically.

Table 1: Differing estimates of participation in training



Sources: IALS, CVTS, LFS, national surveys; adjustments: secretariat calculations.

Given that it is the same indicator and that adult participation in vocational training ought to be relatively easy to define, the differences are extremely significant. The differences between the figures at the two extremes are more than 10 percentage points for half of the 20 countries studied. They are particularly noticeable for countries such as Denmark, the Netherlands, Germany and Ireland, with the figures sometimes differing by a factor of two. What would people make of employment or inflation figures with the same margin of variation?

The optimistic view - apart from the cases in which the figures tend to coincide, suggesting the accuracy of the result - may stem from the fact that there seems to be a fairly regular pattern to the classification of the countries. There are two quite different types of situation: one in the 'North', where the Scandinavian countries provide a lot of training, and one in the Mediterranean 'South', where training is much less common.

The third quadrant in the diagram - relating to adult training in less formal settings - is even less well known. When it comes to formal and non-formal training, are they complementary or can one replace the other? Should the earlier data suggest, for instance, that in some countries there are types of apprenticeship and methods of imparting or transmitting knowledge and skills that do in fact exist but which are simply less formalised and thus fail to be counted? This is the recurrent idea of hidden resources that could never be detected by obsolete nomenclatures and inadequate statistics. There are instead some indications that less formal training is roughly in proportion to formal training, and that there is not so much of it. But the fact of the matter is that, apart from some anecdotal and conflicting examples, there is a very real lack of relevant data that would allow anything very definite to be said about the subject and about the changes that are apparently taking place.

Lastly, there is scant data about young people outside formal education, i.e. the fourth quadrant. Comparative studies on education and support for young people emphasise both the vital importance of training in relation

¹ To take some account of obvious differences of field, scope and protocol among the various sources, they are 'adjusted' in relation to each other. The assumption adopted is that for the same group of countries appearing in two sources, the countries' average participation rate must be the same. The differences regarding a specific country thus reflect changes in the figures according to the national circumstances in which the statistical tool is used.

² International Adult Literacy Survey, OECD and Statistics Canada.

to all that follows the acquisition of proficiency and learning skills, and at the same time the flagrant lack of comparable data. The rates of young children's attendance at pre-school establishments before the age of compulsory schooling are collected and known in a very haphazard fashion. Above all, they provide only a limited picture of the situation, since education and care of very young children are the responsibility of other bodies, especially family-organised or mixed establishments, in a large number of countries. A high rate of pre-schooling is not in itself a positive indication. A low rate may reflect another considered policy, that should not necessarily merit a more negative assessment.

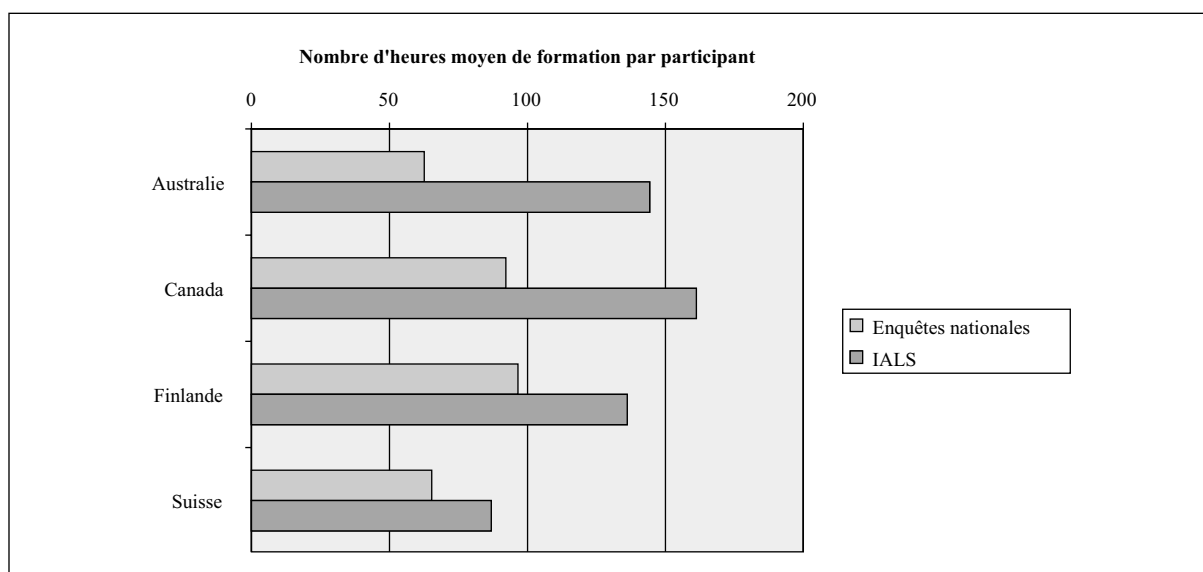
For older children, non-formal adjuncts to education in the school and university system are also poorly known. How prevalent are they, and are they a factor in the differing performances of those in the education system? There is a lot of information that is needed in order to assess education policy.

Apart from the most basic data on the incidence of training activities, we could make a long list of the things that have little or no idea of with any accuracy. An overall look at lifelong learning seems to indicate that it is the mechanisms and effects that are the least known. This is not surprising, since it requires a basis that is, as we have seen, far from fixed when it comes to knowledge of actual activities and their extent. The return on training, i.e. the return on investment in training after initial schooling, is poorly known. The figures on individual effects, such as on wage levels, are conflicting. And when they can be discerned, it is not certain that a higher salary or faster promotion in the wake of training can in fact be considered a consequence in terms of cause-and-effect. It may be the result of other specific characteristics, undetected in the models, which help to bring about both better salary conditions and better access to training.

The strategy needed to cover information requirements

Producers of statistical information need to define a strategy to remedy these significant shortcomings. It is fairly easy to make a diagnosis. The demand for indicators refers to a very wide field, since it now covers every type and scale of lifelong learning. In the face of these requirements, the results when they exist are fragmentary and uneven. The reasons for discrepancy and non-comparability are easier to list than to remedy. First of all, they concern concepts and definitions. What are the activities to be covered? How can they be defined, and what are the limits? The problem is not solely conceptual. Using a few examples, the diagram below shows noticeable differences in the same country in the average length of training per person, depending on the source of information used. As a rule, the national surveys are more restrictive in their definitions than the IALS survey. They cover only training courses and programmes, whereas the IALS takes a broader view and also covers less formal training.

Table 2: Figures in relation to definition of training, calculated by secretariat



There are other more practical reasons affecting the population and reference period. Who are the people concerned? If those receiving initial training (schooling) are included, the resulting figure will be higher. On the other hand, including only those in older age groups will lower the rate of participation. Over what period should training activities be recorded: at the time of the survey, in the previous four weeks, in the previous six months, in the previous year, or even longer?

What and how? For whom? When? These are the main questions. They can be considered from two angles: conceptual and technical. When it comes to producing indicators, the most important aspect is the idea that the sheer scale of the field means that it is hopeless to think that it can be covered by a single method or tool. We are a long way from having an integrated system of physical and financial accounts, compiled on a basis of international comparability, for training activities in all their forms and throughout people's lives. A decision has to be made to develop a variety of approaches and tools to tackle all the various questions. It is also a pragmatic decision, since it is impossible to devise a perfect system just like that. But it is also a more basic decision, which involves going through the whole range of statistical tools to find the one that is most suited to the area to be covered. You are not going to cover family-centred child care with the same methods you would use for financial flows relating to company training.

Harmonisation of concepts

It is probably true that there is less international harmonisation of concepts for social statistics than for economic, monetary and national accounts statistics. This is partly because there is a different degree of internationalisation in those fields, and there are different priorities when it comes to devising statistical tools. But there is also a more basic reason: social circumstances are by definition rooted in their societies, which tend to be organised on a national basis, i.e. in very different institutional settings. This is particularly true in the case of training, where there is tremendous variety in the way in which it is organised, even between similar countries and at times even within the same country. The first concern of international organisations - including the OECD, in collaboration with others - thus focused on concepts and definitions.

Reference to ISCED for definition of training

The definitions and glossary of the ISCED (International Standard Classification of Education) are the unquestionable reference for defining training activities. Definition of this kind is particularly necessary when dealing with less formal training. It is a good idea to cover 'training activities, the primary, intended and voluntary aim of which is to acquire or increase knowledge, ability or skills'. The covered activities exclude activities such as communication and training that is incidental or a by-product of another activity. The idea is to cover all training, but only training.

At the same time as this vital definition is formulated in order to demarcate training (organised for such a purpose) from other activities than can produce instructional effects, it is useful to expand ISCED. Although there is no lower limit on duration, ISCED covers organised and lasting activities which are characterised by having a method, an organised preset schedule and a provider (possibly distant or indirect). For a programme-based taxonomy it is very difficult for ISCED to capture educational activities that are not organised in the form of educational programmes of regular education. In the case of training or educational activity (according to ISCED), it is a good idea to include in lifelong learning any activities that are not organised according to a programme in the ISCED sense. This is typically the case of less formal learning.

Ultimately, it can be said that the basis used is the ISCED definition of education, but comprising activities that lie outside the ISCED definition of programmes.

In addition, if the ISCED organisation by programme and level is ill suited to the various types of non-formal lifelong training, another aspect may be considered: training specialities.

Use of ISCED and UNESCO terminology

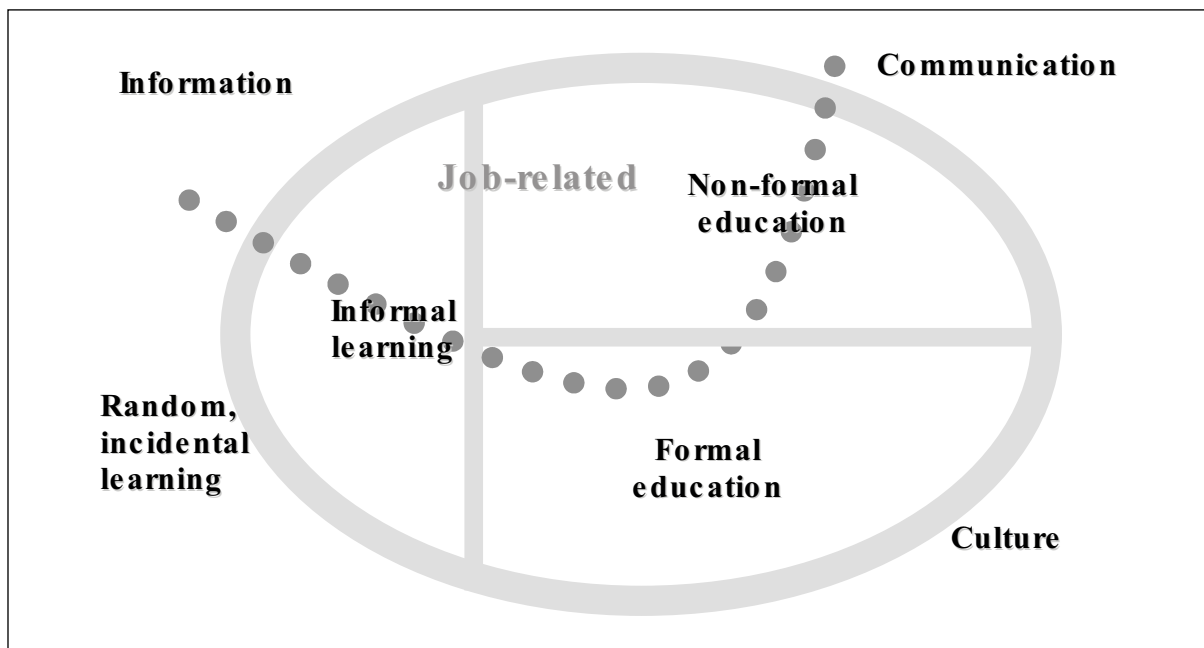
Lastly, for the sake of simplicity, it is better to keep to ISCED terminology (with allowances for translation). The word 'formal' in the phrase 'formal education' refers to the initial training at school or university level undertaken on a full-time basis by young people in accordance with a graded system. 'Non-formal education' refers to organised and lasting activities and programmes that are not covered by the formal system. These

could be activities undertaken outside education establishments or involving adults. ‘Non-formal learning’ always includes educational activities (voluntary activities organised for this primary purpose) that are not covered by the concept of ‘programme’.

Points for clarification and discussion

There are three questions that still need to be clarified and require further practical work: the limits of education in the sense indicated above, especially in relation to cultural activities; the boundary between informal and non-formal and the distinction among programme, course and other forms of self-training; and lastly, the definition of work-related training in its various forms apart from courses (mentoring, on-the-job training).

Diagram 2: Boundaries of training



A number of questions have been raised in discussion about pushing the scope of ‘training’ too far. Practical reasons about the possibilities of collecting data were in fact mixed up with more conceptual discussions. Mention was often made of the difficulty of fixing limits in relation to cultural activities or even any human activities, which in the normal run of things add to the sum of knowledge and experience. If the adage ‘you are never too old to learn’ were taken at face value, the rate of participation in lifelong learning would be 100%! An effort needs to be made to map out an operating boundary. If we are going to continue, we need additional criteria (costs, certification) that can be used in surveys and that would result in an accepted classification of training activities.

Given this approach, do the boundaries coincide with relevant fields in terms of the target populations or policies? The field of formal education, while it is defined by ISCED using several different criteria, nevertheless refers to a fairly clear and relevant set of circumstances: the system of initial education as it is commonly understood. It is the ‘other’ informal or non-formal activities that still need to be examined. There are certain aspects that are common to formal and non-formal education: organisation in programmes, with an institutional provider that can be identified and questioned. Also, there is a link between non-formal education and informal learning. Even when called ‘informal’, learning is actually a distinct and identifiable activity that can make use of an indirect provider: written or audiovisual media. The distinction no longer lies only in the degree of an individual’s autonomy in organising his training, provided of course that it still falls within the realm of training. In the case of training that is not part of the formal education system, should the dividing line be one that separates activities which involve a direct provider and which correspond to the idea of programme from those in which the learner’s autonomy is greater and which do not correspond to the idea of programme? It is also possible to call on other ideas to make this distinction between education (by an education provider) and learning on the initiative and under the control of the learner.

As things stand at the moment, training geared to vocational needs (as opposed to training for personal, home or social purposes) appears demarcated solely as a subset of non-formal education. These are vocational training programmes. For some time now, the emphasis has been on types of training that are less formal than traditional courses or programmes, providing individuals with greater autonomy in the form of seminars, job rotation, mentoring, on-the-job practice and learning, case studies, etc. There is an effort to deal with these types of vocational training in the same way as more conventional and more formal types of vocational training. This means that they have to be identified in terms of informal learning and to be separated from a category that is perhaps too broad. It may be useful to put all vocational or work-related training, regardless of how formal or organised it may be, in the same category.

Production of data and indicators

Once the issues of classification have been settled, the production of the data and indicators that are needed (according to priorities to be drawn up) requires a plan of organisation and suitable methods and tools to be chosen.

Requirements in terms of data and indicators can be listed in the three-column format generally used in the OECD's INES³ programme:

- activities - participation;
- resources - financing;
- outlets - results.

This approach applies, of course, to all educational activities described in the general outline of lifelong learning. Consequently, given that it refers to individual of all ages involved in activities varying greatly in size and structure, adaptations need to be made.

Participation, volume

In the field of formal education, an individual's **participation** is usually (and almost by definition) full-time. The enrolment rate can be easily calculated by comparing the number of participants with the population of relevant age. This certainly does not apply in the case of other lifelong training activities. The length can vary tremendously: from a couple of hours to training lasting hundreds of hours or a return to education in the form of a course that is full-time or lasts a number of years. Measurement of the planned and completed duration, i.e. the volume of activity during a given period, is thus essential to provide a proper picture of an individual's participation.

Similarly, participation during a given period, especially if the period is long, can cover a number of activities. There are some indications that the same people tend to be involved in training. Some people apparently get various opportunities or types of training, while others are left outside the system. This underlines the need to have data both about participation (number of people having taken part in at least one training activity during the period) and about **volume** (total number of hours of training undertaken by all participants).

The programme classification that is used for formal education - ISCED - allows the type and level (or speciality) of training activities to be defined with reasonable accuracy. The type of lifelong training activities is also variable: ranging from attendance at a conventional course to self-learning on a completely independent basis. The concepts of **level**, **quality**, **intensity** and **purpose** of training need to be covered as such in order to get a proper idea and to compare comparable activities.

In formal education, the age and level of participants are more or less defined by participation in a set programme that lays down age and level as conditions of entry. In other cases, the opposite is true. An individual's characteristics are not only background variables but represent proxy elements for the phenomena to be measured. A participant's age and educational level can provide some information about the activity undertaken.

³ Indicators of Education Systems

Inequality and difficulty in accessing training belong to areas on which data are wanted. Do the people involved blame the scheduling, pace, location or costs of training, the type or structure of teaching, or even the fact that they feel it is a waste of time? The perceived obstacles are some of the data that are needed. There are also differences in the intensity of participation in training, depending on groups of individuals. In this instance, a description needs to be made of the characteristics of populations who receive little or no training, or not as much as they would like. Direct questions reveal perceived obstacles. A large number of background variables make it possible to describe populations or population groups according to their various levels of participation.

The **purpose** of training, the aim that is pursued, is another item of data that is needed. This criterion involves distinguishing training geared to vocational requirements and training for more personal or recreational purposes. This makes it possible to identify and assess training activities geared to more targeted audiences or purposes, e.g. inclusion of certain groups, specific needs.

Surveys of individuals are the ideal source in all these fields.

To do this, one of the networks of the OECD programme on education indicators ('network B') devised the use of surveys of individuals, especially labour force surveys, to study the circumstances of the transition from school to work and the level of education attained by the population. In the case of lifelong training, these surveys need to be supplemented by special modules or by special surveys for this purpose. A lot of work was done on the comparability of the results and the various tools. Trial collections of data were carried out using the main national sources of information on adult education, and the results published (see "Regards sur l'Éducation").

The countries in the network decided to produce a standard module focusing on adult education. It was supposed to be a set of definitions, guidelines, specifications for questions and for categories of answers, including conceptual and methodological aspects. The questions would be used as illustrations. The module is offered to the OECD countries as a possible supplement to existing national household surveys, especially those concerning the active population or labour force. Although the operational definition is one of the subjects of the study, it is understood that the interest is in training undertaken after regular initial schooling in educational system establishments.

The module is designed to provide comparable international data on the key indicators for continuous training, including degree of participation, intensity (duration) of activities, providers, incentives and obstacles to participation and main types of activity (formal, less formal, compulsory or voluntary). The main target is organised training, relatively easy to measure and more affected by government policies. However, less formal or less organised types are also of interest and will be included in the module.

The work is under way and should be completed by the start of 2002. It goes without saying that it is closely linked to Eurostat's work to devise an ad hoc module for the 2003 labour force survey.

Costs and resources

There is little knowledge and little breakdown of the costs of training borne by economic operators, individuals, households, businesses and government departments and bodies at various levels. Alongside expenditure (public and private) on education, information is also collected about spending on vocational training when it comes under employment policy. In another context, an effort is made to collect information on expenditure on research and development. When it comes to lifelong training, there is no standard and systematic approach that would indicate how much countries spend on this field. Who finances training, and what kind of training? Who are the recipients of such funding? What human, financial and technological resources are devoted to lifelong training? What is the impact on recipients?

What is the amount of domestic (or national) spending on all training (lifelong, and of all types)? How much is spent on training as a percentage of GDP? Who is the ultimate source of funding: households, businesses, government, central or local authorities? How is the money spent: investment, infrastructure, direct and indirect training costs, remuneration of trainees? Who and what benefits? Which sectors of the population: job-hunters, young people, workers, others? What types of training are offered, at what level, and in what fields? How can providers describe more accurately what is on offer? What is the turnover by branch or sector? Who

are the training providers: public, private, profit-making or non-profit-making, individuals? What economic units are involved in this as a main or secondary activity? How does it figure in the classification of activities: education, consulting, services to households or to businesses? Should it be extended to other activities such as publishing books or software for teaching?

This lengthy list of questions currently elicits only scanty or fragmentary answers, that are in any case hard to compare from country to country. The OECD's thematic publication that is supposed to cover 11 countries initially has no data on costs and financing, in spite of the individual questionnaires that were sent to the countries and the detailed reports that they provided.

The essential source in this field is the survey of providers. It elicits data on teachers and subjects. It needs to be supplemented by other sources in the case of training where there is no direct instructor, e.g. turnover in educational software. These data can be compiled and harmonised and gathered using the concepts of public accounts. The idea is not to conduct an international survey but to bring together on a harmonised basis data that have already been collected and compiled at national level.

The approach of a data producer such as the OECD must inevitably merge with work at national level to compile accounts on education and training in the broad sense. The OECD's methodological work on education and its finances provide a reference, by identifying the sources of funding (public, private or government-subsidised private) and by making a breakdown of spending (by establishment or elsewhere, auxiliary services). This endeavour should be extended and repeated for training in its entirety beyond the sphere of initial education. Some elements are already fairly well identified in most countries and are collected internationally. These refer to government spending as part of policy on vocational or work-related training. This offers a possible basis. The initial step is to use a comparable basis to collect data on the amount of government spending on adult training.

Results: certification and skills

There are two main ways of looking at the results of training. The short-term result can be found in the number of training actions that are successfully completed and rewarded with a certificate indicating that a specific skill or qualification has been acquired, i.e. the number of diplomas and certificates that are issued. The difficulty with this indicator is the tremendous difference in the type, quality, level and ultimately value of the results obtained. Diplomas do not recognise courses except for programmes listed in ISCED.

But this approach is not entirely pointless. Thanks to greater mobility and openness, there is a growing need for skills obtained in a context other than that of initial education to be approved, recognised and transferable. Once again, the number of diplomas has a meaning only if it is accompanied by an indication of the level and speciality, as well as some guidance to the quality of the certification process. Where else can it be used? What is its value? Who are the people who get such results? And what are they like?

The **issue of diplomas** must also be looked at from this angle. The reputation and recognition of qualifications obtained in the course of lifelong learning are very important motivating factors for people. The education system has a special role in this area. Among the diplomas issued by academic authorities at various levels, are some of them issued to adults?

Another question: do school or university establishments provide certification or recognition of qualifications obtained elsewhere or after initial education, at work for example? In both cases, how much of this certification is there? What kind of people benefit? What training does it refer to (field, level)?

The OECD, UNESCO and Eurostat are international organisations that work together to collect coordinated data via the UOE questionnaires. The coverage and breakdown of categories in this information must be considered or reviewed in relation to this aim.

The other way is the **direct evaluation of the results of lifelong learning**. Skills, aptitudes and abilities are not measured, and measurable, solely on the basis of school certificates for an appropriate level. There needs to be direct measurement of skills and abilities. They need to be assessed using special protocols, and discussion of these is at the centre of plans for international surveys beyond literacy. This involves basic research on skills themselves, and work on the tools to assess them. More generally, research on ideas of key skills and on

the various fields of skill has direct repercussions for the assessment of skills among the adult population. This no longer covers only school subjects but expands to include other fields relating to life at work or in society.

At the same time, much more than the results of only formal or less formal training activities is measured. All kinds of learning are covered, including learning that is incidental or random or a by-product of other activities, i.e. learning that is expressed in the aptitudes, skills or abilities possessed at a given time by an individual or by the target population.

The first and then the second stage of the International Adult Literacy Survey (IALS) provided comparable data for 20 countries. When the figures on literacy in its broad sense are considered together with other available information, they reveal a lot. In spite of conceptual difficulties in considering items in different sociocultural settings, the approach involving an international survey conducted in the same way in various countries proved justified.

It is for this reason that a forthcoming survey, provisionally entitled International Life Skill Survey (ILSS), is intended to revise and extend the fields of international assessment by looking at skills in reading continuous text (prose), understanding schematic text (document), ability to calculate (numeracy) and aptitude in solving problems that occur (problem solving). The abilities assessed by various techniques must also include analytical reasoning, teamwork and the ability to master computer and communication techniques. With the title of ALL⁴ (Adult Literacy and Lifeskills), an initial pilot survey is under way, and it should result in a survey in the field in the final quarter of 2002. Taking part in this pilot survey in Europe are Norway, Switzerland and the Netherlands, together with Italy, Belgium and Luxembourg. About ten countries, most of which are not members of the OECD, could be involved in the survey and thus feature alongside the United States and Canada.

One prerequisite is to investigate and **define key skills** in today's society. They can no longer be described as basic skills and technical skills, which are in any case changing, but need to include other skills that relate, for example, to the fields of relations, knowhow, independence or the ability to work as a part of a team or network.

An international research programme called DeSeCo (Defining and Selecting Competencies) is being carried out by the Swiss Federal Statistical Office in cooperation with the OECD. A first seminar was organised in 1999. The next seminar, scheduled for February 2002, will review the contributions of all the research disciplines that are being employed to define these skills. These contributions will need to be used in further work. It is easier to devise a measuring tool if what is going to be measured has been properly defined.

The importance given to the tendencies that have been acquired, and to the **ability to learn to learn**, forges a link between assessing skills during initial schooling or at the end of such education and the conditions of participation in lifelong learning. The assessment of aptitude and potential at the end of schooling can be followed by a longitudinal monitoring that sees whether there are any determining or predisposing factors in relation to lifelong learning.

Operation PISA (Programme for International Student Assessment) is an important tool in this research. The operation that is being set up will take a longitudinal look (PISA-L) covering about ten years at sample groups of pupils, whose skills, tastes, aptitudes and environment will be analysed initially at age 15. It promises to be a useful source⁵.

Education establishments have a special responsibility in the process that lets people learn to learn. Going back to training at a later stage in life is dependent to some extent on past experience. I wonder if this is taken into account by schools and methods of teaching.

Another aspect is the complementary nature of activity in education establishments and other kinds of informal education occurring outside the formal system of education. How can they work together? Are there any mixed systems? Do they cover certain fields or certain categories of pupils or students?

The way to get this information is to conduct surveys of establishments. International coordination is also being discussed in this regard.

⁴ <http://nces.ed.gov/surveys/all/>

⁵ <http://www.pisa.oecd.org>

Conclusion

Given the scope and the complexity of the questions that have been raised, the only solution is to use a set of methods and work. Depending on the field, various means need to be employed: for conceptual frameworks to be devised and defined, outline modules for household surveys to be developed, data to be collected from administrative sources, international surveys of adults and schoolchildren and education establishments to be conducted, national accounts data to be processed.

This effort requires the collaboration of international organisations. It has often been mentioned, and it is an actual and effective reality in much of the work referred to above. It must nevertheless be emphasised that national bodies need to make a significant effort in collecting basic data and reconciling the figures. The quality of internationally comparable data depends to a large extent on the efforts and resources they devote to this.

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MEASURING LIFELONG LEARNING : SOME PRACTICAL ISSUES

CHU Shiu-Kee

UNESCO

Institute for Statistics

Place de Fontenoy

75007 Paris

FRANCE

Sk.chu@unesco.org

Developing the measurement of lifelong learning is a major forward-looking monitoring initiative that will create considerable impact on advancement towards a learning society. Based on the work and progress made by the Task Force on Measuring Lifelong Learning (TFMLLL)¹, this paper attempts to generate further reflections on a number of additional practical issues that will have to be addressed when it comes to the stage of planning and implementing the collection of data on lifelong learning.

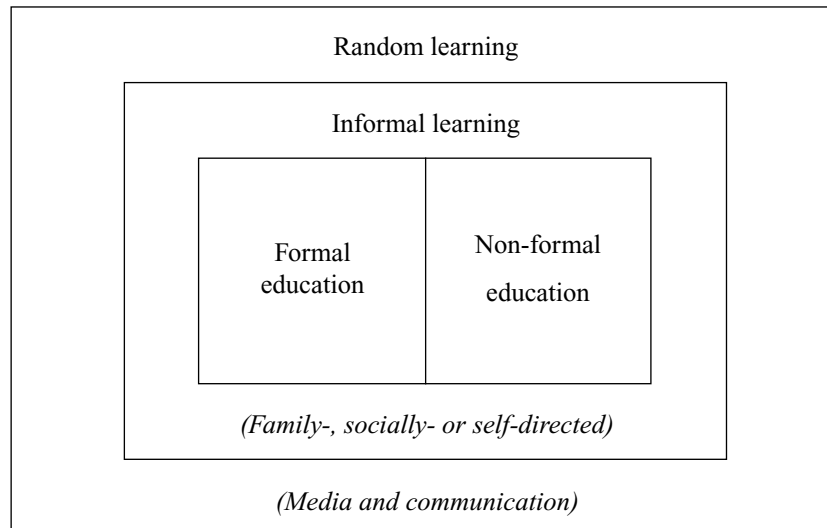
I. Definition and Scope of Lifelong Learning (LLL)

The Task Force on Measuring Lifelong Learning based its work on the European Union's definition of lifelong learning, which '*encompasses all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence.*' Within this definition, correct interpretation of the term '*ongoing*' will have practical implications when it comes to actually measuring lifelong learning during the European Labour Force Survey and other surveys, particularly with regard to what kind of learning should be included, or excluded. Here, the interpretation of '*ongoing*' as to refer to '*the elements of duration and continuity*' and '*in principle without any lower duration limits*' embodies certain contradictions, hence may need further clarifications.

Concerning the scope of lifelong learning, the TFMLLL agreed that purposeful learning can in principle be divided into 3 categories : formal education, non-formal education, and informal learning (including family-directed, socially-directed and self-directed learning), which constitute the priority categories to be measured. It may be kept in mind that, from both a conceptual as well as empirical point of view, lifelong learning actually encompasses also random learning which can occur at anytime and in any place: during a conversation; when glancing through an article; watching a television programme; observing a phenomenon; or even when going from one place to another. Being neither necessarily purposeful nor organized for learning, plus the fact that such learning can occur either spontaneously or after the event in the sense that the person acquires the improvement in knowledge and skill only after a period of reflection and assimilation, the measurement of random learning can present considerable difficulties. It is nevertheless suggested that future work on measuring lifelong learning do not lose sight of this important part of learning.

How best to implement the currently-defined scope of lifelong learning during actual measurement requires considerable additional conceptual and methodological work. Whilst the scope, definitions and classifications of formal education have been more or less clearly specified in the ISCED (International Standard Classification of Education)², further clarifications of the definitions and classifications of 'types of education', 'modes of delivery' and 'providers of education' will be needed so as to provide a conceptually correct and comparable basis for measuring lifelong learning that includes non-formal education and informal learning if not also random learning.

Scope of Education and Learning



Conscious of the complexities and difficulties in measuring all types of learning/education, UNESCO started in 1990 to develop the statistical measurement of non-formal education through the organization of two expert meetings and the preparation of a Manual for Statistics on Non-formal Education³. A number of preliminary criteria have been identified for characterizing and distinguishing between formal and non-formal education. It emerged from the work of the TFMLLL that within the concept of lifelong learning throughout life, those criteria such as: age, institutional framework, channel and mode of delivery, admission requirements, registration, and full- or part-time learning are of only secondary relevance to the measurement of lifelong learning, whereas the key criteria for distinguishing between formal and non-formal education should focus on learning objectives, contents, methods and organization in particular the level-grade structure, academic year and minimum duration, even though these are also becoming less rigid nowadays.

One may bear in mind that in actual learning situations and educational delivery, the three categories of formal and non-formal education and informal learning often overlap and there are many borderline cases which can vary from country to country, and from location to location within countries.

For example in some countries, the lack of government capacity to provide basic education opportunities to all school-age children have encouraged NGOs, local communities and private bodies to organize alternative basic education programmes for out-of-school children and youth (those who either never enrolled or dropped out of school) that do not necessarily follow the regular basic education grade structure and schedule. Such programmes are frequently not considered as to be regular and formal education even though successful completion of some of them may lead to recognition of level and grade equivalence to formal basic education. Some national governments are attempting to 'formalize' these programmes by providing pedagogical and resource support as well as formal recognition, whereas certain local governments are 'de-formalizing' their regular basic education by introducing flexibility in its contents, methods and modes of delivery so as to cater to different learning needs and situations.

Of course there remain numerous purposeful and organized non-formal educational and training activities that take place in the work place, community centres, professional associations and other non-educational institutions that clearly do not match the characteristics of formal education. It will be crucial that these activities be included within the ambit of the measurement of lifelong learning, to the extent that they can be rigorously and meaningfully measured.

Neither are the distinctions between informal learning and formal and non-formal education water-tight. By including family-directed, socially-directed and self-directed learning, informal learning clearly emphasizes the purposefulness of the learning activity, and to some extent also an organized nature in that it is either the learner himself/herself, his/her parents or family member, or the local community or some other social organizations that organizes the learning activity. Taking the case of a person following a distance-learning programme organized by an Open University, it will be quite feasible to collect data on this participation from both the learner and from the Open University. But in the case of a father giving additional mathematics lessons to his child

during the evening, or a young person taking part in a social initiation activity in the local community, it may not be easy nor reliable to systematically collect the relevant data. Besides, for measurement purposes (also see following sections on Priority Information Needs, and Data Sources and Channels), one may have to be very careful in distinguishing between the perspectives from the learners and from the providers, especially when it is about participation in less organized and less institutionalised forms of learning activities.

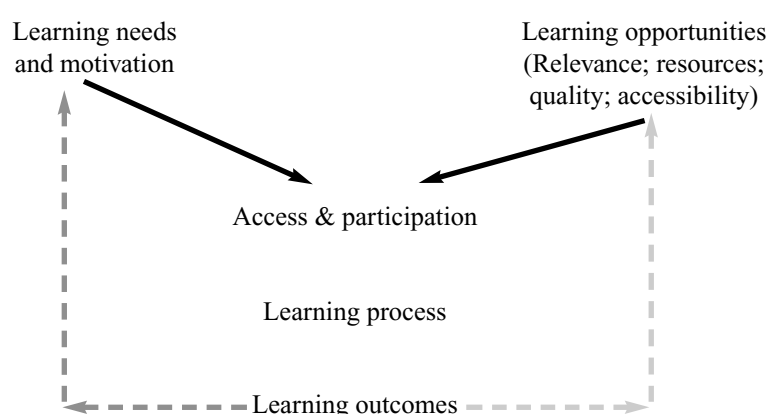
These go to show that there remain considerable conceptual, methodological and practical issues in measuring lifelong learning which will have to be taken into account when it comes to actual development and implementation of the measurement process. One way to proceed may be to pragmatically inventory and analyze existing concepts, practices and emerging issues, and to distill the particularities and commonalities so as to begin establishing more and more universally applicable criteria, norms and measurement methods. It will be essential to combine these developments with further work on the revision of ISCED regarding types of education, education providers and modes of delivery.

II. Priority information needs

Initial efforts to measure lifelong learning must be preceded by a clear identification of the policy information needs. Policy documents from UNESCO^{4,5} have given indications that, based on a learner-centred approach, the measurement of lifelong learning will have to place special emphasis on gauging the **demand for various types of learning opportunities** by different population groups in different geographical locations, and the extent to which such demands are satisfied. To do so, more refined measurement of people's **motivation to learn**, their **knowledge of available learning opportunities** and of their **quality** and **accessibility**, as well as of past and present levels of **access and participation** in lifelong learning, can provide salient answers to these questions regarding how well supply matches demand.

Of particular interest and importance in the measurement of lifelong learning will be information about the **efficiency, effectiveness and quality of the learning process** from the perspectives of both the learners and the providers. Such measurement may cover aspects regarding the **degree of correspondence of learning objectives** between the learners and the programme design; the **relevance and quality of learning content, materials and methods**; the **effectiveness of educational delivery and learning methods**; and the **speed and depth of knowledge and skill assimilation** among the learners.

Measuring LLL: Priority Areas



A third major policy information area is no doubt the **outcomes and impact** of lifelong learning, in both the narrow sense with regard to the learner's personal development and well-being, and more broadly about its impact on general social, economic and cultural development of the society and nation. On the learner's side, this may include data on the his/her **performance** while participating in the learning activity, **completion/non-completion** of the learning objectives, plus periodic **follow-up monitoring of changes** in the person's knowledge and competencies, occupation, employment and income, access to further learning opportunities, culture and leisure, and other salient aspects of quality of life. Such information on personal learning outcomes will on the one hand help the providers of lifelong learning to better cater to the learning needs and expectations,

and on the other hand pave the way for more responsive policies on lifelong learning in the future, with the dual vision of promoting individual growth together with developing the communities, society and the nation.

To the extent possible and subject to further clarification of the definitions of formal, non-formal and informal education/learning, it will be a policy priority to understand the relative shares, contributions and **complementarity among these learning channels** in terms of capacity, quality, learners' participation and learning outcomes, so as to lead to more balanced and effective lifelong learning policies, strategies and measures.

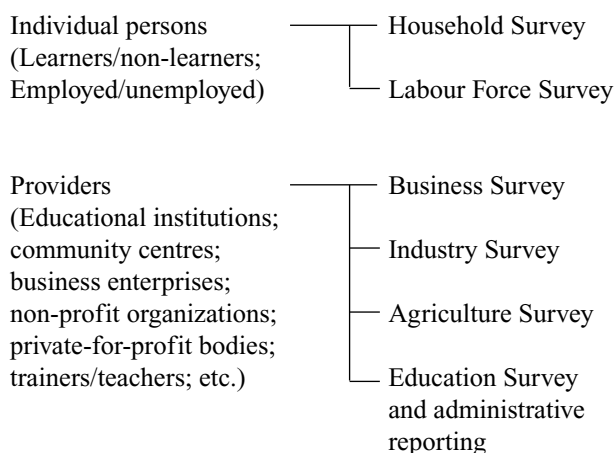
The processes of planning and implementing the measurement of lifelong learning must therefore be preceded by a clear determination of the priority information needs among these and additional aspects, before examining the possible data sources and channels as well as feasible and rigorous ways to collect, analyse and interpret the data.

III. Data Sources and Channels

Lifelong learning is such an all-pervasive and broad-based activity that takes different forms, caters to different learning needs of people of different ages, gender, ethnic, linguistic and religious groups, educational attainment, occupation, income and social status, and takes place in all kinds of places and at any time. It is only plausible that its monitoring and measurement will have to resort to a multitude of data sources and channels.

Possible data sources for the measurement of lifelong learning can in general be categorized into two types: (a) individual persons (learners and non-learners); and (b) providers of lifelong learning opportunities (schools, universities, business enterprises, adult learning centres, professional associations, local communities, NGOs, private bodies, etc.). Each type of data source lends itself more readily to particular channels and modes of data collection, and respond to specific policy information needs.

Measuring LLL: Data Sources & Channels



For example, individual persons are often monitored through population censuses and demographic surveys including household surveys and labour force surveys; whereas providers of lifelong learning can be covered by various sectoral surveys such as education surveys, business surveys, industrial surveys, agricultural surveys, as well as other social surveys that collect data from institutions and agencies known to provide education and training.

Among the priority policy information needs outlined above, it can be said that surveys of individual persons can be more effective in collecting data on demand, access, participation, the learning process, and learning outcomes. Additional questions may also be introduced to identify the reasons for participation and non-participation, and to gather learners' perception of the relevance and quality of the learning activities. Longitudinal follow-up surveys of individual former learners can be particularly useful in gauging the impact of lifelong learning activities. A major limitation of this data channel is its inability to provide comprehensive information on the level of supply of lifelong learning opportunities, plus reliance on self-declaration, recall from memory, and personal impressions when it comes to perception of quality and relevance.

Complementing the above surveys of individuals, surveys of providers of lifelong learning opportunities will above all help to assess the level of supply, of access and participation, as well as the correspondence of existing capacities to demand so as to indicate gaps, shortfalls and/or over-supply so that appropriate regulatory mechanisms can be put into action to fill gaps and reduce over-supply in specific areas, by re-directing learning resources. Besides enabling the building of comprehensive databases of providers of lifelong learning and of trainers/educators/facilitators for promoting access and participation, such surveys can go into more detailed data about the quality of human and material resources input into the organization of lifelong learning activities, as well as the effectiveness of the learning process and learning outcome in terms of the number of learners who succeeded in completing each activity.

It can therefore be seen that both data sources and channels will have to be utilized in order to constitute a more balanced, comprehensive and meaningful understanding of what is happening in lifelong learning, so as to lead to sound policy and decision-making. In addition, one has to be mindful of the possibility that a variety of practical problems can occur during data collection using either channel. One of these problems relates to the criteria and norms to be applied in determining whether a certain learning activity qualifies as a lifelong learning activity, hence is to be included in the surveys.

Types of Non-Formal Education

- Adult literacy programmes
- Basic education for out-of-school population
- Functional literacy and life-skill training
- Agricultural extension and rural development
- Production and service trade training
- Non-formal tertiary education
- Language and communication skills training
- Religious education
- Culture and leisure education

For example, while organized educational programmes by academic year and semesters are clearly covered under the measurement of lifelong learning, should the surveys include a half-day seminar on a specific topic as a lifelong learning event ? Or a visit to the museum ? Or the act of watching a documentary film on television about penguins in the Antarctic ? It can be noticed that there can be a wide range of activities spreading across formal and non-formal education and informal and random learning that require very clear-cut operational criteria and norms to serve as the basis for correctly determining whether they should be included or excluded during the measurement of lifelong learning. Can a certain minimum duration of learning be one of these criteria? Or should we limit such measurement to only organized learning programmes as defined in the ISCED, excluding any ad hoc and short-term learning activities?

In developing the monitoring of non-formal education², UNESCO advocates the adoption by each country of a pragmatic approach in cumulatively building a database of non-formal educational institutions and programmes, beginning with existing types of non-formal education for which information is available, to gradually expand to include information on other types and sub-types, so as to develop a standard typology of non-formal education. This approach can be applied by some of those countries interested in developing the measurement of lifelong learning, so that they may feedback experiences, problems, issues and solutions to both UNESCO and Eurostat.

In conclusion, UNESCO supports the work of Eurostat in developing the measurement of lifelong learning, and wishes to continue to be associated in the recommended actions to develop a classification of learning activities and to design a new European Adult Education Survey, in close linkage to UNESCO's own programme in follow-up to the Delors Report on Education in the 21st Century⁴, the Education for All Dakar Framework of Action⁵, and the mission of the UNESCO Institute for Statistics to improve the policy relevance and quality of education statistics.

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MEASURING LIFELONG LEARNING

GRAF PÜCKLER Botho

Bundesvereinigung der Dt Arbeitgeberverbände

Breite Strasse 29

10178 Berlin

B.Graf_Pueckler@bda-online.de

1. The industrial nations of this world are going through in a phase of profound structural change typified by the spread of knowledge-based forms of work and production, intelligent products and the services which are often inextricably associated with them. Nowadays “knowledge” is used as a factor of production and has equal status with the traditional factors of production that are land, labour and capital. The possession of knowledge is decisive for the competitiveness not only of individual companies but also of nations. Particularly for nations which have no natural resources of their own, the quality of their “human resources” is their vital asset. Investment in human resources is thus crucially important for economic growth and prosperity. It plays a decisive role in global competition.
2. Thus the knowledge-based society offers great opportunities but is also - and this should not be overlooked - fraught with dangers. It can split society into those who possess the knowledge and those who have failed to keep pace with the ever increasing demands for qualifications. Anyone who is already at a disadvantage in this respect runs the risks of becoming one of the losers of the knowledge-based society. This means that, for socio-political reasons if nothing else, education, training and continuing training systems must create the conditions for minimising such dangers.
3. This requires suitable indicators to establish in which direction the need for qualifications will develop over time. This is necessary in order to give those who are outside the labour market a chance by providing suitable training and continuing training. However, those who have jobs but regards them as under threat must also be given the chance to obtain further qualifications in order to keep their jobs or to be able to apply successfully for new ones.
4. A large volume of data on the education system is generally available at national level. In Germany, for example, it is easy to extract from education statistics detailed information on the level of public expenditure on education, i.e. the imparting of knowledge: for example, in 1996 approximately DM 168 billion or approximately Euro _ 86 billion, which was about 9% of public expenditure. There are also detailed data on the number of pupils, trainees and students and on the number of entries to and dropouts from courses. We also know the number of university examinations taken and the average overall mark. We also know, of course, how many pupils/students have thrown in the towel and left school/university in mid-stream. In Germany, overall data and information on the educational qualifications of the population are based mainly on the results of the microcensus. In addition, there is comprehensive statistical information from the Federal Institute for Vocational Education, the Institute for Labour Market and Occupational Research and other public, semi-public or private institutions. On the basis of such publications, we can obtain a fairly accurate and comprehensive picture of the present level of education of the population and its structure, the duration of training in the individual course, etc.
5. At international level there is also considerable information on the number of pupils, students etc. However, this information is mostly in the form of statistics on individuals who are in the education system, i.e. the

number of pupils, students etc. broken down by sex, age and origin in the individual stages of the education system.

6. Difficulties arise, however, if we look for comparable data on “knowledge” itself, its content and its structure. There are no statistics on this, either at national or at international level. And the reasons for this are understandable, since the definition of the factor of production “knowledge” is no easy matter. We should nevertheless try to come up with suitable indicators to give us information on “knowledge” and its structure.
7. The advantage of such statistical indicators is that they reveal any shortfalls. International comparisons could bring to light at an earlier stage both positive and negative trends in the education sector. If the national education system does not succeed in giving young people the necessary knowledge corresponding to the present international level, their chances of entering the labour market are considerably reduced. In order to ensure their competitiveness, firms are obliged to attract the best brains - if necessary, from abroad. One thing is clear: competition for the resource “knowledge” is well under way. For example, a German economic journal recently ran the following headline: “In order to safeguard prosperity and economic growth, countries are head-hunting each other’s best brains”.
8. As we get away from the formal education sector and get closer to the informal sector, information at both national and international level becomes increasingly sparse. There is inadequate or no statistical information on the areas of the non-formal and particularly the informal education sector, where there is a massive shortfall of information, particularly since this is an area in which lifelong learning is a central feature. Since I am here to represent the users of industry, I should like to confine the rest of my remarks to the area of lifelong learning connected with the world of work, i.e. with in-house/vocational continuing training.
9. The rapid increases in knowledge, the changes in forms of work and work organisation, and the introduction of shorter but more flexible working hours mean that nowadays every individual is required to constantly upgrade his/her competence and to act with increasing individual responsibility. The level of competence and the level of individual responsibility are inextricably bound up with the educational/training qualifications obtained. More and more people are staying longer and longer in the education system so that they can obtain the requisite qualifications with the highest possible marks in order to optimise their chances for entry into working life. However, the qualifications people have already achieved are not enough to enable them to establish themselves successfully in the long-term and for their whole lives on the labour market since, in the wake of the very rapid advances in science and technology, the half-life of knowledge has become ever shorter. New knowledge replaces old knowledge at ever shorter intervals, and this trend affects virtually all spheres of scientific and technical knowledge. Thus the extent and very rapid advance of computer technology and its impact on science, production and even the private sphere of everyday life were unimaginable ten to fifteen years ago. Today we are facing a similarly rapid development in biotechnology in general and in genetic research in particular. This means that today knowledge once acquired is no longer enough for professional success. Rather, the knowledge acquired must be constantly extended, whether by participation in in-house continuing training courses or by own-initiative training.
10. Senior managers know that the competitiveness of their companies is largely attributable to the qualifications of their staff. Qualifications are therefore equivalent to securing the future of businesses. Quality and technical optimisation cannot be achieved unless production staff know how the components they make combine to form a whole product and where the potential sources of error are. Decisive product improvements are fairly often based on the suggestions of skilled production staff. But not only products but also production processes are being constantly improved. Here too, it is precisely skilled staff who are motivated to maintain their know-how at a state-of-the-art level and it is their suggestions for improvement which enable production processes to be optimised. They help to avoid costs and to make their firms more competitive. High qualifications are not, however, obtained automatically. Managers therefore offer their staff the possibility of in-house training so that they can maintain the knowledge and skills required for ensuring quality and/or acquire the new qualifications required to manufacture new products. In-house training takes many forms, the basic ones being the following:
 - Learning on the job
 - Self-teaching with learning aids
 - In-house and external courses

- Information events
 - Re-training courses
11. The main types of in-house training are learning on the job, self-teaching and the participation of skilled and management staff in information events. Most of these training seminars are conducted by the companies themselves as part of targeted training programmes, courses, seminars etc. Participation in such training courses is compulsory in some cases but voluntary in others.
 12. What statistical information is relevant in this field from the point of view of industry?
 - Type and number of in-house training courses
 - Forms of training and duration, level and content of the course
 - Purpose of the course
 - Overall expenditure on training
 - Number of participants/participations by age, sex, company and function
 - Where do training courses take place? Externally or in-house?

Derived indicators

- Expenditure per participant/hour or per employee/hour
 - Expenditure on training as a percentage of total personnel costs
13. This does not necessarily require **new official** statistics. In my view, this is mainly the preserve of scientific research institutes, which can conduct such investigations by means of voluntary sample surveys. For example, the Institute of German Industry in Cologne regularly conducts such surveys, which produce interesting results.
 14. However, the extremely rapid advances in technology, which result for employees on the shop floor in constantly new production processes or new services, also require from the staff themselves the willingness to improve, or at least to maintain, their employability by constant learning. Without this willingness on the part of employees to constantly increase their own employability, any training scheme proposed by the company, the government or any other body is bound to come to nothing. We are all familiar with the English saying “employability for employment”. This applies not only to those who want to enter the world of work at the beginning of their professional life or to those who have lost their jobs and are trying to increase their employability by taking part in re-training or continuing training courses. It also applies to those who already have a job, since nowadays they too must realise that they must constantly adapt to new working conditions and new working contents. Already achieved specialist skills are, of course, still the basic requirement for obtaining a skilled job, but this alone will not be enough in the future. We must adapt ourselves to the fact that, as a result of the short half-life of knowledge, lifelong learning is becoming increasingly important and will also take up an ever-increasing proportion of people’s time – i.e. training not only during working hours but also during leisure time. At present official statistics contain no or only insufficient information on this. Furthermore, we know little or nothing about the financial resources – in absolute figures or as a part of their disposable income, which those who attend training/continuing training courses are prepared to spend. This applies both to the level and the structure of individual expenditure on continuing training. And lastly, we know nothing about whether such efforts have resulted in further qualifications and whether they have, in practical terms, positively influenced the professional situation of participants. It would therefore be worthwhile to obtain specific data on the content of continuing training course offered and requested and their success (effectiveness).

LIFELONG LEARNING FOR ALL: A CHALLENGE FOR EUROPE

ANDRE Maria-Helena

Confederal Secretary ETUC

Bd. Du Roi Albert II, 5

BRUSSELS

MANDRE@ETUC.ORG

Europe is confronted with a number of challenges, resulting from the globalisation of the economy and markets, the development of new technologies, especially information and communication technologies, the demographic challenges and of the deep and direct impact these have on the way new jobs are being created and on the way work, services and production are organised.

The promotion of innovation, the reinforcement of social and territorial cohesion, access to knowledge and information for all and the promotion of employability in order to reach full employment, are part of the answers needed to face successfully these challenges. No one can be left out and the contribution of each and every individual is essential in order to meet the objectives set by the Lisbon European Council.

ETUC supports the set of strategic targets adopted by the European Summit, aimed at promoting employment, economic reform and social cohesion as components of the knowledge-based society. In particular, we consider it is essential to establish an integrated macroeconomic policy mix to re-attain full employment and to create more and better jobs in Europe and greater social cohesion.

The creation of a learning society demands new opportunities for all, and must not create new categories of social excluded; it must give diversified and relevant answers to the needs of the different target groups, not just at the right moment but also in different moments of the individuals' lives. It must ensure that individuals can acquire the knowledge, skills and qualifications – the instruments – to enable them to react in the face of the rapid evolution of society and of the labour market. Knowledge must be recognised as an asset to be developed along with the conditions that govern access to it.

Access to lifelong learning – which must be recognised at national and European levels as an individual right with collective guarantees - contributes to individual development and personal fulfilment, the promotion of equal opportunities, the development of active citizenship and promotes greater social cohesion and integration in the context of societies that are becoming increasingly multi-cultural. It also fosters economic development, through the continuous updating of skills and a better match of skills' supply and demand. And last but not least, it will preserve the European social model. For all these reasons, the ETUC does not accept the essentially employment-related view that is often adopted as regards the role of lifelong learning.

We must work towards the creation of a new culture of lifelong learning. It requires new innovative and integrated approaches and the right policy mix. However, this is not an easy process and it will not happen from one moment to the other. Everyone talks about lifelong learning, its strategic importance, the need to implement it for everyone and at all levels, but in reality it seems that not enough is being done.

New understandings, new rights and responsibilities will have to be promoted if lifelong learning is to become a reality and part of the European culture, contributing to attain the objective of rising productivity, profitability, competitiveness, full employment, high skills, job quality, employability, a fairer distribution of income, a better reconciliation between work and family life and an active citizenship.

The ETUC considers that this new approach involves not only far reaching changes as regards education and vocational training systems, which must be reformed and modernised in order to attain high levels of quality and to satisfy the needs of the economy, of the individual and of society, but also in terms of greater investments, of a greater cooperation between the different actors and new forms of management, information, consultation and participation.

It is a complex task and clearly it requires the overall agreement on the fact that lifelong learning is a permanent and ongoing process; that it must be conceived in terms of time and resources. It implies a new vision of the time factor, culminating in establishing a better balance between the time devoted to private life, work and learning; it goes beyond the objective of increasing or maintaining employability; it demands innovative forms of investment and new ways of using the resources available; it must involve a redefinition of curricula; be of high quality; concern all phases of education and training (nursery school, primary school, secondary school, higher education, training for adults); it must deal with questions such as the relations between formal, non formal and informal learning, while recognising the need for all individuals to receive ongoing training, irrespective of their age, their individual needs and the time and place when they acquire skills, which are increasingly diversified.

If we can agree on this, we must also agree that lifelong learning implies greater personal motivation and investment, in terms of both quantity and quality.

We know that at company level, access is still very much restricted to those who already have a fairly high level of qualifications and access remains practically impossible for older workers, those with atypical contracts (in particular women), seasonal workers, ethnic minorities, disabled people or those having a low level of basic qualifications.

Access to lifelong learning is closely linked to the motivations of each individual: career advancement, new qualifications or skills, a better salary geographical or professional mobility, enhanced employability, the evaluation of previous learning experiences (which can be successful or a failure), or simply self-fulfilment.

Employers must also be motivated and consider lifelong learning in terms of an investment that has a strategic potential in terms of improving the company's performance and labour relations.

Trade union organisations must also play an essential role in motivating employees with regard to the benefits of lifelong learning. Through collective bargaining or trade union training programmes at all levels, trade union organisations must contribute to increasing the awareness of workers and trade union delegates of the challenges posed by the knowledge-based society.

ROLE OF STATISTICS, INDICATORS AND TARGETS

A new approach is needed, in order to take into consideration quantitative and qualitative aspects. It is necessary to go beyond the collection of purely economic data and to take into consideration the effects of lifelong learning on the individual and on their capacity to adjust to a society that is changing very quickly in social, cultural and technological terms. The implementation of the Lisbon strategy implies better statistics, better indicators as well as a common strategy on how to measure lifelong learning.

It is clear that there are still considerable shortcomings in the statistical data, especially on the way it is collected at national level, if it is updated or not and how to make it comparable at European and international level. Probably more could be done on the basis of the available statistics and research findings.

From a trade union perspective, these are some of the areas that need to be looked into:

The need to increase public investments in human resources development and to measure non formal learning

Today, it is widely acknowledged that the level of investment of governments and employers in lifelong learning is far from adequate, both as regards more "traditional sectors" and ICT (research and development, software, telecommunications, etc.).

The proportion of national income (GDP) devoted to education is an important indicator of the importance attached to education by Member States. Educational spending constitutes an important investment in human resources. On average, public spending on education represents 5% of GDP in the EU.

This means that the level of public expenditure in the field of education continues to be far below the requisite level, in particular with regard to the commitments entered into at the Lisbon European Summit. Member States did not set specific targets in terms of a substantial annual increase in the percentage of GDP to be invested in the development of human resources.

Also here there are substantial differences between Member States (from 3.5% in Greece, to more than 8% in Denmark in 1998, being the EU average of around 5.5%). Although in some countries it has been possible to increase expenditure slightly, in at least six member states expenditure declined by up to 1% of GDP.

It is clear that public spending is not the only indicator on the quality of education. Efficient organisation and administration of education systems can make a decisive contribution to improving educational quality. Public spending is, however, relevant in terms of constructing and maintaining school buildings and for the ability to react to rising educational requirements as well as to the introduction of new ICT in schools. The adequate provision of public funding is an absolute necessary condition for training and education systems to be modernised and developed.

ETUC considers that it is not enough to call for a substantial raise in investment in human capital, as proposed by the Lisbon Council. The Commission's Communication to the Stockholm European Council "Realising the European Union's potential", recognises the lack of progress achieved in the framework of the European employment strategy with regard to the implementation of lifelong learning, in particular with regard to the fixing of national objectives.

This means that a target should be set of raising education spending to 7% of GDP. At the same time, it would be important to have more up to date and comparable data on issues such as investments in infrastructure (including social infrastructures and ICT accessibility). It would also be important to define the type of indicators that are needed at the European level in order to measure results in terms of quality of education and training systems.

This type of data only concerns formal education.

Alongside the responsibility for financing from public authorities which remains essential, two major patterns are emerging as regards the question of investment: the use of collective funds, resulting from bipartite or tripartite agreements and the use of individual "learning accounts".

While recognising the need to implement an approach based on shared responsibility as regards the financing of lifelong learning, where the individual also has part of the responsibility, notably in relation to his or her own motivation and learning capacity, the ETUC cannot accept that the main responsibility for this financing should lie with the individual. Thus, the individual "learning accounts" are one of the elements of financing training and are above all appropriate for financing learning programmes freely chosen by the individual. It would be interesting to have more concrete data on the take up of "individual learning accounts" as well as in terms of the results achieved.

Non-formal education is becoming as important as formal learning, especially that acquired in the workplace, but also in other settings.

Non-formal learning must also be measured, especially the one acquired at the workplace. It is important to the extent that it is a way of guaranteeing the transferability of qualification in the context of geographical or professional mobility, thereby contributing to individual motivation and employability.

Ensuring the recognition of the skills and qualifications obtained in a non-formal context, as well as the "accreditation of prior learning" (acquired at work or in another context) falls within the scope of the responsibilities of the social partners, at the most appropriate levels; this means that they must be in a position to contribute to the definition, accreditation and recognition of such by the institutions responsible for education and training, as well as their inclusion in national systems.

The need to raise commitments for lifelong learning (in order to match expectations)

Just 6% of the population aged between 25 and 64 participates in educational and training measures, according to the 1999 Eurostat data. The proportion of the labour force participation in further training measures must be substantially increased.

As said before, it is necessary to guarantee the right of access to lifelong learning, as well as the provision of adequate training offers and a solid financial basis. While recognising the central importance of ICT skills, lifelong learning should not be restricted to such skills and encompass a broad range of skills, including foreign languages, social skills and social competences. Simple technical skills are no longer sufficient!

There is the need to have data on access to lifelong learning at work, foreign language skills, supply of *e-Learning*, types of learning acquired and its recognition as well as on skills needs in the different sectors.

The work developed by Eurostat to define quantitative and qualitative indicators is very important in this respect.

To reduce the number of school drop-outs

On the EU, there is an average of 22% of young people aged between 18 and 24 that lack any education or vocational training qualifications beyond lower secondary level, even if this average conceals substantial differences between the EU Member States (8% in Finland – 41% in Portugal, according the EU Labour Force Survey).

The ETUC supports the goal agreed in Lisbon of halving the number of low-skilled young people or the intention formulated in the Employment Guidelines, to reduce significantly the number of school dropouts.

Yet, the EU should set more ambitious targets: overall the proportion of youngsters lacking more than the minimum educational qualifications and vocational training should be pushed down to below 8%, even if this demands considerable efforts to be developed from the part of certain Member States. A better use of the European Social Fund could certainly help in this respect. More data on this is certainly important.

At the same time, it is necessary to have indicators on literacy as well as more qualitative indicators relating to the type of jobs young people have access to, how stable or precarious they are, the type of contracts and the level of wages.

Greater efforts from companies

Lifelong learning takes different forms. However, employers have a specific responsibility in offering lifelong learning measures to their workforce.

If we look at the CVTS, Eurostat data from 1993, less than 60% of companies with more than 10 workers offered further training measures of any kind. In the case of companies with up to 49 workers the figure was only 50%. In relation to large companies almost all offer further training measures.

Thus, people working in small firms are at a disadvantage compared with workers in large companies in terms of opportunities for lifelong learning and developing their skills.

There are substantial differences in participation rates in terms of the existing level of qualifications of the workers concerned. Women have even more difficulties. Well-qualified white-collar workers embark on further training relatively frequently, whereas the participation rates among unskilled and semi-skilled blue-collar workers are much lower.

Meaningful and up-to-date data are required for an effective benchmarking. In an environment of rapid technical change, lifelong learning measures are not merely a cost factor but a vital long-term investment to safeguard the competitiveness of firms and job security. All employers should therefore see it as their duty to invest in training the workforce, as emphasised in the report of the high level group on the management of industrial change.

The ETUC considers that in this respect the issues of working time and work organisation play a very important role. Learning and training requires time, whether it be free time or working time. Thus, the lifelong learning policy and working time policy must be related and the social partners must negotiate a new balance between working time and training time.

Data in relation to these issues is of enormous relevance: how many hours workers spend in training, link between reduction of working time and training time, results of training in terms of greater geographical or professional mobility, impact in terms of wages as some of the areas we would like to see covered.

A new organisation of work implies the creation of conditions that are favourable to learning in the workplace. The identification of needs in terms of training and qualifications within the company, together with the information, consultation and active participation of workers and their representatives, is a key element in a modern human resources development strategy, leading to the promotion of a high level of skills within the company, increased productivity and competitiveness, as well as the development of “learning organisations”. These results must translate into greater motivation among employees, an increase in the quality and safety of jobs, as well as a new definition of pay systems. Data on the number of companies utilising high-performance work systems is very relevant in this respect.

Digital literacy

Active participation in the knowledge-based society presupposes comprehensive ICT skills.

The requirements set out in the 2001 Employment Guidelines that all schools should have access to the Internet by the end of 2001 is a first step in the right direction. There is already an upward trend in this respect, which in many Member States is already above 90%.

However, recent research data obtained by the European Commission do not seem to confirm that companies are increasingly aware of the benefits of digital literacy. According to the data, 45% of blue-collar workers and 73.5% of white-collar workers use a computer in the normal course of their work; nevertheless, only 22% have received ICT training and only 16.7% have followed a training programme paid for by their company. This demonstrates clearly that individuals are financing their own training, without the support of the public authorities or employers. If employers persist in this policy, it will be very difficult, as the ETUC wishes, to include in the framework of the collective bargaining process at different levels, the implementation of the conditions to allow every worker to acquire, by the year 2003, an information society culture, as recommended by the employment guidelines.

The diffusion of ICT is expanding rapidly and in the future all workers must have access to further training. In the case of ICT the need for lifelong learning is particularly apparent.

The social partners have a particular responsibility to overcome the existing skills gaps. Yet, it is above all the private sector employers who must face up to this responsibility. The aim must be to offer 20% of all workers an appropriate further training measure per year. This would ensure that over a period of five years all workers would receive some training in this area.

Also the public administration can be taken as a model in respect to their high standards of employee training. In the central public administrations of Belgium, Denmark and Spain 80% of workers have received ICT training, in Austria the figure is of 90% and in the Netherlands and Sweden such training has been provided to the entire workforce.

Innovation in teaching and training methods – the role of teachers and trainers

The development of new teaching and training materials, capable of meeting individual needs implies teaching material with contents suited to the needs and learning speeds of the different target groups.

The new methods must motivate, encourage the development of a critical mind and stimulate the commitment and active or interactive participation of not only students, but also of teachers and trainers.

In this respect, the ETUC considers important to have data on access to digital literacy by teachers and trainers and what measures are being implemented in order to fulfil the target set by the Lisbon European Council (by 2001 teachers and trainers should have digital literacy).

It is also important to have more data on the shortage of teachers and trainers, which seems to start affecting a considerable number of European countries.

THE STATISTICAL RECORDING OF LIFELONG LEARNING FROM THE VIEW- POINT OF PRODUCERS OF STATISTICS

HÖRNER Walter

Regierungsdirektor
Statistisches Bundesamt
Gustav-Stresemann-Ring 11
65189 Wiesbaden
GERMANY
Walter.Hoerner@statistik-bund.de

Introduction

- (1) For some time now, discussions in the field of education policy at national and international level have been very much focused on the topic of “lifelong learning” (LLL). However, consensus does not yet appear to have been reached on what exactly this means and how it can be recorded statistically with a view to producing objective, quantitative studies for the purpose of, say, policy advice.
- (2) First, then, we must provide a concrete definition of lifelong learning, so that policymakers, business-people, social groups and the individuals engaged in the learning process have a real idea of its current status and of the headway being made in this field.
- (3) This paper casts light on a number of questions from the viewpoint of the producer of statistics. The statistician is expected to take the abstract concept of LLL and flesh it out using suitable characteristics and indicators, passing the resultant figures and information on to politicians, researchers and the like. This should be done as expeditiously as possible so that diachronic trends can be identified in good time. Findings should also, obviously, be harmonised between the larger countries so that international comparisons may be made. This paper explores the options that will ensure that this wide range of objectives is gradually met.

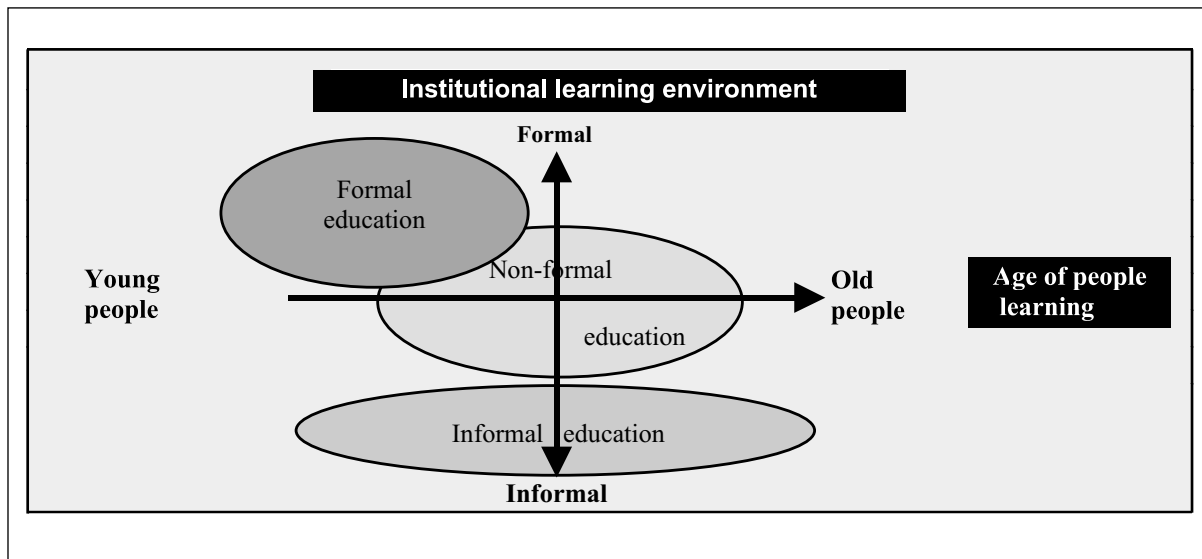
Lifelong learning - a complex, multifaceted topic

- (4) The point of departure for any body of statistics is the need for information - either an existing one, or one arising from a general plan comprising political or analytical goals, schemes, measures, etc.
- (5) The following considerations are based on a concept of lifelong learning that has recently found broad acceptance and that can basically be summed up as follows:
 - Learning should be understood as a permanent process that embraces the whole of an individual’s life, from earliest childhood to old age (“from the cradle to the grave”).
 - Given its diversity and complexity, learning should be interpreted in a broad individual and societal sense and not restricted to an individual’s professional career.
- (6) Learning is not, therefore, to be seen as a phase of childhood or adolescence that has a clear start and finish and that is primarily geared to the acquisition of a particular vocational qualification - it is an ongoing societal and individual concern that touches on every area and phase of life.
- (7) The idea of lifelong learning thus calls for a new and broader view. Firstly, account must also be taken of less formal educational measures and learning activities. Secondly, the main focus is not on the various types

of educational establishments, but the individual who, in the course of his life, takes part in consecutive or simultaneous learning processes or takes advantage of various learning opportunities in parallel.

(8) In addition to the temporal dimension of lifelong learning (learning activities taking place during the various phases of an individual's life), there is also the institutional dimension of lifelong learning. This is becoming increasingly important as learning moves further and further away from its conventional format and shifts to a wide variety of social environments. This also affects the contents of learning processes, which closely match the underlying and changing objectives of the individual concerned (professional, social and personal targets). Fig. 1 shows these two dimensions of lifelong learning.

Fig. 1: The “length and breadth of life” approach



NB: formal education, non-formal education and informal learning are concepts that will be examined in greater detail later. For more details, cf. Annex 1 to this paper.

(9) On the whole, the lifelong learning approach basically involves a fundamental shift away from traditional, results-oriented educational methods towards modern, process-oriented and modular learning formats. One of the reasons for this is that, in addition to the State, the individual and non-government bodies are having to shoulder much more responsibility for education and learning than they previously did.

(10) In addition to the question of formal participation and restrictions on access to the traditional education system, there is the question as to whether and to what extent individuals are prepared and able to make a commitment in terms of time and money to their own education. An individual's personal circumstances and motivation thus assume special importance in the context of lifelong learning.

(11) To sum up, we can broadly define lifelong learning as **all types of learning entered into by individuals during their lives in order to acquire or expand knowledge, skills and abilities in the personal, vocational or societal fields.**¹

Statistical measurement

(12) Statistical measurement means providing numerical information on real phenomena using recognised statistical methods and procedures. This raises the following fundamental methodological problems and challenges:

¹ This definition is largely consistent with, for example, that used by the Eurostat Task Force Measuring Lifelong Learning, (part of the Working Committee on Quality Indicators for Lifelong Learning) in the Memorandum on Lifelong Learning (“...all purposeful learning activity, whether formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competences”).

- **Conceptual adequacy**

As a rule, real phenomena and the accompanying scientific and political ideas that form the basis for statistical measurement do not find their exact counterpart in statistical concepts, nor can they yet be defined in terms of their ability to be represented statistically. This applies equally to the fundamental concept here - lifelong learning. General concepts must therefore first be suitably converted into an approach that is compatible with statistical measurement. The statistical concepts, breakdowns and classifications that are used must be selected in such a way as to achieve the best possible match with the general objectives of the study. However, the fundamental problem here is that there can never be a *perfect* match between the concepts with which science or politics operate (which are based on *ideal types*) and the corresponding concepts with which statistics operate. Ideal concepts, particularly in the field of social sciences (as is the case here with lifelong learning) always involve judgements and non-quantifiable components that cannot be depicted using statistical concepts².

- **Coverage problem**

The scope of the survey must be defined in such a way as to ensure that the genuine statistical units (in the case of lifelong learning this means, in addition to the **institutions** and places of learning at which lifelong learning activities take place, the **individuals** that participate - or do not participate - in such activities) are completely covered and non-genuine units excluded³. In doing so, care should be taken to ensure that the statistical units so defined actually have the relevant data at their disposal.

- **Programme adequacy**

The characteristics of the statistical units needed to statistically chart lifelong learning must be as comprehensive, accurate and topical as possible. The statistical production process (i.e. the methods and procedures used for the collection and processing of statistics) must be selected in such a way as to ensure that the characteristics are recorded as objectively and pertinently as possible. A secondary requirement is often imposed - namely that the statistical instruments used and the findings produced be as compatible as possible with the existing statistical system. This may lead to less-than-perfect solutions for individual subsectors. On the other hand, the combination of specific data on, say, lifelong learning with data that have been collected for other purposes (e.g. on the individual's socio-economic background) may increase the overall information potential (e.g. Labour Force Survey).

- **Efficiency**

Shortages of staff and materials mean that what resources *are* available must be used efficiently. In practice, this principle is often scaled down to remaining within a specified budget. Consequently, it may not always be possible to apply the optimum statistical solution during the course of a survey.

- **Compatibility**

Depending on the legal, institutional and organisational rules that apply to statistics in a given Member State, the incorporation of a new set of statistics into the existing statistical systems may be subject to special conditions or even give rise to certain conflicts.

- **International comparability**

International requirements create additional problems. Generally speaking, the statistical concepts and systems used by the Member States differ, particularly when statistics are collected for national purposes and are thus tailored to national requirements and the system used in a particular country. However, even in in-

² In order to physically compile a set of statistics, statistical concepts must be found which are (i) dependent on the survey procedure; (ii) as unambiguous as possible and (iii) as straightforward as possible to apply during the course of the survey. However, with statistics that are based on administrative data ("secondary statistics"), the statistician is generally bound by the definitions of official statistics. In addition to the basic problem of conceptual adequacy mentioned above, this creates a situation in which the statistical concepts are generally less substantial than the underlying "ideal type" concepts.

³ In a lifelong learning survey, this would mean, for example, including learning processes that are "voluntary" and take place outside of conventional educational establishments.

ternational surveys - which are harmonised in advance and which therefore feature a single survey design - cultural influences are just one of the factors that must be taken into account in connection with response behaviour. As a rule, there is a conflict between the goal of properly depicting the state of affairs in any given country and that of maximum possible international comparability.

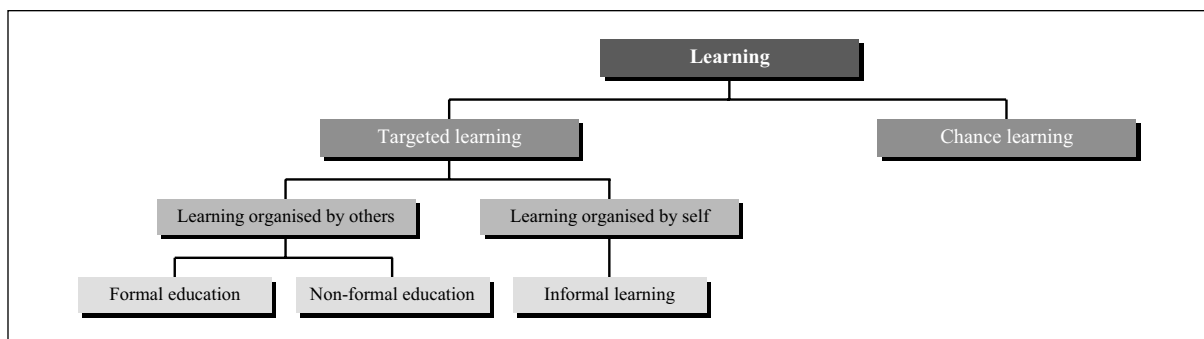
(13) To sum up, there can never be a perfect match between a real phenomenon - in this case lifelong learning - and its statistical depiction. The closeness of the match depends not just on the intelligence, expertise and imaginativeness of the statistician, but also largely on the basic conditions governing his or her work. Basically, a distinction must always be made between reality and its statistical portrayal.

Concrete approaches to the statistical recording of lifelong learning

Statistical concepts and coverage

(14) It follows from the above that, in addition to the conventional types of education which are provided by educational establishments and which have hitherto been covered adequately (**formal education**), the statistical measurement of lifelong learning must also recognise and incorporate the hitherto neglected processes in contexts outside the education sector, as these are also legitimate statistical variables. These include, for example, further training courses run by institutes outside the education sector (such as enterprises), as well as specific further training measures in the non-formal education sector, such as those run by adult education centres etc. (**non-formal education**). They also include learning activities arranged by individuals or other bodies which are not highly organised, which take place in various types of learning environment outside the institutions referred to above and which have a variety of objectives, e.g. computer-based or media-based learning, group learning with friends etc. (**informal learning**). Fig. 2 shows the relation between these types of learning.

Fig. 2: A classification of learning activities



(15) Account should not, however, be taken of chance learning. Even though this may be of great empirical significance, it largely escapes operational definition and thus statistical measurement. For further information on formal, non-formal and informal learning, cf. Annex 1.

(16) Unfortunately, this classification does not yield any immediate clues as to how data on the individual categories can be statistically recorded. Nor is the International Standard Classification of Education (ISCED) of any help. This uses the curriculum as the classification unit, which in many Member States is the survey unit too. This pragmatic approach does, admittedly, permit uniform statistical coverage and allow data on the formal education sector to be compared internationally. However, it is difficult to provide appropriate coverage for non-formal education using this as a basis, even though it does yield a good deal of information about the curriculum as a statistical unit. Ultimately, the curriculum cannot be maintained as the classification unit for informal learning, as the latter covers activities which, by their very nature, fall outside the scope of organised programmes. Statistical coverage must start with the individual.

(17) One way forward might be to further subdivide the categories in question according to more pragmatic criteria, e.g. into (a) pre-school education, (b) compulsory schooling, (c) post-compulsory education, (d) continuing vocational education and training, (e) non-formal general education and (f) informal learning (for details, cf. Annex 2). This system differs from ISCED, the basic purpose of which is to classify educational pro-

grammes by educational level rather than to compile statistics. By contrast, the classification proposed here appears to be better suited to taking the twin dimensions of lifelong learning into account.

The need for information - and statistical indicators

(18) Statistical production initially yields basic data on the extent and structure of the statistical variables under investigation in each of the specialist subcategories. These figures provide much important information for policy discussions or for evaluating the relevant measures. As a rule, however, these figures are not enough by themselves. Recent years have thus seen the development, at national and internal level, of systems of indicators⁴ that yield findings about specific fields and allow the relevant comparisons to be made from various points of view - material, temporal, regional or international.

(19) Like traditional education statistics, the following three areas of indicators (each with their specialist subdivisions) can be drawn on to provide a statistical picture of lifelong learning:⁵

- Indicators on **participation** in learning activities (access and attendance). These provide information on the number of participants and their socio-economic characteristics.
- Indicators on **investments** in learning (expenditure and funding). These provide information on monetary expenditure on, or the cost of, educational measures or learning activities and on the public and private sources of funding to cover such expenditure.
- Indicators on **achievement**, i.e. the outcome of educational and learning activities. These measure output, or the skills acquired as a result of the time and money invested.

(20) Lifelong learning is a topic that has recently moved to the top of the agenda in discussions about education policy and employment policy, particularly at international level⁶. Politicians are thus very keen to have the relevant data in the near future. To this end, a number of initiatives have recently been started, and working parties set up - particularly at international level - with a view to coming up with proposals for statistically measuring lifelong learning or developing sets or systems of indicators on lifelong learning.

(21) Results for the proposed indicators are not yet complete, or else the available indicators give an incomplete picture of lifelong learning. It should be borne in mind when assessing proposals for LL indicators that there is a great deal of political pressure to produce results within short deadlines so that current political needs can be met (this also includes making use of data sources already available). This being the case, we cannot expect to see a balanced and exhaustive system of indicators on lifelong learning in the near future. The indicators so far proposed thus concentrate primarily on the area of formal and non-formal education, data and indicators on informal learning being few and far between. That said, the indicators currently being discussed or developed graphically illustrate the extent to which lifelong learning is already understood (for further details, cf. Annexes 3 and 5).

Aggregate indicators on lifelong learning

(22) Politicians and the press often ask for less summary indicators on complex subjects such as lifelong learning. Given the large variety of activities encompassed by lifelong learning, aggregation proves problematic in methodological terms - and almost impossible in practice.

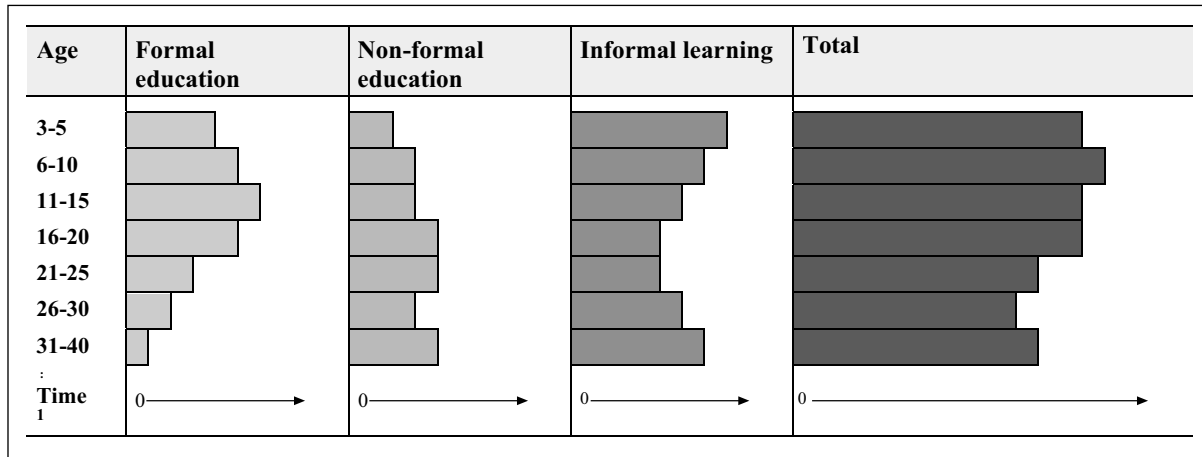
(23) A solution of sorts may be found to the aggregation problem by using unidimensional data - mainly the **time** spent on learning activities or the **financial resources** invested. Each of these variables works with just one dimension and can therefore be aggregated. A good example of globally aggregated structural data are “national profiles”, in this case of participation by the population as a whole in lifelong learning (cf. Fig. 3).

⁴ Statistical indicators are figures that allow specific conclusions to be drawn about certain policy or research topics such as lifelong learning (e.g. number or proportion of persons engaged in lifelong learning activities over a specific period of time, or private expenditure on lifelong learning as a portion of total private expenditure/public expenditure or expenditure on education, etc.). In this sense, indicators may be either basic data on the extent or structure of a statistical phenomenon or figures that bring together - and make sense of - separate statistical variables. Consequently, the term “indicators” is frequently used as a blanket term for all objectively relevant data in a given field.

⁵ Indicators and further information on these areas of indicators can be found in Annex 3.

⁶ Cf. the conclusions of the EU Lisbon summit (23-24 March 2000), an excerpt of which can be found in Annex 4. Proposed indicators for the EU employment guidelines can be found in Annex 5. The importance of lifelong learning was also stressed in a Communiqué adopted by the OECD employ-

Fig. 3: Representation of learning volume on the basis of data on time invested



¹ e.g. hours per day; hypothetical data (for illustration purposes only).

(24) Although these data are fairly crude, they do provide a graphic illustration of basic structural differences between, say, different countries or trends over time. It remains to be seen whether and to what extent these temporal data can be assessed in monetary terms and so yield more detailed information.

(25) Using time as a common denominator not only allows volume-based comparisons to be made of sometimes highly diverse lifelong learning activities at national level - it also allows international comparisons to be made. It also remains to be seen how data on time invested may be combined with conventional data on education to yield additional information. Even so, time-based data only provide information on the volume of education and learning (sometimes further broken down), not on the quality of learning. Nevertheless, the methodological advantages of this approach - particularly in an international context - should not be underestimated.

(26) As with the depiction of time-use data, thought could also be given to developing structural overviews of monetary parameters (expenditure on education and learning). Both would yield mutually complementary information on investment in education.

(27) Another approach to aggregated indicators would be to develop a **composite synthetic indicator** based on various partial indicators on lifelong learning in the form of an index. This could include quite different aspects of lifelong learning. This would provide a measure for making overall comparisons between countries or over time. The basic problem with implementing this approach, which is interesting in terms of its objective, would be how to select the indicators needed for this type of ranking and weight them prior to inclusion in the index.

Structural indicators

(28) For policy purposes, data on participation, investment and achievement could usefully be supplemented by indicators that cast specific light on the structure of education and learning and on trends that have been observed, e.g. indicators on the type and scope of available learning opportunities and on the way they fit in with each other in terms of organisation and contents. Possible points of departure include the specific gearing of curricula towards lifelong learning in the area of basic skills, increased flexibility of education programmes by the mutual recognition of achievement in examinations or the creation of institutions that document and recognise an individual's achievements or skills, irrespective of how these were obtained. For more details, cf. Fig. 4 below, which provides an overview of indicator areas.

(29) The recording of the institutionalised control of achievement also becomes increasingly important here, as does the ongoing development of available learning mechanisms (quality management), e.g. in the field of the further training of teaching staff at all levels of education. However, these components are generally not quantifiable. If need be, they could be recorded using qualitative indicators.

Fig. 4: Coverage of indicators

Area	Subgroups	Indicators
Participation	Numbers	Individuals by participation status
	Volumes	Time invested by individuals (per week/year)
Investment	Financial resources	Expenditure on staff and materials (pub./priv.); total, per participant Contribution of private households (e.g. school/study/course fees, expenditure on study materials); total, per participant
	Time	Time spent by training provider (e.g. hours taught by teachers))
Achievement	Institutionalised examinations	Individuals holding formal diplomas attesting to the completion of education, certificates
	Proficiency tests	Direct measurement of knowledge, skills and abilities
	Self-assessment	Direct questioning after a subjective assessment of proficiency
Structures and development processes	Type and scope of available learning opportunities	Creation of decentralised learning centres, institutions, teaching hours, etc.
	Adequacy	Tailoring in terms of LLL (specific gearing of curricula, e.g. focus on basic skills) Flexibility of education (removing obstacles to access; flexibility in the documentation and recognition of achievement)
	Consistency	Adjusting the contents of available learning opportunities
	Quality management	Institutionalised control of achievement within the system Mechanisms for the ongoing development of structures (e.g. ongoing training of trainers)

Additional data sources and data management

(30) In spite of the paradigm shift in education and learning, and the new and broader prospects this opens up, the formal education sector continues to play a central role, as it is here that the foundations for lifelong learning are laid. Consequently, existing education statistics continue to be of fundamental importance to lifelong learning. Studies should be carried out to establish, for example, to what extent the recording of the acquisition of, say, learning skills in the field of formal education could be given a more central role in future, in addition to formal certificates of academic achievement.

(31) The joint UOE programmes run by UNESCO, Eurostat and the OECD give an idea of the national sources of data on education that are currently available for international work. However, they do not as yet take account of the lifelong learning aspect. At present, there is no definitive overview of national sources of lifelong learning, particularly since the perception of LL differs so much from one Member State to the next, meaning that different countries allocate different types of learning activities to this area.

(32) To better meet international requirements and improve comparisons, there were basically two approaches in the past in the field of education statistics - the conversion of national survey findings using international rules and procedures (*ex post* harmonisation) and the development and conducting of *ex ante* harmonised surveys (at EU level basically in the field of household surveys and CVT at the workplace, and at OECD level basically in the field of performance and skills assessment). In terms of methodology and contents, these surveys have considerably improved the data that are available. Even so, international sources often only include data for selected countries.

(33) Annex 6 summarises the data sources that are currently available for international comparisons of lifelong learning. Other interesting sources that could be drawn on in the near future for studies of lifelong learning include the “lifelong learning” ad hoc module in the 2003 European Labour Force Survey, the European Adult Learning Survey recommended by the Eurostat Task Force Measuring Lifelong Learning (cf. Annex 7) and the European Survey on Income and Living Conditions (SILC)⁷.

⁷ The European Survey on Income and Living Conditions (SILC) is the successor to the European Household Panel (EHP), and is scheduled to be introduced in 2003.

The development and implementation of a statistical approach to lifelong learning - practical considerations

(34) Not surprisingly, it is not always easy to see eye to eye with a topic that is as complex as lifelong learning, and where the interests of the parties keen to devise a statistical approach for analysing this subject are so very different. This is particularly true at the start of work if there is still disagreement as to what constitutes lifelong learning. An added complication is that politicians tend, quite understandably, to make general or specific demands in the light of the current political debate. Statisticians, on the other hand, tend to exercise caution, assessing the chances of producing statistics in terms of basic conditions (which may limit room for manoeuvre) and resources (which tend to be limited). When work begins, there are also often major disagreements between Member States as to what statistics on lifelong learning should and could include. And the problem is only exacerbated when different committees are working on the same or similar topics without sufficient agreement or co-ordination.

(35) This being the case, it would appear helpful to make a clear distinction between what is politically or analytically desirable on the one hand (i.e. the general concept of lifelong learning and its development) and endeavours to secure adequate statistical coverage for it on the other. Similarly, when developing a statistical approach, a clear distinction should be made between what is statistically feasible, what is actually required and what, in the short-, medium- or long-term, can actually be accomplished. Experience with lifelong learning has hitherto shown that, if such a distinction is not made, communications between and within the interested groups (producers, users, etc.) readily lead to misunderstanding and opposition, things which could easily be avoided. In any case, it seems appropriate to draw up a detailed map of lifelong learning (both as a general policy concept and as a statistical approach) so that this can be used as a basis for establishing consensus about what should be recorded statistically, how urgently and within what sort of time frame.

(36) For the statistician, deciding on suitable statistical concepts, classifications and the like is not an end in itself, but a means to an end. Nevertheless, broad and clear agreement on what statistical categories should be used is as important as it is necessary when developing a complex statistical subsystem (basic data, indicators, etc.) of the type required for lifelong learning. This applies to policy analysis just as much as to statistics.

(37) When developing a statistical approach for recording lifelong learning, the choice between a “bottom up” approach (where existing statistics are gradually completed or further developed) and a “top down” approach (where agreement is reached on a harmonised, balanced and comprehensive approach, the survey instruments being decided on afterwards) is a black and white decision in appearance only. In the light of experience in similar cases to date, and in view of the urgent need for information to frame policy and the concomitant pressure of time on the one hand and prevailing statistical conditions on the other (existing statistics or statistical systems in the Member States; human, financial and material resources within the statistical system; legal provisions, etc.), the starting point must necessarily be the options open to the Member States and the data situation within international organisations. These can be harmonised and improved only gradually ((bottom up)). However, individual stages of work must form part of a comprehensive, long-term and flexible plan ((top down)) if optimum statistical coverage of this important topic is to be achieved with any degree of consistency and dynamism. In other words, the best way of proceeding is by means of a staggered approach which meets the data needs of policymakers as closely and expeditiously as possible without losing sight of the overall long-term objective and its gradual realisation.

Conclusions and outlook

(38) It is clear from the above that a start has already been made on a number of initiatives to produce statistics on LLL, and some preliminary findings are already available, particularly at European and international level. Based largely on existing statistics and data as they are, most of these figures refer to the formal and non-formal sectors, the field of informal learning having received very scarce coverage. This trend can be expected to continue in the short term. However, basic data on the informal sector should be compiled and made available as soon as possible. One promising approach here is the drawing up of national profiles on the participation of the population as a whole in education and learning, based on time-use data. These provide basic and comparable structural information on the LLL sector as a whole for use in national and international contexts. These could form the basis of more detailed investigations.

(39) The *sine qua non* for the comprehensive and consistent recording of statistics on lifelong learning is the development of an exhaustive and consistently structured classification of all educational measures and learning activities deemed important to this area. No such classification exists as yet, so a start should be made on this forthwith.

(40) Though there are good reasons why the development and supply of indicators on LLL are based on existing statistics and data, the objective of balanced statistics should be borne in mind in subsequent developments. This calls for the development of a comprehensive, long-term model for recording statistics on lifelong learning that could be used to actively optimise adjustments to the contents of programmes and, indeed, to the statistical instrument itself. Particular thought should be given to how the statistical recording of individuals, who play a key role in lifelong learning, can be improved.

(41) Monetary parameters such as expenditure on, and financial resources for, education and learning, together with the relevant data on time use, can usefully be combined into statistics on investment in education and learning. In subsequent work, greater emphasis should be placed on this aspect in order to draw the public's attention to the return on investment for individuals and society as a whole, as well as the return in terms of international competitiveness. Achievements in, and expenditure on, education and learning should no longer be seen primarily as consumption, but more as an economic investment in the future.

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Annex 1: Classification of learning activities

Formal education	Non-formal education	Informal learning
Description		
Teaching or lessons organised by officially recognised educational institutes forming part of an official and consistently structured education system. As a rule, these end completed with a formal examination and award of a certificate, diploma, etc. Typical age group: 5-25 year-olds	Teaching or lessons of a general or vocational nature organised outside of official educational institutes. These do not normally lead to the formal award of an officially recognised qualification. . All age groups (pre-school to pensioners)	All other activities geared to learning that take place outside conventional educational establishment (e.g. at work, at home, in other informal learning environments) All age groups (pre-school to pensioners)
Sub-categories		
<ul style="list-style-type: none"> • Pre-school education • Compulsory education • Post-compulsory education 	<ul style="list-style-type: none"> • Continuing vocational education and training • Non-formal general education (all age groups) 	<ul style="list-style-type: none"> • Teach yourself, particularly media-based (books, PCs, etc.) • Collective learning in informal groups (family, friends, colleagues, etc.)
Examples		
Regular tuition at <ul style="list-style-type: none"> • kindergartens/pre-school establishments • schools • colleges (and similar.) • universities irrespective of organisational status (public or private).	Language courses, computer courses, music school, etc. Voluntary participation by pupils or students in classes outside their regular curriculum. Participation in formal tuition at a college by individuals not registered as students (e.g. as part of guest student programmes). Tuition and training organised or financed by employers for their staff, by other employment bodies (ministries, trade unions, associations, etc.), the Church, adult education colleges and private institutes.	The reading of specialist books and journals Distance-learning with occasional course attendance Computer-based tuition programmes (CD-ROM, Internet) Educational broadcasting (TV/Radio) Instruction provided by colleagues (at work etc.) or by family members, friends, acquaintances
Comments		
Supplementary learning activities (such as homework, preparation for exams, writing up of lectures, etc., should be classified as informal learning (or non-formal learning, assuming attendance at the appropriate events)	Tuition at formal educational establishments outside the regular curriculum must be classified as “non-formal education”, even if the contents are linked to formal education (non institutional classification) One-off events that are informally organised, of unspecified duration, not specifically educational and aimed at a limited target ground should be classified under informal learning. Learning processes that arise spontaneously as a result of a main activity escape statistical measurement and cannot therefore be taken into account.	Individual distance-learning courses with regular events requiring attendance and with dominant tuition topics should be classified under non-formal learning

Annex 2: Classification of learning areas

For operational purposes, use can be made of the following definitions:

- (a) **Pre-school education:** organised tuition aimed at young children prior to the start of compulsory schooling (ISCED 0), e.g. kindergartens, pre-school, music or foreign language tuition for 3-5 year-olds.
- (b) **Compulsory education:** includes all regular tuition at public or private schools for children and young people subject to full- or part-time compulsory schooling (particularly ISCED 1 and ISCED 2).
- (c) **Post-compulsory education:** includes all optional educational programmes within the formal education sector after compulsory schooling that build on the knowledge and skills acquired during that period (ISCED 3-6), e.g. sixth-form college, vocational school, study at university (undergraduate or postgraduate).
- (d) **Continuing vocational education and training:** this category includes vocational training programmes which, whilst outside the formal education sector, are organised and run along lines similar to those used in the formal education sector. It consists of two categories - initial and further vocational training, and continuous vocational training. It is irrelevant whether such training takes place within the enterprise or elsewhere (e.g. a training centre), i.e. whether it organised by the enterprise itself or by a third party (e.g. association, union, ministry, private training institute).
- (e) **Non-formal general education:** this includes all organised education outside the formal education that does not have a direct bearing on a person's work (e.g. courses at adult education centres, schemes run by the church or others, distance learning). In addition to adult education, this includes tuition of a general nature for children and young people (e.g. language, computer and music courses), regardless of whether the participants are also in formal education as pupils or students.
- (f) **Informal learning:** this includes all other planned (intended) learning activities, regardless of the age of the person concerned and of the social context in which the activity takes place. Informal learning may take place on a group basis (collective informal learning) or in the form of self-teaching (individual informal learning). Examples include instruction within the family or other informal groups, plus self-learning (particularly with the help of media such as books, radio or computers).

Areas (a), (b) and (c) follow the chronological and thematic sequence of traditional (formal) schooling. They basically correspond to the area of formal education. Areas (d) and (e) are classified as the non-formal education sector. In addition to this chronological and sectoral structure there is the "catch-all" area of informal learning (f), which includes all planned learning activities outside the formal and non-formal sectors.

Annex 3: Proposed indicators for lifelong learning

	Participation	Investment	Achievement
(a) Pre-school education (b) Compulsory education (c) Post-compulsory education (d) Continuing vocational education and training (e) Non-formal general education	1. Number of participants 2. Participation rate by age-group 3. Average time invested per day/week/year by • age, • sex, • nationality, • family income, • other socio-economic characteristics • ...	1. Expenditure by providers of education on staff and material (pub./priv.); total and per participant 2. Time invested by providers of education (e.g. total teaching hours by teachers/lecturers). 3. Users' contributions (e.g. school fees, course fees, etc.) 4. Users' expenditure on teaching materials (books, academic journals, correspondence courses, etc.) 5. Users' expenditure on supplies, e.g. paper, exercise books, writing implements, computer programs, etc.	- not relevant - 1. Individuals completing institutionalised educational programmes and examinations (formal exams, certificates) 2. Portion of individuals definitively failing to complete an educational level (drop-out rate, early school leavers, etc) 3. Direct questioning after subjective self-assessment of own abilities) 4. Direct measurement of knowledge, skills and abilities (proficiency tests)
(f) Informal learning	1. Average time invested per day/week/year by • age, • sex, • nationality, • family income, • other socio-economic characteristics • ...	6. Users' indirect expenditure, e.g. transport costs 1. Users' expenditure on teaching materials (books, academic journals, correspondence courses, etc.) 2. Users' expenditure on supplies, e.g. paper, exercise books, writing implements, computer programs, etc. 3. Users' indirect expenditure, e.g. transport costs.	1. Direct questioning after a subjective assessment of own abilities 2. Direct measurement of knowledge, skills and abilities (proficiency tests)

Proxy indicators on informal learning

On the whole, learning activities in the informal learning sector are not institutionalised and thus partly escape direct statistical detection. In such cases, use may be made of proxy indicators instead, which at least provide an indirect measure of informal learning activities.

- Percentage of households with computers/internet access.
- Aggregate number of users of libraries/number of books loaned (per annum)
- Aggregate number of visitors to museums (science etc.) and other cultural events relevant to learning (p.a.)
- Number of participants in educational trips, e.g. language-learning trips (p.a.)
- Educational broadcasts on TV and radio (aggregate of scheduled programmes and viewing/listening figures in hours per month/year)
- Expenditure by private households on computer equipment/accessories and Internet access/use (p.a.)
- Expenditure by private households on books/textbooks, journals, newspapers/magazines, etc., (p.a.)

In order to establish a clear definition of learning activities to be included as lifelong learning, it would seem necessary to draw up a comprehensive **classification of learning activities** that includes the informal learning sector.

Annex 4: Extract from the conclusions of the Lisbon summit

Education and training for living and working in the knowledge society

Main education and training components:

- (a) development of local learning centres,
- (b) promotion of new basic skills, in particular in the information technologies, and
- (c) increased transparency of qualifications.

Targets:

1. A substantial increase in per capita investment in human resources.
2. The number of 18- to 24-year-olds with only lower-secondary level education who are not in further education and training should be halved by 2010.
3. Schools and training centres, all linked to the Internet, should be developed into multi-purpose local learning centres accessible to all, using the most appropriate methods to address a wide range of target groups; learning partnerships should be established between schools, training centres, firms and research facilities for their mutual benefit.
4. A European framework should define the new basic skills to be provided through lifelong learning: IT skills, foreign languages, technological culture, entrepreneurship and social skills; a European diploma for basic IT skills, with decentralised certification procedures, should be established in order to promote digital literacy throughout the Union.
5. Define, by the end of 2000, the means for fostering the mobility of students, teachers and training and research staff, making the best use of existing Community programmes (Socrates, Leonardo, Youth), removing obstacles and creating greater transparency in the recognition of qualifications and periods of study and training; take steps to remove obstacles to teachers' mobility by 2002 and to attract high-quality teachers.
6. A common European format should be developed for curricula vitae, to be used on a voluntary basis, in order to facilitate mobility by helping the assessment of knowledge acquired, both by education and training establishments and by employers.

Source: European Council (Lisbon), 23-24 March 2000.

Annex 5: Indicators for 2001 employment guidelines

Indicator	Definition	Data source
LLL_1 = Educational attainment rate of adult population	Percentage of population having achieved at least upper secondary educational attainment by gender and ages (25-34, 45-64 and 25-64 years old).	Labour Force Survey (LFS) covering the period up to 2000, with annual results
$LLL_{1.1}$ = Literacy proficiency rate of adult population	Literacy scores of adult population, by education level, literacy domain (prose, document, quantitative), age group and working status.	IALS, 1994-98, "Literacy in the Information Age", OECD and Statistics Canada, 2000.
LLL_2 = Participation rate in education and training	Percentage of population participating in education and training over the total population of the same age group - by gender, age groups (25-34, 45-64, 25-64 year olds) and working status (employed, unemployed, inactive).	LFS covering the period up to 2000, with annual results
$LLL_{2.1}$ = Total number of hours of training / Total adult population	Average number of hours of training per adult worker by age, gender and working status	LFS 1999/2000 and Employment Outlook, OECD 1999
LLL_3 = Rate of early-school leavers	Proportion of the total population of 18-24 years old having achieved only lower secondary education (ISCED level 2) or less and not attending further education or training, by gender.	Labour Force Survey (LFS) covering the period up to 2000, with annual results
LLL_4 = Rate of student access to computers	Number of students per computer by education level (primary, secondary)	<i>Benchmarking Report following up the SJIS, Commission services paper, Feb. 2001</i>
LLL_5 = Rate of Internet coverage in schools	Percentage of schools connected to the Internet by education level (primary, secondary)	National data by the Ministries of Education, see also LLL_4
LLL_6 = Percentage of Teachers with IS literacy	Percentage of teachers having acquired digital literacy skills required by education level	National data, see also LLL_4
LLL_7 = Percentage of the workforce using computers for work	Percentage of working population (employed and unemployed) aged 15 and over using computers at home and/or at workplace for work purposes.	Eurobarometer Survey on ICT and Employment, Nov.2000
$LLL_{7.1}$ = Rate of working population trained on job related ICT skills	Percentage of working population aged 15 and over trained on job related ICT skills.	Eurobarometer Survey on ICT and Employment, Nov. 2000
LLL_8 = Percentage of the workforce participating in job-related training	Percentage of the workforce (employed and unemployed) participating in job-related training by gender, age groups and economic activity	CVTS 1993 and 2001

Source: European Commission: Working paper on indicators to monitor implementation of guidelines on lifelong learning (IND/05/01/EN), Februar 2001.

Annex 6: Summary of international sources of data on lifelong learning

Source Survey unit Countries covered	Contents / scope	Strengths and weaknesses (with respect to monitoring LLL)
UOE data base / INES project Survey unit: Programmes, Households, Individuals Countries covered: OECD countries, others	Participation in education at country level (students enrolled, entrants, repeaters, graduates, organisations, personnel, finance); demographic, social, financial indicators Covers the entire formal and partly non-formal national education system	International comparable information on participation, completion, expenditure and types of resources dedicated to education; covers mainly public providers; outcomes in terms of graduates; includes data on the years of age of the participants Not included: vocational training at the work place
European Labour Force Survey (LFS) Survey unit: Households, Individuals Countries covered: Member States of the EU	Participation in different kinds of education and training; educational attainment as a proxy for skills; link with employment status and background variables; ad-hoc module on lifelong learning in 2003	Intends to cover the whole resident population
Continuing Vocational Training Survey (CVTS I+II) Survey unit: Enterprises Countries covered: Member States of the EU	Participation in continuing education and training in enterprises; costs and financing of training; type of activity, inside vs. outside training, gender Surveys in 1994 and 2000.	Self-directed learning (at the work place) partially captured; certification Data collected only from employers; outcome in terms of occupational skills
OECD Programme for International Student Assessment (PISA) Survey unit: Individuals (only 15 year olds) Countries covered: Australia, Austria, Belgium, Brazil, Canada, China, The Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, The Russian Federation, Spain, Sweden, Switzerland, The United Kingdom, The United States	Assessing effectiveness of educational systems at national levels Refers to reading literacy, mathematical literacy, scientific literacy First assessment in 2000; thereafter: three-year cycles	Internationally comparable data on learning outcomes of those "completing" compulsory schooling Includes assessment of cross curriculum competencies Limited age group (15 year olds)
International Adult Literacy Survey (IALS) Survey unit: Individuals (only adults) Countries covered: Australia, Belgium, Canada, Chile, The Czech Republic, Denmark, Finland, Germany, Hungary, Ireland, The Netherlands, Norway, Poland, Portugal, , Slovenia, Sweden, Switzerland (French, German, Italian), United States, United Kingdom, New Zealand	Assessment of literacy and numeracy skills of the adult population (prose literacy, document literacy, quantitative literacy)	Internationally comparable data on literacy and numeracy skills Refers only to adults
TIMSS-R (Third International Mathematics and Science Study - Repeat) 1999 Survey unit: Individuals Countries covered: Australia, Iran, New Zealand, Belgium (Flemish), Israel, Philippines, Bulgaria, Italy, Romania, Canada, Japan, Russian Federation, Chile, Jordan, Singapore, Chinese Taipei, Republic of Korea, Slovak Republic, Cyprus, Latvia, Slovenia, Czech Republic, Lithuania, South Africa, England, Republic of Macedonia, Thailand, Finland, Malaysia, Tunisia, Hong Kong, SAR, Moldova, Turkey, Hungary, Morocco, United States, Indonesia, Netherlands	Direct assessment of mathematics and science skills	Cross-country and time comparisons (1994/95 with 1999 data)
European Time Use Survey (TUS) Survey unit: Individuals, Households Countries covered: Time use surveys in the Member States of the EU currently underway. Could possibly be extended to include other countries	Time dedicated to different activities, including education and learning; socio-economic characteristics of participants (especially age structure) Currently underway	Data on participation in learning (time volume) that is comparable across activities as well as across countries; no aggregation problem. No information on financing/expenditure and on output/success. Questionnaire could possibly be extended in future surveys.
International Adult Literacy and Life Skills Survey (ALL) Survey unit: Individuals (16-65 year olds) Countries covered: Confirmed: Canada, USA, Bermuda, Switzerland, Norway, Netherlands, Belgium (Flemish), Italy, China Possibly: Bolivia, Columbia, Costa Rica, Uruguay, Argentina, Austria, Belgium (French), UK, Sweden, Ireland, 6 African countries (with financial support of the World Bank).	Direct assessment of life skills, such as prose and document literacy, numeracy, analytical reasoning, teamwork, ICT literacy. Pilot testing in 2001, main survey in 2002.	Going far beyond adult literacy skills, intends to measure a broad set of basic life skills Refers only to adults
European Survey on Income and Living Conditions (EU-SILC) Survey unit: Households, Individuals Countries covered: Member States of the EU	Cross-sectional survey that is intended to allow for an evaluation of personal and societal outcomes of learning. To be launched in 2003.	Linked to working and living conditions; covers only parts of relevant learning activities

Annex 7: Recommendations issued by the Eurostat Task Force Measuring Lifelong Learning

The Eurostat Task Force Measuring Lifelong Learning (TF/MLLL) is in favour of carrying out a harmonised survey on the learning behaviour of adults at European level. The questions should be based around the following components, which are also of relevance to formal training, non-formal training and informal learning.

European Union Adult Learning Survey	
Target group: 16+ year olds	Reference time: one year
On the individual	
Demographic data <ul style="list-style-type: none"> • age, sex • nationality/citizenship/ethnicity • main residence Educational and social profile <ul style="list-style-type: none"> • family situation (work, children, caring) • educational attainment (level and field of education and training) • educational background of the parents • disability (physical, mental) 	Labour market information <ul style="list-style-type: none"> • labour status (employed, unemployed, inactive, self-employed, voluntary work) • current/last job (incl. occupational category) • employer/enterprise (NACE sector, size) • income Other personal information <ul style="list-style-type: none"> • self reported basic skills (digital literacy and ICT familiarity, foreign language skills) • social / civic participation
Participation / access	
Incidence <ul style="list-style-type: none"> • participation (number of events) Volume <ul style="list-style-type: none"> • time spent in education and learning (volume) within / beyond working hours 	Unmet demand <ul style="list-style-type: none"> • perceived personal demand (needs and interests) Access/obstacles/equity <ul style="list-style-type: none"> • perceived obstacles to participation • transparency of learning offer (information and advice/guidance)
Characteristics of each activity	
Content <ul style="list-style-type: none"> • type of learning activity, field of study, purpose/aim • place in national education system (for formal/non formal education) • recognition of learning outcomes Volume <ul style="list-style-type: none"> • duration 	Characteristics of provision <ul style="list-style-type: none"> • type of provider Subjective evaluation of activity <ul style="list-style-type: none"> • perceived motives and benefits (job-related, societal, personal) Financing <ul style="list-style-type: none"> • Source of financial support (public, employer, individual, learner)

CONTINUOUS TRAINING: COMPARISON OF VARIOUS STATISTICAL SOURCES IN FRANCE

ZAMORA Philippe

INSEE

18 Bd Adolphe Pinard

Paris

FRANCE

Philippe.zamora@insee.fr

Summary: This paper describes five different sources that are available on continuous training in France: three household surveys and two business sources. The joint processing of these different sources reveals some discrepancies among household sources and between household and business sources. The different types of queries are compared. Among the conclusions, emphasis can be given to the importance of length of reference period and timetable in selecting the training described. It is also possible to calculate the level of ‘memory loss’ of training from one year to the next in a household survey. This loss is slight for short training and practically nil for long training. This is encouraging for the quality of the surveys covering several years of a person’s career. There is nevertheless a discrepancy between household and business sources with regard to rates of access to training. The most likely factor is more general than memory bias. It is linked to the lack of identification in surveys of certain types of short training. The factor also occurs when an effort is made to describe training activities over a short, recent period.

Introduction

a) System of continuous training in France

The authorities in France decided in the Law of 17 July 1971 to develop post-school training by relying to a large extent on businesses. The law in fact states that each company with more than ten employees¹ must set aside a fixed proportion of its wage bill to organise training or, if it cannot achieve this objective, to top up its efforts by paying a tax until it equals the fixed amount. This is quite a novel system of incentives that has no equivalent in other industrialised countries. According to the ideas of those behind it (L. Tanguy, 2001), the law was designed to encourage the aim of permanent acquisition of skills and knowhow by employees, but also set out to link it closely to a company’s operational set-up. The system was not in fact trying to build a supervised system that was disconnected from business decisions on investment in human resources. Companies in fact provide the special setting for supervising technological changes and adapting to them².

This system is now being questioned for a variety of reasons (Lichtenberger, Méhaut, 2001):

- Access to training is very uneven and depends on the size of the company and the socio-professional class. There has been little progress in dealing with these inequalities since the start of the 1990s (Goux, Zamora, 2001). Employers undoubtedly consider encouraging workers to adapt less of a priority than in the case

¹ Since XXXX small firms must also pay a tax, although the amount is much less.

² There are a number of other arrangements supplementing the system, e.g. individual training leave, which allows some employees desiring vocational retraining to take 1-3 years of leave to undertake or complete training, while having the safeguard of being able to return to the same or to a better post in the firm. This option affects only a few employees (between 20 000 and 40 000 per year).

of management staff. Since training requirements apply to all staff, the current system provides no individual training guarantees. In addition, not all firms have to cope with the same technological changes. Staff in more traditional sectors (or in small companies that are less innovative for lack of resources) are thus in a less favoured position.

- There is increasing acknowledgement that the objectives pursued by employers (“adapting employees to the firm’s particular technological changes”) and those sought by employees (“learning or maintaining general skills”) do not actually match very well. Training organised by firms tends to be very short (CEREQ publication) and provides knowledge that is probable of little use outside the firm.
- An employer can invest in general training (which can simply offer a return that is hard to evaluate and only long-term) only if the firm is likely to benefit. Staff employed on short-term contracts - and the numbers have been steadily rising in the last 15 years, especially among young people - are consequently excluded from this kind of training, which they probably have particular need of.

b) Measuring continuous training

The criticism levelled against the current French system of continuous training has prompted the government and the social partners to give some thought to it. There is provision in the planned reforms to introduce required certification of training undertaken and experience acquired and to guarantee an individual right of access to training. A similar review of the situation is also being undertaken within the European Union, which is endeavouring to promote the idea of lifelong learning and to develop policy measures in support of this aim.

In connection with the next few years when there is going to be a radical change in the system of continuous training, the statistical set-up perhaps needs to make an even greater effort to arrive at a precise measurement of the phenomenon and, in particular, to ensure the quality, reliability and proper interpretation of the resulting indicators. This objective can be achieved by comparing different sources concerning the same subject. The fact is that French statistical efforts on the subject of post-school training have increased tremendously since the start of the 1990s and provide some pointers to how accurately the phenomenon has been measured.

I. Five different sources for continuous training

The list of sources is not intended to be exhaustive, and they are mentioned inasmuch as they have been used for this paper. Three of them are household surveys, which attempt to approach access to training from the employee’s angle. The fourth uses the administrative forms (reference 2483) that firms complete to record their training efforts. Lastly, the fifth source is taken from a European survey, the Continuous Vocational Training Survey (CVTS).

Household surveys

1) VQT survey (1993) (20 000 respondents)

In 1993 the Vocational Qualification Training survey devoted one of its modules to continuous training. Two types of training were covered: the first looked at training organised or funded (at least in part) by employers, and the second referred to so-called post-school training, i.e. resumption of studies, correspondence courses or vocational training courses for adults.

2) HLS survey (6 000 respondents)

The recurrent Household Living Standards survey is conducted three times a year. Each year, since 1996, the October survey has devoted a module to continuous training, using a questionnaire based on the VQT survey. Two types of definition are dealt with: the first refers to training organised or funded (at least in part) by employers, and the second covers vocational training that occurs outside the firm. In this respect there is big difference from the VQT survey, in which post-school training covered all training (including training for personal reasons).

3) Continuous training survey 2000 (22 000 respondents) (CT2000)

This survey supplemented the labour force survey of March 2000³ (C. Fournier et al., 2001). Compiled by CEREQ (Centre d’Etudes et de Recherches sur les Qualifications = Centre for study and research on qualifi-

³ Most employment surveys are followed by a supplementary survey covering a topic related to the labour market. Until 2002 the employment survey will be conducted once a year in March. Each household is surveyed for three years in a row: one third of the sample is renewed each year. The supplementary survey involves only the third of the households in their final year of the survey.

cations) and INSEE, it is the first survey dealing solely with continuous training. Unlike the two previous surveys, training is not divided according to how it is funded but according to how knowledge is acquired. This results in the following breakdown:

- traineeships, seminars, courses, taking place away from the normal place of work and involving one or more persons;
- on-the-job training: this category requires the presence of an instructor who imparts knowledge, in the normal working environment, in either real or simulated conditions; this type of training must be organised and take place at a definite time; it needs to be distinguished from apprentice training and from spontaneous trial-and-error, e.g. devising new software, which are not the subject of the survey;
- self-training, comprising correspondence courses, training software, or even structured reading of technical manuals, provided that the learning is intentional;
- sandwich training, relating to various labour contracts geared to young people and financed by the State: contracts covering qualifications and introduction or learning; these contracts include periods of work in a firm and periods of training, e.g. at apprentice learning centres, university technology institutes or vocational schools.

Use of form 24-83

It is CEREQ that processes the tax returns. They are completed only by firms with more than ten employees, and only training included in the training plan is recorded. This is called ‘deductible’ training (see box). The amount of information is limited, but this source is nevertheless useful in providing most of the interesting quantitative indicators. It is thus possible to correct dual counting and to calculate the rate of access to training, i.e. the number of persons involved at least once in a training action during a given year. These access rates can be broken down by major socio-professional category, sex and age.

The problem with this source is the number of uncertainties that have a varied effect. For example, it is in fact possible that firms exceeding their training spending may not report all the training actions that were organised. This would tend to under-estimate the access rate. Also, there are quite a lot of firms that do not submit a declaration. It is possible that these firms organise less training than those that reply, and the result of this would be to over-estimate the access rate.

Business surveys: CVTS (Continuous Vocational Training Survey) (11 000 firms)

This paper uses some results of the harmonised CVTS survey conducted in March 1994 among firms with more than ten employees. The survey looked at training actions during the 1993 calendar year. In its scope and classification, the survey was similar to the CT2000 survey: external traineeships, seminars, in-house traineeships, on-the-job training and self-training.

II. Significant discrepancy between business and household sources, but also among household sources

Table 1 compares access rates calculated using the five sources. The common basis for the training used for comparison comprises training by firms with more than ten employees that qualifies as ‘deductible’ in accordance with the 1971 law, i.e. covered by form 24-83. The CVTS and CT2000 surveys thus cover external traineeships, seminars, lectures and in-house traineeships.

Table 2 compares the household sources and takes account of *all training funded by employers*.

Table 1: Annual rate of access to continuous training⁴

	Household sources	Business sources	
	Continuous training survey	Form 24-83	CVTS
Reference period	March 1999 - February 2000	Calendar year 1997	Calendar year 1992
Engineers and managers	40.1%	50.5%	48.5%
Workers and employees	16.6%		31.2%
All	21.6%	35.5%	36.4 %

Scope: Employees of firms with more than ten employees, excluding general government (comparable sectors of activity)⁵

Table 2: Annual rate of access to continuous training funded by employers

	Sources ménages		
	Vocational qualification training	Continuous training survey	Household living standards
Reference period	January 1992 - April 1993	March 1999 - February 2000	October 1999 - September 2000
Engineers and managers	31.8%	42.9%	40.4%
Workers and employees	14.2%	19.4%	22.4%
All	18.3%	25.0%	29.2%

Scope: All employees at the time of the survey

These tables prompt several comments.

- 1) There is no agreement among the household sources. The VQT survey indicates access rates that are significantly lower than those of the CTS and HLS surveys.
- 2) Even though they do not refer to the same year, the figures from the two business sources tend to match.
- 3) The figures from the household surveys are about 15 percentage points below the business survey figures. The differences between household and business sources are confirmed, and are generally of the same magnitude, for the two groups when a more detailed breakdown is made.

These three findings will now be considered in turn, and an effort made to explain the differences.

III. Differences among household sources

Table 2 shows that the access rates in the HLS and continuous training surveys are fairly close. The figure for the VQT survey is well below, however: by about 6-10 points.

a) No sign of significant changes in continuous training since the start of the 1990s

The first theory regards the survey date. There is a seven-year interval between the VQT survey and the other surveys. The difference in the figures can thus be ascribed to greater use of continuous training by firms. But this theory accords badly with the results of the regular processing of the two other available sources: since 1993 in the case of the 24-83 forms and since 1996 for the HLS surveys.

⁴ The figures on intermediate levels are not shown here, since the definitions for the category differ from survey to survey. Intermediate levels are of course included in the total figures (all).

⁵ Marion Lambert (CEREQ) must be thanked for the information on the fields to be covered in the Training 2000 survey.

Table 3: Rate of access to ‘deductible continuous training’

	1993	1994	1995	1996	1997
Rate of access to training	33.2%	33.6%	34.1%	35.0%	35.5%

Source: Tax form 24-83 (CEREQ processing)

Table 4: Rate of access to continuous training funded by employers⁶

	1996	1997	1998	1999	2000
Start of training	Oct 1995- Sep 1996	Oct 1996- Sep 1997	Oct 1997- Sep 1998	Oct 1998- Sep 1999	Oct 1999- Sep 2000
Engineers and managers	41.4%	39.2%	44.1%	36.0%	40.4%
Workers and employees	23.2%	21.4%	20.3%	19.2%	22.4%
All	30.2%	28.7%	27.9%	26.1%	29.2%

Source: HLS surveys 1996-2000 (INSEE)

These two series, carefully compiled every year using the same questionnaires and the same processing methods, fail to indicate any development of continuous training, or at least only very slightly in the case of the 24-83 tax forms. There seems to be a considerable under-estimation of the access rate by the VQT survey, especially as the figures in Table 2 refer to a period of 16 months, and not one year as in the other sources. The initial conclusions regarding the development of continuous training in firms therefore need to be tempered: it is undoubtedly not so significant as the initial figures from the VQT and CT2000 surveys would suggest (Goux et Zamora, 2001).

b) The reference period has an impact on indicating training

In order to understand this under-estimation, you have to go back to how the questions are put in each survey. There is in fact a significant difference in the three household surveys: the reference period for describing training. In the VQT survey the reference period covers the period from the end of studies until the time of the survey. The HLS survey refers to the previous year. In the CT2000 survey, the reference period was from March 1998 to February 2000. The HLS and VQT surveys ask respondents about the most recent training. In the CT2000 survey the time range is much greater and covers all training during the reference period.

The HLS and VQT surveys do not ask respondents to remember all training; they are asked if they have been involved in at least one, and they are then asked about the most recent. This method of questioning involves a *much more subjective response* than in the CT2000 survey. Since he does not have to provide exhaustive information, the respondent probably tends to remember the longest or most important training and to confuse it with the most recent. If this is what happens, it is obvious that the annual access rate (obtained by calculating the proportion of people stating that their most recent training occurred in the previous year) is more under-estimated as the length of the reference period increases.

Table 5: Length of training

	VQT survey 1993	Continuous training 2000
Less than a week	63.4%	84.7%
Between a week and a month	24.7%	11.5%
More than a month	11.9%	4.8%
	100%	100%

Source : INSEE-CEREQ

⁶ Note: Tables 3 and 4 do not refer to the same field.

Table 5 above compares the length of the most recent training reported in the VQT and CT2000 surveys (in the case of the latter, there is information about the length of almost all training undertaken by respondents during the previous year). It can be seen that the length of training according to the VQT figures is much longer. This has nothing to do with any actual shortening of the deductible training reported elsewhere (Tables 6 and 7) and much shorter. VQT respondents are thus more likely to recall longer training, because it is easier to remember.

Table 6: Average length (in hours) of deductible training

	1993	1994	1995	1996	1997
Average length of training	45	43	42	40	38

Source: Tax form 24-83 (CEREQ processing)

Table 7: Length of training funded by employers⁷

	1996	1997	1998	1999	2000
Less than a week	68.0%	72.5%	70.8%	70.6%	72.1%
Between a week and a month	11.8%	9.1%	11.5%	11.3%	10.2%
More than a month	20.3%	18.4%	17.7%	18.1%	17.7%
	100%	100%	100%	100%	100%

Source: HLS surveys 1996-2000 (INSEE)

c) No particular effect of 'specialised' questionnaire

The results of the HLS and CT2000 surveys match fairly closely. The reference periods are more or less the same⁸. However, it is surprising that the CT2000 survey does not seem to indicate a higher access rate, given that the survey focuses on continuous training. Investigators are specially trained in this field and if a respondent says that he has never had any training, the investigator is encouraged to ask again in an effort to jog his memory. In addition, when a respondent has received no training, some special modules are used. He thus has every opportunity to recall any training and to change his initial response. Be that as it may, the access rates are virtually identical to those revealed by a survey that contains only a few questions about training in the middle of the questionnaire, and without any particular prompting of the respondent.

IV. Business sources

The similar figures produced by the CVTS survey and the 24-83 forms are not surprising, since the same respondents are involved. This close similarity also shows that looking at in-house and external traineeships is a good way to approach deductible training. This backs up the comparison in Table 1. The same area is in fact covered for training, since the CT2000 survey includes in-house or external traineeships, seminars, etc.

Businesses and households do not report the same number of trainees, however, and there is a big difference between the two sets of figures. The next section tries to find some explanations for this difference.

V. Discrepancies between household and business sources

There are two factors that may possibly explain the difference:

- **Identification:** First of all, it is possible that the range of training mentioned by respondents does not correspond to the employers' list when they complete the 24-83 form or respond to the CVTS survey, even if in

⁷ No effort is made to make comparisons between the VQT and continuous training surveys on the one hand, and the HLS survey on the other. In the HLS survey, duration is not expressed in hour-equivalents but is currently somewhat loose - less than a week, a week, 2-3 weeks, 1-3 months - which makes it difficult to classify training lasting, say, a week and a day or three and a half weeks.

⁸ They could be specified more accurately.

both cases they are in-house or external traineeships. In listing the training to be reported in the continuous training survey, there is an important criterion referring to learning as the objective. Employees are probably prompted to ignore certain training that they consider to be of use solely in the particular context of the firm, which is not really learning in the strict sense. On the other hand, financial considerations probably encourage employers to list any training they have organised.

- **Memory:** The second factor is simpler and refers more to response mechanisms in relation to household surveys. When asked about training during the previous year, respondents are inclined to forget some training. How long the training lasted and how long ago it occurred are undoubtedly vital elements in this. Training is more likely to be forgotten if it was short and happened some time ago.

Table 8 shows that there is a strong tendency to forget short periods of training. The longer ago the reference period, the greater emphasis on longer training in people's minds.

Table 8: Recollection of training

	Most recent training between March 1998 and February 1999	Most recent training between March 1999 and February 2000
1-2 days	32.9 %	43.6 %
Between 2 days and a week	31.8%	33.8 %
Between a week and a month	16.1%	13.1 %
More than a month	19.1%	9.5%

However, the monthly figures shown here are not enough for 'memory' parameters to be determined. To do this, a possible seasonal factor in the separation of long and short training would need to be ignored.

Reason for separating the factors

They do not have the same effect in terms of survey methodology. The identification factor has the same influence regardless of the length of the reference period, whereas the effect of the memory factor increases with the length of the reference period.

Formalising the role of the two factors

In order to formalise the effect of these two factors, the following model is used:

Model: There are two types of training, short courses (coursés) and long courses (longues), which we can indicate by the letters C and L. The following is also used: t indicating the length of time between the date of training and the date of the survey. We thus have, for any month indicated by t :

s_t^C : number of short courses reported in the household survey

s_t^L : number of long courses reported in the household survey

n_t^C : actual number of short courses (actual in the sense of 'reported by employers')

n_t^L : actual number of long course (actual in the sense 'reported by employers')

- The first factor involves the fact that employees do not consider that very short training satisfies the aim of learning as reported by employers in business surveys. There are thus factors δ_t^C and δ_t^L , with the result that:

$$s_t^C = \delta_t^C n_t^C \text{ and } s_t^L = \delta_t^L n_t^L$$

But this is not the effect of memory. For this first factor, therefore, δ_t^C and δ_t^L are assumed not to depend on t .

— The second factor involves the memory effect.

$$s_t^C = \rho_t^C n_t^C \text{ and } s_t^L = \rho_t^L n_t^L$$

This time, ρ_t^L and ρ_t^C depend on t . This is not a problem of identification; it can therefore be assumed that ‘memory is perfect’ for the month preceding the survey.

$$\rho_1^L = 1 \text{ and } \rho_1^C = 1$$

— Taken together, the two factors provide a ‘training recall rate’:

$$s_t^C = \delta^C \rho_t^C n_t^C \text{ and } s_t^L = \delta^L \rho_t^L n_t^L \text{ with } \rho_1^L = 1 \text{ e } \rho_1^C = 1$$

Hypothesis 2: It is assumed that ρ_t^L and ρ_t^C develop in linear fashion in relation to t .

$$\rho_t^L = 1 - \frac{\rho_L}{12}(t-1) \text{ and } \rho_t^C = 1 - \frac{\rho_C}{12}(t-1) .$$

Attempt to assess the memory effect (second factor)

Hereafter, short training will be taken to mean training lasting less than three days.

This part deals with calculating parameters ρ_L and ρ_C . The annual data collected in the CT2000 survey will be used. This survey asked respondents to detail all training undergone between March 1999 and February 2000 (period I), and then to describe the earliest training in the period from March 1998 to February 1999 (period II). In the case of the latter period, the information is incomplete since 20% of the respondents follow at least two training courses during the year. Although the information for the period is incomplete, the data together allow the investigated parameters to be identified.

The aim is thus to compare the structure of training in period II (running from two years to one year before the date of the survey) with training in period I (running from one year to one month before the date of the survey) and to calculate the memory parameters. Only these parameters affect the descriptions of the two periods, since the identification factor has the same effect on the two periods.

Since the data are complete for period I, the structure of training reported for this period can be worked out. To simplify matters, it is assumed that respondents do not undertake more than two training courses in a year (which is in fact true for 95% of them). The proportion of employees involved in one short training course during the year is indicated by π_C , those in two short training courses by π_{CC} and those involved in a short and then a long training course by π_{CL} , and so on.

Hypothesis 3: This structure is assumed to be valid for period II as well. This may seem a big assumption, but the HLS surveys conducted each year (see Table 7) indicate that the relative breakdown of short and long training, together with the proportion of those undergoing training, does not vary significantly from one year to the next.

The model then simply has to be run for each set of training undertaken. As an example, if a respondent has had a short and then a long training course (CL) during period II, he will be asked to report the earlier one.

case 1: he has forgotten both courses and reports nothing: probability = $(1 - \rho_C)(1 - \rho_L)$;

case 2: he has forgotten the short course but not the long one and reports the long course: probability = $\rho_L(1 - \rho_C)$;

case 3: he has forgotten the long course but not the short one and reports the short course: probability = $\rho_C(1 - \rho_L)$;

case 4: he forgets neither course and reports the long course: probability = $\rho_L \rho_C$.

Remember that parameters δ_t^C and δ_t^L have no part in this reasoning. What is taken into account for the two periods is only the training reported by the respondent. It is the memory rate that explains the difference in reporting between the two periods. The table shows the different possibilities:

	Reporting C	Reporting L	Reporting nothing
LC	$\rho_C(1 - \rho_L)$	$\rho_L\rho_C + \rho_L(1 - \rho_C) = \rho_L$	$(1 - \rho_C)(1 - \rho_L)$
CL	$\rho_C\rho_L + \rho_C(1 - \rho_L) = \rho_C$	$\rho_L(1 - \rho_C)$	$(1 - \rho_C)(1 - \rho_L)$
CC	$\rho_C(2 - \rho_C)$	0	$(1 - \rho_C)^2$
LL	0	$\rho_L(2 - \rho_L)$	$(1 - \rho_L)^2$
C	ρ_C	0	$1 - \rho_C$
L	0	ρ_L	$1 - \rho_L$

Furthermore, α_L (or α_C) represents the proportion of employees reporting that their earliest training in period II was long (or short).

Two equations are thus obtained:

$$\begin{aligned} \pi_{LC}\rho_C(1 - \rho_L) + \pi_{CL}\rho_C + \pi_{CC}\rho_C(2 - \rho_C) + \pi_C\rho_C &= \alpha_C \\ \pi_{CL}\rho_L(1 - \rho_C) + \pi_{LC}\rho_L + \pi_{LL}\rho_L(2 - \rho_L) + \pi_L\rho_L &= \alpha_L \end{aligned} \quad (\text{eq. II})$$

Result: *short training tends to be somewhat forgotten/long training is correctly recalled.*

Table 9 shows the results of the above equations for all employees and for two subsets: those educated up to school-leaving certificate and those with higher qualifications.

	ρ_C : annual memory rate for short training	ρ_L : annual memory rate for long training
All	69.7%	108%
Up to school-leaving certificate	69.8%	110%
Higher qualifications	70.1%	110%

The results are not particularly surprising. The memory rate for short training is about 70% from one year to the next, much lower than for long training. What is more striking, however, is the fact that the latter rate is above 100%. This could be attributed to the unsophisticated nature of the model. Whatever the reason, it seems that there is no loss of memory with regard to long training of 1-2 years earlier. Lastly, regardless of the level of education attained, the memory rates are identical. Less familiarity with training does not result in less recall of training undertaken. On the other hand, there is a possible difference between the two subsets in the case of the first factor, i.e. identification of training. Hypothesis 2 was not used here.

Parameter ρ is more harder to identify directly. It could be separated from the memory parameter if it were possible to compare the proportion of long/short training between business and household sources over a short period immediately preceding the date of the survey, since the memory factor has no effect in this instance. However, neither the CVTS survey nor the 24-83 forms provide such information. In their current versions, firms are asked only to indicate the total number of hours devoted to training, which means that no useful comparison with household sources can be made.

However, if one is willing to make a big assumption, it is possible to arrive at some idea of the respective weight of the identification and memory factors in the discrepancy that occurs between business and household

sources. Suppose that the identification factor plays no part, i.e. $\rho = 1$, and use instead hypothesis 2, based on a linear memory rate.

It is then possible to calculate the number of forgotten training courses:

$$n = \sum_{i=1}^{12} \frac{n_i^C}{1 - (\rho_c / 12)(i - 1)}$$

The calculation gives a figure of between 300 000 and 400 000 training courses forgotten over a year, which in the best of cases account for about 5% of the access rate, i.e. barely one third of the discrepancy that is revealed. This calculation, which is mentioned here only by way of example, since it rests on some considerable assumptions, seems to suggest that the identification factor tends to predominate. Further, more careful use of the various sources will be needed to confirm this finding, which is somewhat tenuous at this stage.

VI. Conclusions

Quite apart from the need to understand the discrepancies among the various sources dealing with continuous training, comparison of the various surveys during this study has yielded some methodological pointers for devising an *ad hoc* module to accompany the European labour force surveys scheduled for 2003. In a restricted framework such as this, it is necessary to select only one of the training courses undertaken by the respondent in order to describe it in greater detail. The fact is that more than 20% of them take more than two courses in a year.

The length of the reference period seems to be the most important aspect influencing the choice of training. The longer the reference period, the more likely it is for the longest or most notable training to be recalled. The introduction of a timetable, as in the CT2000 survey, may help to make the selection process stricter.

On the other hand, a separate module in the middle of a survey does not in itself seem likely to result in an under-estimation of the number of training activities. Similarly, the different types of presentation (according to type or funding) does not seem to give rise to results that are significantly different.

The extent to which long courses (over three days) are forgotten seems negligible, and the rate for short courses is fairly moderate from one year to the next. This is a rather encouraging finding. Indeed, if the medium-term impact of continuous training is to be studied, it is necessary to look at training over a fairly long period in an individual's career: 4-5 years seem to be the minimum. Also, long training is more likely to have an affect on an individual's productivity. In such instances, the recall rate seems to be fairly adequate. However, the results that have been obtained are extremely incomplete: we know nothing about how memory works and the theory of linearity over a number of years may therefore seem somewhat bold. It is too early at this stage to extrapolate to 4-5 years data that have been collected over two years, on the basis of theories that are at the outset somewhat presumptuous. Similarly, there are no figures for the identification rate - as distinct from the memory rate (see definitions) - but it is likely that it affects only very short training.

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MEASURING LIFELONG LEARNING

LEMAN Steve

Principal Research Office
Dept. for Education and Employment
Room N607 Moorfoot
Sheffield S1 4 PQ
UNITED KINGDOM
Stephen.leman@dfee.gov.uk

1. Lifelong Learning policy in the UK rests on the twin pillars of social inclusion and economic competitiveness. Measures of participation in learning need to cover the social characteristics of individual learners and the economic or other purposes of the learning they undertake, as well as the nature of the learning itself. This paper describes the context, then sets out the information requirements and illustrates some issues and problems that confront data producers, through a case study of the National Adult Learning Survey. The paper's main focus is on individual demand for learning.

Context

2. The first report of the National Advisory Group for Continuing Education and Lifelong Learning, NAGCELL (1997) identifies a number of changes that make an expansion of the lifelong learning system an urgent priority:

- Economic globalisation, bringing about a shift in skill needs in the workplace;
- Demographic change, particularly in the age and sex profile of the workforce;
- New working practices such as team working and flatter management structures;
- A decline in unskilled employment;
- Greater need for key skills, at all levels;
- A need to recognise diversity and a range of cultures, with their associated needs for learning; and
- Shifts in traditional employment structures, which have often weakened communities and created a need for regeneration.

3. In addition to this largely economic and work-related agenda, the Government has recognised (DfEE, *The Learning Age*, 1998) the importance of learning as an end in itself and in supporting social inclusion, civic and public life and personal and spiritual fulfilment. The White Paper *Learning to Succeed* (DfEE, 1999) sets out how the Government is working to extend and improve the demand for and supply of learning opportunities in order to ensure that everyone has access to high quality, relevant learning at times, locations and places that suit them. *Learning to Succeed* commits the Government to a National Learning Target for 2002, for a seven per cent reduction in non-learners.

4. The White Paper notes that many adults are looking to learn in informal, self-directed and flexible ways, and the first NAGCELL report says that more emphasis should be placed on the home, the community and the workplace, as places of learning. The Government affirms that in addition to helping adults to achieve qualifications, it will also be important to encourage encouraging adults back into learning and helping the more disadvantaged. Such first-rung provision should, wherever practicable, act as a stepping stone into further

learning leading to qualifications or units of qualifications, but many adults, including large numbers of older and retired learners will want to pursue study for its own sake.

Information requirements

5. The body of research on adult participation shows that adults who have previously engaged in learning are always far more likely to be current participants than those who have not. The other main determinants of participation include:

- length of schooling
- educational attainment
- age
- current socio-economic circumstances
- cultural factors: work, social and family environment
- perception of the value of education
- awareness of educational needs
- familiarity with educational opportunities and processes
- possession or lack of time and autonomy
- possession or lack of basic, social and communication skills
- presence or absence of constraints such as lack of money, transport and childcare

6. Therefore we need information on these variables for the general population and, most importantly, for specific groups – so that the design of policies and programmes can focus not only on increasing participation numerically, but widening participation to bring in members of the under-represented groups. Existing survey evidence shows that groups least likely to undertake learning include:

- those aged 50 or over;
- those looking after the home or family, the retired and those unable to work because of long-term sickness;
- those leaving school aged 16 or younger; and
- those leaving school without qualifications.

7. The priority now is to build up a time series through repeats of the National Adult Learning Survey. Trend information will enable us to assess whether these groups are participating more in absolute terms, and as compared to the population as a whole. Uses of the information include:

- evidence on potential demand for programmes
- baseline and progress measures for a participation target
- evaluating the contribution of adult learning programmes to the social inclusion agenda

Annex A illustrates some of the findings of the first National Adult Learning Survey.

Issues and problems

Issue 1: what is “participation”?

8. The pilot of the National Adult Learning Survey found that it is very difficult to define “learning” in a way that is both concise and readily understood. The chosen solution is to ask a series of questions. The respondent is asked about different types of learning activities, and is defined as a “learner” if **any** of these activities have been done during the previous three years:

Taught learning:

- any taught courses that were meant to lead to qualifications;
- any taught courses designed to help you develop skills that you might use in a job;
- any courses, instruction or tuition in driving, in playing a musical instrument, in an art or craft, in a sport or in any practical skill;
- evening classes;

- learning which has involved working on your own from a package of materials provided by an employer, college, commercial organisation or other training provider;
- any other taught course, instruction or tuition.

Non-taught learning:

- studying for qualifications without taking part in a taught course;
- supervised training while you were actually doing a job (i.e. when a manager or experienced colleague has spent time with you helping you learn or develop skills as you do specific tasks at work);
- time spent keeping up to date with developments in the type of work you do without taking part in a taught course - for example, by reading books, manuals or journals or attending seminars;
- deliberately trying to improve your knowledge about anything or teach yourself a skill without taking part in a taught course.

In reporting the information, we can provide participation rates for:

- all learning
- taught learning
- non-taught learning

9. Problems can arise in surveys if the respondents do not understand some of these categories. Some respondents have particular difficulty with the non-taught, informal and self-directed modes of learning. Good interviewer briefing is essential.

10. There is no agreed international definition of adult learning. An international comparison is available from the International Adult Literacy Survey and is reported in the OECD's *Education at a Glance*. However, this covers only formal, taught courses and does not capture the broader conception of the "Learning Society". The more informal or self-directed types of learning are captured in various country-specific surveys. The OECD and Eurostat are working on harmonising the classification of learning.

Issue 2: the reference period

11. Some surveys ask about all learning undertaken after the person left full-time schooling. Such information may not be reliable, because of problems of recall. No reference period is perfect, but the National Adult Learning Survey uses a three-year period. This allows us to capture a wide range of learning opportunities without creating too many problems with memory. If a learning "diary" is used, shorter periods – for example, twelve months – can also be used in reports. A one-year period can be useful for early evaluations of new policies.

12. We can capture the duration of a learning episode, and the number of hours of tuition, for taught learning only – not for non-taught learning.

13. Administrative data on education / training are usually reported only in snapshot terms, covering a single point in time.

Issue 3: the purpose of learning

14. The National Adult Learning Survey defines learning as vocational or non-vocational, *according to the respondent's main purpose*. For example, a given language course could be undertaken for leisure-related reasons or in connection with current or prospective employment.

15. The data do not perfectly answer the needs of all users, since there is some disagreement on the definition of learning. Some interest groups who focus mainly on the economic benefits of learning would like us to exclude from the analysis some of the shorter-duration learning episodes, and those that are not relevant to employment. However, the majority of users agree that the definition is appropriate. A body of research evidence shows that non-vocational learning, or learning that does not lead to qualifications, has wider benefits. These include self-sufficiency, social cohesion, health and well-being, and crime reduction. Non-vocational or unaccredited learning can be effective as "first-rung" provision leading to further learning that may itself have positive economic outcomes.

Issue 4: local and regional data

16. To plan education and training in localities and regions, we need participation data at these levels. The main problem is cost. An adult learning survey large enough to yield data at these levels would be very expensive. We found a cost-effective solution: to introduce questions on learning, closely based on those in the National Adult Learning Survey, to a boosted version of the Labour Force Survey. The findings are not very detailed, but “headline” findings are available on taught, non-taught and overall learning.

Issue 5: difficulty in tracking individuals between institutions and over time

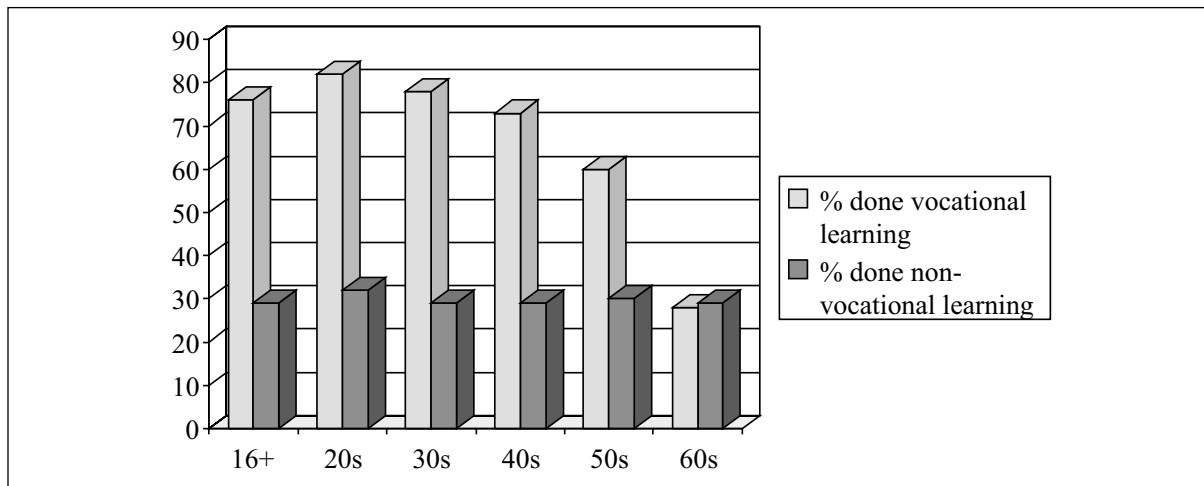
17. Individuals may undertake learning in several different settings. It is generally not possible to link the management information on these different learning episodes. Consequently we do not have a picture of the cumulative impact of different programmes on a given individual. Surveys can help with this to some extent. However, the National Adult Learning Survey is mainly a set of cross-sectional exercises. The data producer’s ideal world would include:

- the possibility of linking data on each individual learner, through a unique identification code or number; and
- longitudinal survey instruments to measure the long-term outcomes of participation in learning.

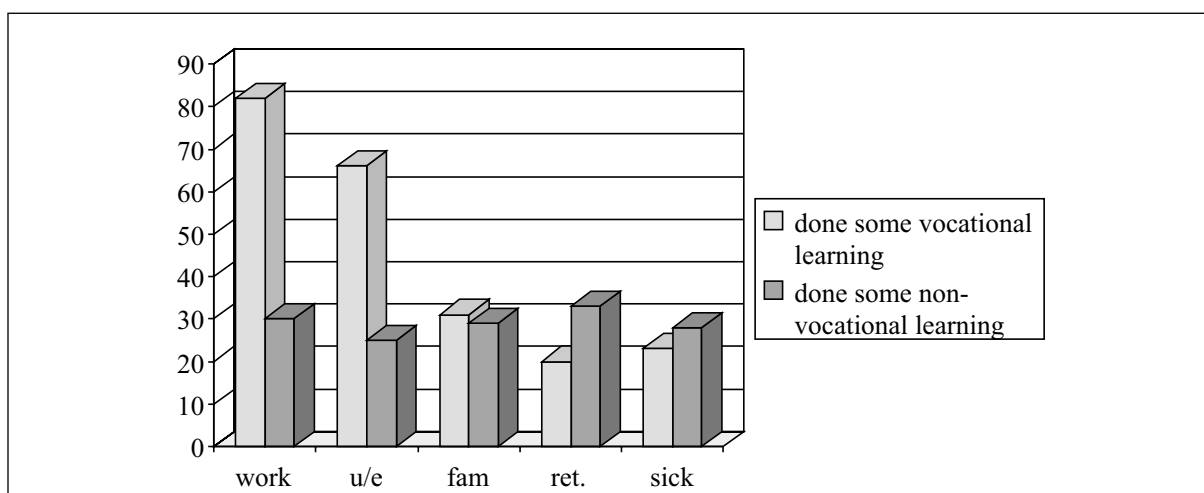
There has been one piece of longitudinal work so far, looking at movement into and out of various kinds of learning. Some results are illustrated at Annex B.

ANNEX A: FINDINGS FROM THE NATIONAL ADULT LEARNING SURVEY

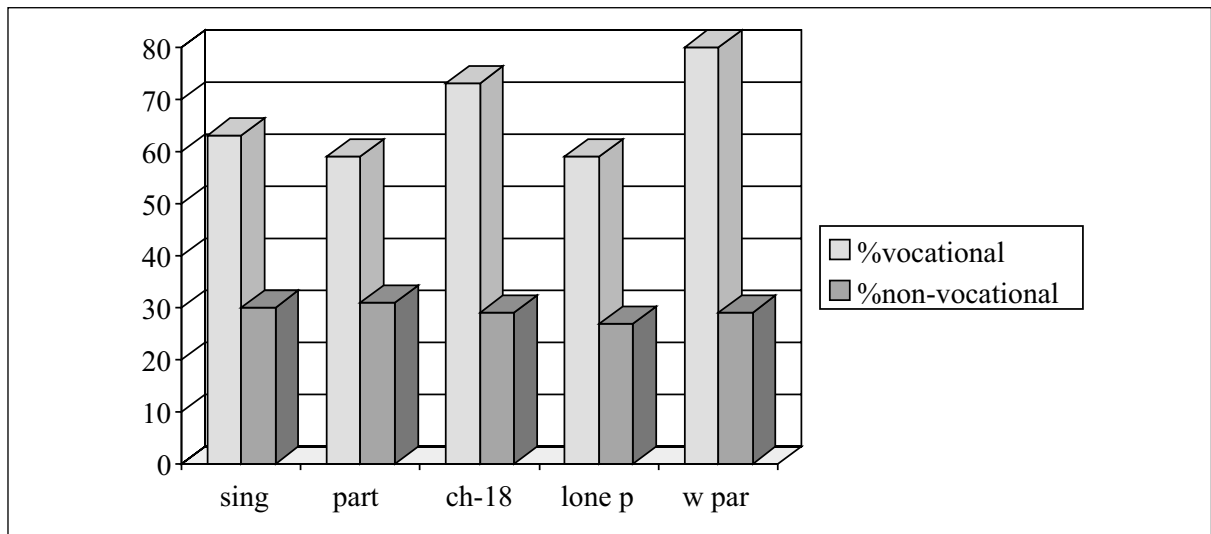
By age, vocational and non-voc.



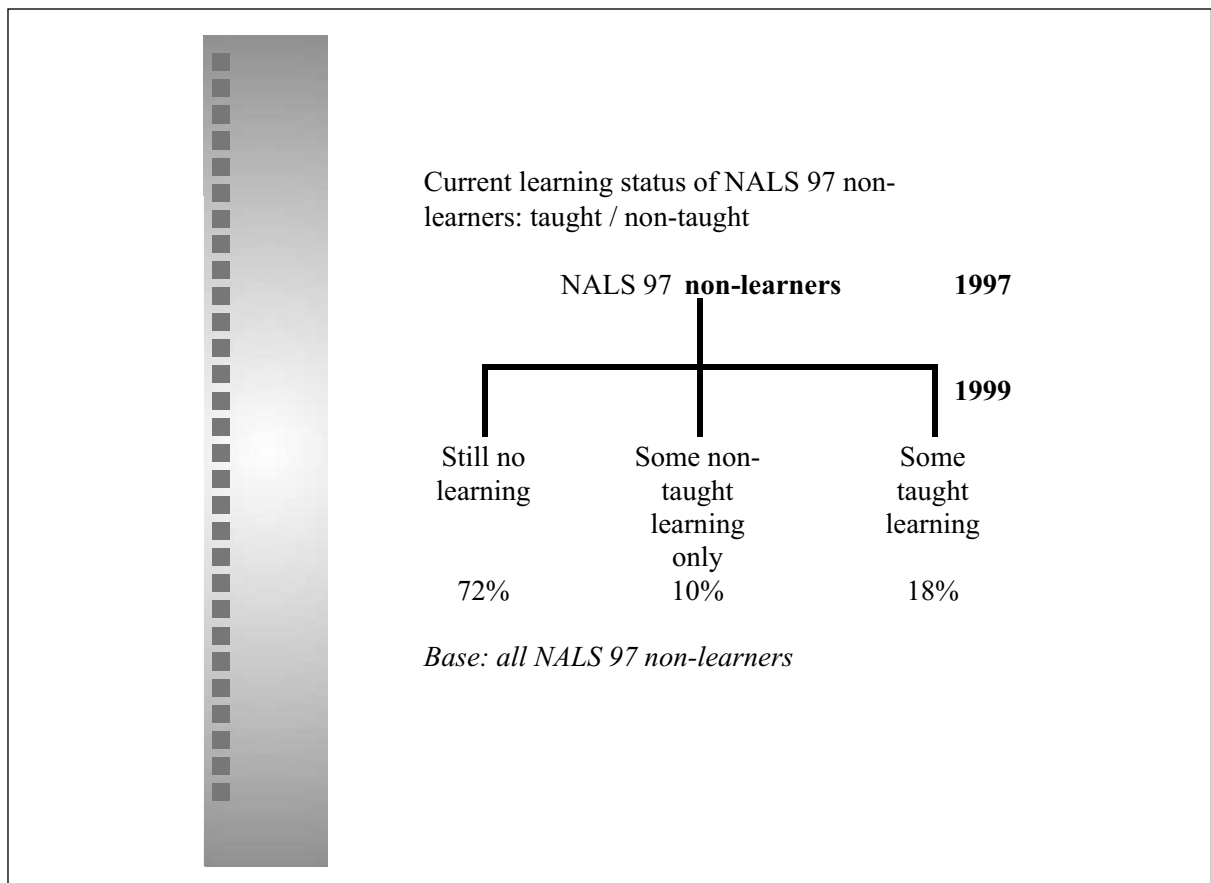
Participation by activity status



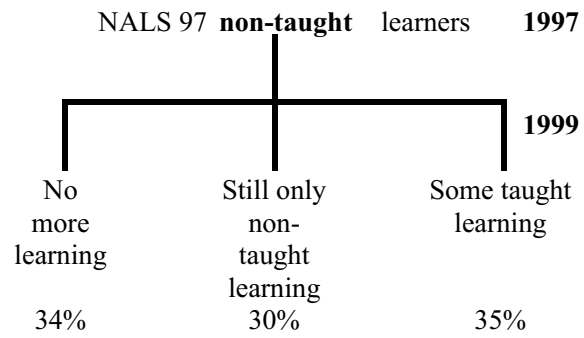
Participation by household type



ANNEX B: FINDINGS FROM THE PATHWAYS IN ADULT LEARNING SURVEY



Current learning status of NALS 97 non-taught learners



Base: all NALS 97 respondents reporting non-taught learning only

THE POINT OF VIEW OF DATA PROVIDERS, EURYDICE

DELHAXHE Arlette

EURYDICE

Rue d'Arlon 15

B – 1050 BRUXELLES

Arlette.delhaxe@eurydice.org

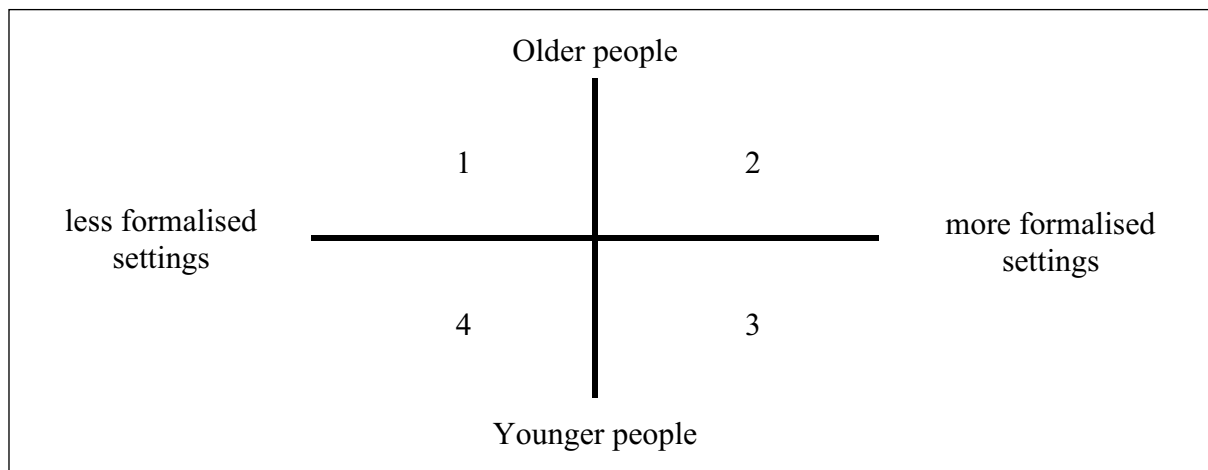
Introduction

Before getting down to essentials, it is important to highlight two major characteristics of the concerns of Eurydice in relation to the theme of the seminar, namely (1) the question of 'measurement' and (2) 'lifelong learning'.

Eurydice is the information network on education in Europe and produces comparative analyses on a variety of issues by examining the functioning and organisation of education systems. **As far as measurement is concerned, Eurydice is not therefore a producer of statistical data in the strict sense.** However, if it is considered, as Bottani et Tuijnam (1994, p. 49) suggest, that indicators '*are more than simply a numerical expression or a composite statistic*' and that their defining characteristic is that '*they are intended to convey summary information about the functioning or performance of an education system to inform the stakeholders and other interested parties*', Eurydice may be regarded as contributing, by means of its analyses, to the preparation of indicators on education systems and thus to the measurement of their operations. What is more, as I shall attempt to illustrate, qualitative indicators are necessary to interpret an item of statistical data correctly and transform it into an indicator relevant to a particular context.

A second major characteristic of the current concerns of Eurydice limits its contribution to the analysis of lifelong learning, given that **its field of investigation covers solely formal education systems and their contribution to LLL.** More specifically, in the Figure regarding this matter on page 10 of the Eurostat Task Force Report (2001), the work of Eurydice relates primarily to the two quadrants linked to more formalised settings and, in particular, quadrant 3 targeted towards younger people.

Figure 3.1: The lifelong-lifewide framework



Source: Adapted from National Agency for Education Sweden:
Lifelong learning – an indicator framework.

As the Eurostat Task force report (2001) also firmly emphasizes, LLL presupposes a major change in educational content and outlook in school systems themselves: the necessary skills have to be developed at this level for learning to learn. In this respect, the role of schools is crucial. To control and monitor the implementation of LLL, there is therefore a definite need for an analysis of educational structures based on ‘comparable’ data from countries. It is here that Eurydice can make an important contribution.

From the survey of national policies for LLL completed by Eurydice in March 2000 under the Portuguese presidency and very recently updated,¹ it could be concluded that the way in which countries have approached LLL is strongly determined by the specific nature of their education system. All of them are dependent on this aspect in adapting their system to current requirements and expectations. This is their common *leimotiv*; it is the rate at which they act and the way in which they do so that vary.

THE NEED TO CONSIDER THE QUALITATIVE DIMENSION OF STATISTICAL DATA

Since the European Commission began to produce indicators on education systems with the regular publication of the *Key Data* report, it has encouraged collaboration and synergy on the part of Eurydice and Eurostat. By combining so-called qualitative and quantitative data, it has been possible to emphasize how knowledge of the workings and organisation of education systems illuminates and ‘complements’ the interpretation of available statistical data.

Data on the teaching of foreign languages, as well as on amounts of public financial support for students in higher education and on participation rates at the pre-primary level of education will be taken as examples to illustrate the foregoing assertion.

The teaching of foreign languages as a basic skill for everyone

Basic skills are an integral aspect of the priority objectives identified in the follow-up to the report on the concrete future aims of education and training systems. These skills are defined in the conclusions to the Lisbon Summit and foreign languages are unquestionably among them. As regards skills concerned with numeracy and reading, a body of helpful data is available on outcomes, whether derived from the PISA (OECD) or IEA studies. By contrast, in the case of foreign languages, work is needed so that reliable and readily comparable information on the skills acquired by young people at the end of compulsory schooling can eventually be made available. Current statistics (Eurostat, UOE) give information on the number of pupils learning particular languages at different levels of education. Once more, if this data is to be correctly interpreted, it is essential for it to be considered in conjunction with the provision of foreign language courses in the various countries concerned. For example, the very high proportions of young people studying English is in some countries attributable to the fact that it has to be taken as the first compulsory language.

As a result of qualitative information now available, it is also possible to measure what has been accomplished by policies in the field of language teaching. In a recently published study on foreign language teaching in schools,² the age at which languages are first learnt is diachronically compared for the years 1974, 1984 and 1998. This comparison points to a very positive trend: languages are being compulsorily taught to children at an increasingly early age and the differences observed between countries 20 years ago are far less marked.

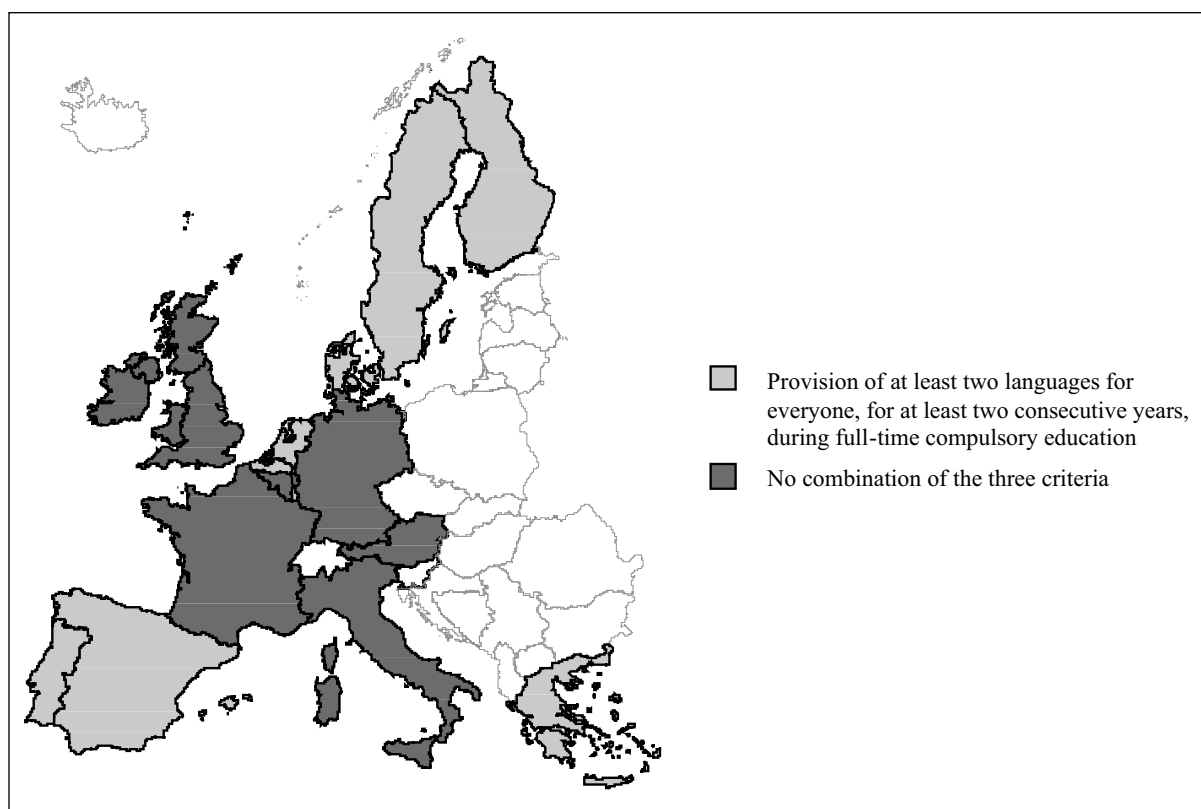
To consider the recommendations in the March 1995 Council Resolution³ in conjunction with the current situation in Europe is also to obtain an indicator of the quality of ‘educational provision’ in terms of input or process. This is because it is possible to determine the extent to which the three criteria specified in the Resolution (namely, enabling all pupils to learn two foreign languages – for at least two consecutive years – during compulsory education) are or are not reflected in the organisation of national education systems.

¹ The survey has been updated jointly with CEDEFOP and will soon be available on the Eurydice web site: www.eurydice.org

² Eurydice, *Foreign Language Teaching in Schools in Europe*, Brussels, 2001

³ Council Resolution of 31 March 1995 on improving and diversifying language learning and teaching within the education systems of the European Union (Official Journal No. C 207 of 12 August 1995, pp.1-5)

Application of the three criteria (1995 Resolution) in the provision of foreign languages during full-time compulsory schooling, 1999/2000.



Source: Eurydice.

In 1999, seven EU countries complied with these three criteria. Regularly updated, this information will provide useful indicators for measuring the progress achieved in foreign language teaching in relation to the Resolution and the monitoring of priority objectives in education systems as regards LLL.

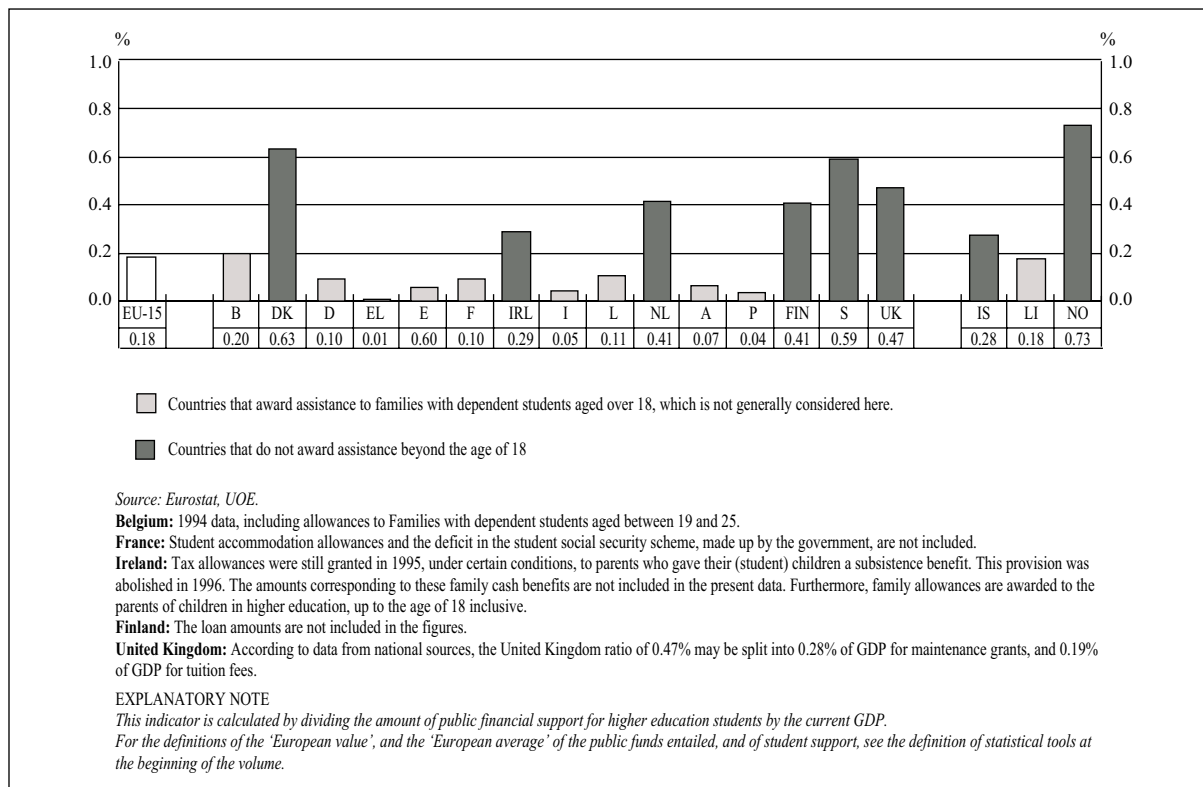
Public financial support for students

As far as LLL is concerned, it has been re-emphasized that it is a priority to encourage young people to remain within the education/training system beyond the age of compulsory schooling. Financial investment by the public authorities is part of the effort to achieve this objective. Analysis of the methods of providing financial support to students is helpful to an understanding of policy options and decisions, and in interpreting existing financial data more accurately.

In the study conducted by Eurydice on this topic (1999), two main models governing the management and contributions of the State were identified. In the first, students are considered to be independent from their parents and receive state support directly without any reference to the income of their families. In these cases, parents receive no state financial support for a dependent child. In the second model, parents remain financially responsible for their student children and receive financial assistance in the form of tax relief or benefits.

In the Unesco/OCDE/Eurostat (UOE) questionnaire, amounts of support are supposed to cover all forms of public assistance available in each country. Depending on the definitions, the data collected relates therefore not only to grants and direct support in cash, but also assistance awarded to families.

Figure 12: Public financial support for higher education students (ISCED 5, 6 and 7) as a proportion of GDP, 1995



However, given the difficulty of identifying these latter amounts (because of separate budgets and the complexities involved in calculating the share of household expenditure corresponding to support for students in higher education), the amounts given hardly ever include anything but the grants and loans awarded to students. In the above-mentioned study, the UOE Figure on amounts distinguishes between countries in which financial support goes to families, from other countries. The aim is to warn the reader that, in the case of the former, the amounts invested by the State in financial support for higher education are underestimates.

Reference to existing national data has enabled these amounts to be estimated more accurately. Three major national studies focusing on these types of expenditure have been conducted in Germany, France and Portugal, respectively. According to the results obtained, taking these elements into account makes a significant difference, as it virtually doubles the level of State investment, raising it to 0.3-0.4% of GDP or, in other words, to around the levels reached by the Netherlands and Finland.

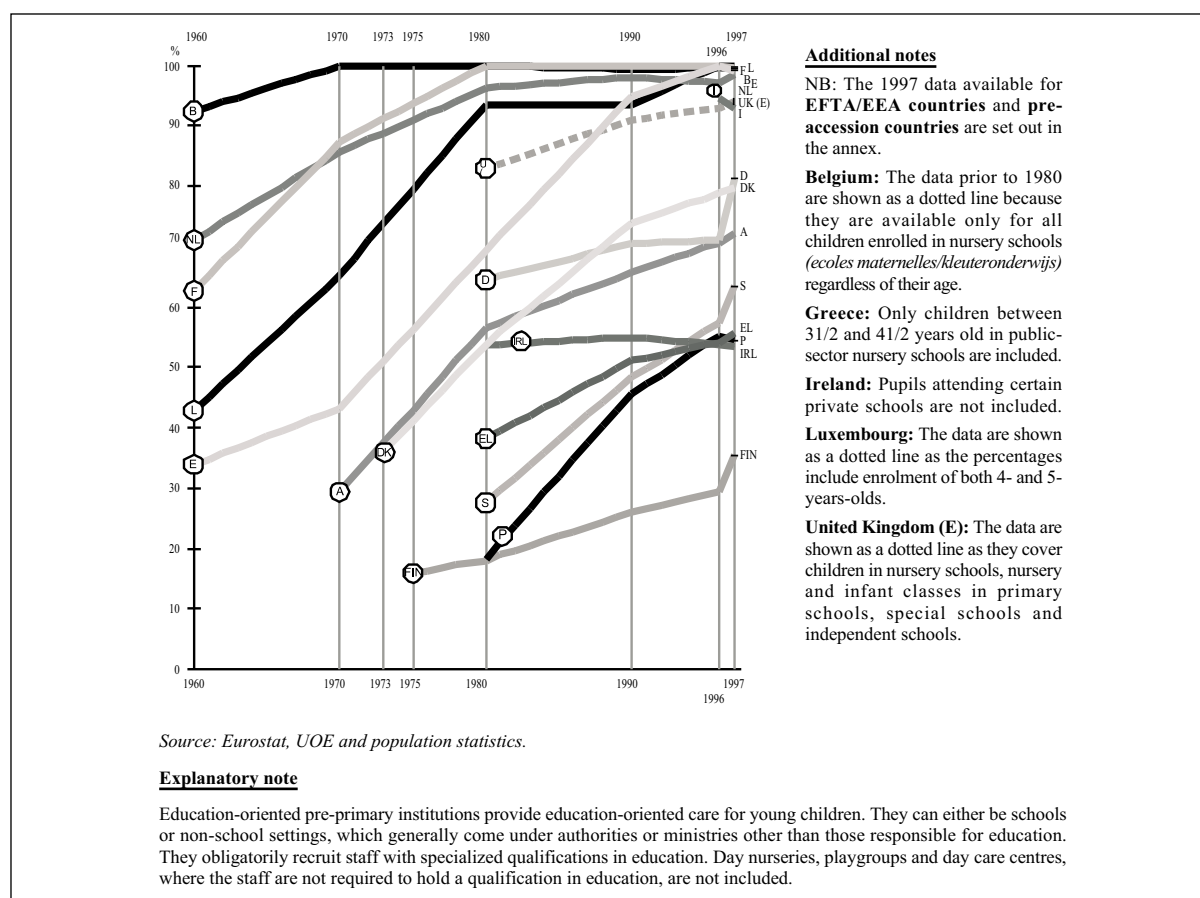
The participation of young children in the curricula of pre-primary education.

The role of pre-primary education in the development of young children, as well as the important part played by this stage of education in relation to LLL, is now very widely acknowledged. Yet fairness as regards access to pre-primary education still remains a sensitive issue in many European countries. Participation rates – at around the ages of 3 or 4 – constitute the preferred indicator for measuring access. These rates are calculated on the basis of the UOE questionnaires, by means of which data can be gathered on the participation of children in more formal settings corresponding to schools or other kinds of centre which are distinct from private homes and recruit staff with fully recognized qualifications. Time series have been prepared to measure trends in the participation of children in these types of institution.

This method of collection thus gives very favourable results for countries such as France, Belgium or Italy in which such organisational arrangements predominate, sometimes to the exclusion of all others. However, these statistics may be qualified in the light of qualitative information about the various kinds of facilities in existence. In countries that display relatively low rates, the data do not necessarily mean that no other educational alternative is available as, in some of them, provision mainly takes the form of play groups or family day care and the participation rates are underestimates. This applies mainly to the Nordic countries, in particular Fin-

land,⁴ in which these other kinds of facilities are much more widespread, so that the participation rates are relatively low.

Figure C1: Participation rates of 4-year-olds in education-oriented pre-primary institutions, as a percentage, from 1960 to 1997



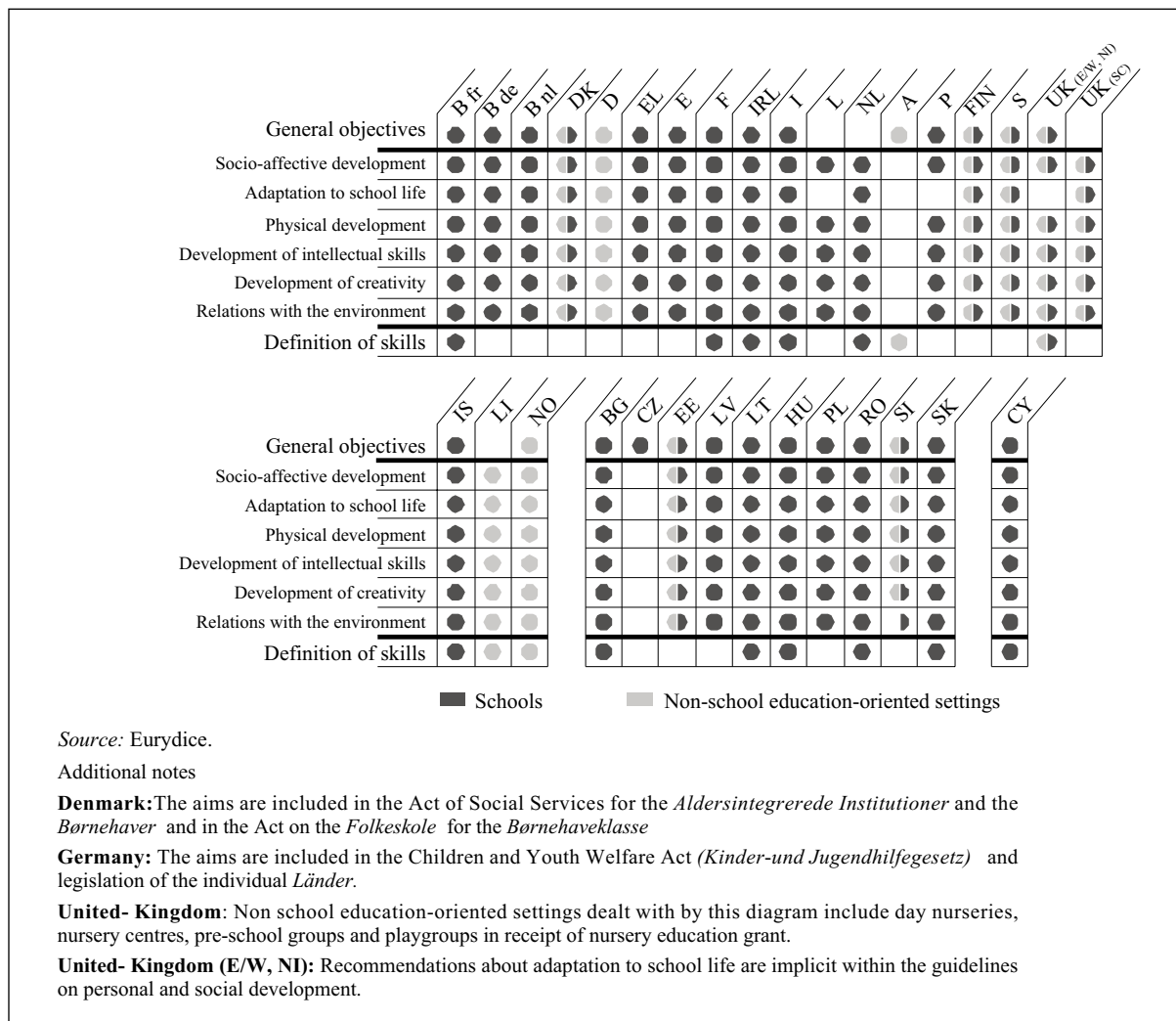
Furthermore, in some countries, day nurseries or family day care have to be supervised by qualified staff with the same skills as adults employed in more formal settings. These facilities thus comply fully with the qualification criteria considered in the UOE definition. This is particularly so in Sweden and Norway and, in the majority of cases, in Finland. Information collection mechanisms have to be developed to provide data on the attendance of children at centres corresponding to less formal settings which nonetheless comply with the same 'quality' criteria (at least as regards staff training) as the institutions currently included in the data.

More important still perhaps, the quality of pre-primary education is not measured solely on the basis of attendance rates, which is why *Key Data* prepared jointly with Eurostat also includes 'qualitative' indicators on the number of children per adult in a group or class, and on types of existing institution and staff training, etc. This kind of information is all the more necessary when the analysis of policies for pre-primary education is concerned with matters relating to the improvement of provision and the quality of reception facilities.

The development of autonomy and creativity are two aims attributed to pre-primary education in relation to LLL. As regards the objectives pursued, there is a standard distinction between pre-primary school institutions and the other types of educational centre. The former would appear to correspond to the wish above all to prepare children for learning at school, whereas the latter are apparently characterized by far greater emphasis on creativity and play. Analysis of official recommendations and curricula is one way of gaining a more accurate insight into political statements about this level of education.

⁴ The study relating to pre-primary education entitled *Quality of life of four year old children in the world*, conducted under IEA auspices, revealed that 30% of Finnish children aged 4 received provision in a less formal setting. This percentage is not taken into account in international statistics.

Figure C13: General and specific objectives stipulated in the official guidelines, education-oriented pre-primary institutions, 1997/98



Where the objectives are the subject of specific recommendations and divided into priority concerns, few differences are to be observed between countries and between 'school' and 'non-school' types of institution, and the six kinds of objective identified and illustrated in the Figure are referred to in nearly all cases. Only the guidelines of 'school' institutions in Luxembourg, Portugal and the United Kingdom make no mention of school learning as a specific objective to be attained.

Finally, whether or not access to pre-primary centres is free is also an important factor when considering whether the provision available is adequate and satisfactorily meets demand. Naturally, children from poorer families are likely to be excluded from pre-primary facilities if their parents have to pay for them, unless measures are introduced to waive or relax such financial conditions.

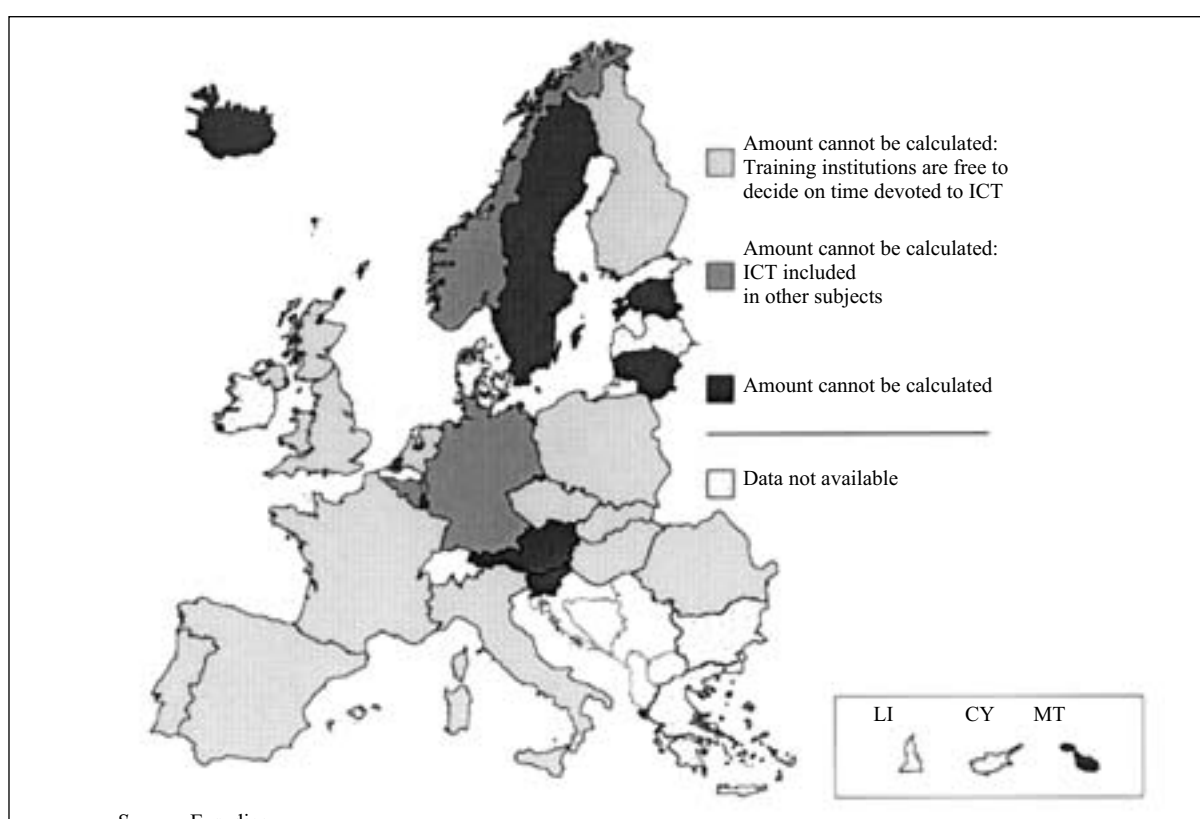
LIMITS TO OFFICIAL ADMINISTRATIVE SURVEYS IN UNDERSTANDING THE WORKINGS OF EDUCATION SYSTEMS

With decentralization and the growing autonomy granted to schools as regards not only the management of resources, but also the curriculum, and the amount of teaching and educational provision, it is increasingly difficult for the public authorities at top or central level to supply reliable and representative data for the whole area under their jurisdiction. Notes such as 'depends on the school' or 'local autonomy' are becoming increasingly common. While this is helpful in indicating the degree to which management of an educational system is decentralized, they basically say little more than 'data not available'. Calculation of the number of hours of teaching a year constitutes a typical example. In the majority of countries, it is possible by means of an appropriate

method of calculation⁵ to obtain the minimum number of hours that pupils at a given age have to complete in a school year. However, since 1995 in Sweden, for example, this calculation is no longer possible as municipalities are free to distribute as they wish, over the nine years concerned, the 6665 periods established for the whole of compulsory education. Reliance on the ‘flexible timetable’ category has clearly increased in many countries throughout the last decade.

Information available on initial teacher training is also subject to this limit. Clearly, it is fairly easy to compare the length and level of initial teacher training, the types of training offered, such as those for subject specialists, semi-specialists or non-specialists (generalists) in accordance with the level of education, or the inclusion or otherwise of compulsory training in information and communication technology (ICT) when considering the skills expected of teachers. However, over and above this data, the autonomy granted to training institutions in many countries is such that it is impossible to measure, for example, the proportion of ICT training in total training or the content of the skills that trainee teachers are taught.

Amount of ICT training in initial teacher training for lower secondary level, 2000/2001



Even in the case of strictly administrative data collection, local surveys are therefore increasingly necessary. Indeed, they have long been conducted by the IEA as part of its studies on output. They have been similarly developed in INES and PISA at the OECD. From this standpoint, the work currently undertaken by UNESCO, the OECD and IEA to develop a tool for matching questions in surveys for the various studies is also to be welcomed.

The European Commission Eurobarometer survey on the position and use of ICT in schools, which was recently conducted among teachers as part of e-learning activity, should also be mentioned. This ‘Flash survey’ of representative samples of schools contains not only statistical data on the number of computers per school, but also ‘qualitative’ data on the use to which they are put (in terms of approach and frequency of use), on the opinions of teachers regarding these matters, and on their training in this area.

⁵ This is based on multiplication of the average daily load by the number of days of school per year. The average daily load is itself obtained by taking into account the number of teaching periods per week, the length of each period and the number of days of schooling per week.

THE STRICTNESS AND ACCURACY OF DEFINITIONS

Qualitative analyses call for as much methodological stringency as statistical ones if they are to be reliable and helpful for comparative purposes. This is very important, as the increasingly strong demand for qualitative data should not lead to excessive emphasis on exchanges of ‘good practice’ and national descriptions or ‘national profiles’ that are not methodologically or procedurally disciplined.

It is now urgent to establish precise criteria and a clear definition of what constitutes a ‘good practice’ Furthermore, so that this is reliable for comparative purposes, care should be taken to place it in its context. Such analysis is required in order to interpret correctly the beneficial impact and/or effectiveness of the practice concerned, as well as its limits. This is because any single element is part of a system and interacts interdependently with the other elements in it. The measurement of lifelong learning is no exception to this basic rule which has been impressed on us by all those determined to ensure that comparative education is a highly scientific discipline.

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THE DYNAMIC BEHIND EUROPE'S FUTURE (EDUCATIONAL, ECONOMIC, INDUSTRIAL, CULTURAL, SOCIAL, POLITICAL)

LONGWORTH Norman

Advisory Professor For Lifelong Learning
European Learning Cities Network/Napier University
C/o Mas Oliver Sauveur
66500 EUS
France
Norman_Longworth@CSI.com

A Brief Guide for the Busy Person

‘EUROPE’S STRENGTHS, AND THE ROAD TO IMPROVING ITS COMPETITIVENESS, COULD LIE IN THE CREATION OF A EUROPEAN LEARNING CULTURE THROUGH LIFELONG LEARNING.’

ERT Report on Education and European Competence

Europe - Returning to Lifelong Learning

Europe is returning to Lifelong Learning. In the first years of the 17th Century, Jan Comenius wrote:

‘Just as the whole world is a school for the whole of the human race, from the beginning of time until the very end, so the whole of a person’s life is a school for every one of us, from the cradle to the grave. It is no longer enough to say with Seneca: ‘No age is too late to begin learning.’ We must say: ‘Every age is destined for learning, nor is a person given other goals in learning than in life itself.’

What is Lifelong Learning?

Using Open and Distance Learning Techniques for delivery of new courses?
More Leisure Education for Adults?
Creating employment opportunities through Education/Industry Links?
The empowerment of workers in ‘Learning Organisations’?
A strategy for making people employable and employed?
A way of giving people self-esteem and learning skills?
A Community working together for the good of all its citizens?
A Cradle to Grave seamless learning process?
A new approach to Adult and Continuing Education for the workplace?
A philosophy and set of tools for developing everybody’s human potential?

Plato started it. His ideas of '*Dia Viou Paedaeia*' - the obligation of all citizens to educate themselves so that they can better contribute to the community- were written more than 3000 years ago. This theme has returned throughout history in different parts of the world. Kuan Tzu's famous maxim '*When planning for a year - sow corn, when planning for a decade - plant trees, when planning for a lifetime - train and educate men*' was written in the 3rd Century BC and Jan Comenius's view is almost 400 years old now.

But what is Lifelong Learning? To some it is no more than encouragement and new opportunities for adults to learn, particularly in the leisure and liberal arts, but sometimes as a second chance opportunity for people whose intellectual development occurred later in life. In others it is heavily professional development oriented, centred around industry and universities, and round ways of improving organisational and personal performance. In yet others it is the application of open and distance learning tools and techniques to supplement traditional infrastructures. But the all-encompassing view expressed in the last of the list above is increasingly coming into favour.

Three Models of Lifelong Learning

Not surprisingly in today's world, many Lifelong Learning models have an employment-oriented approach and, except in Japan, most focus heavily on partnerships, predominantly those between Industry and Universities. In the Northern European and North American perception a loose connection is made to the role of schools in developing values and attitudes towards learning, but education at school level is kept rigidly separate from what happens after school. The lifetime holism of an individual's learning pathway is not addressed. However, in Japan and the Pacific Rim countries there is a strong community element initiated by Government through festivals, fairs, national programmes and the construction of purpose-built Lifelong Learning centres. The Industry and Community models are normally kept separate from each other.

3 Lifelong Learning Models

1. The Industry-oriented Central/South European Approach
Vocational and employment oriented
Promotes Continuing Education for all
Driven by University-Industry Partnerships
Adult level - more education and training
Training, not learning, focus
2. The Japanese and Pacific Rim Approach
Two Models - kept quite separate
a) Job and skills driven - Initiated by Companies in Companies
Has a Training and a Learning Focus
Companies as Learning Organisations
b) Community Driven - Initiated by Government and Communities
Lifelong Learning Community Centres
Mainly For Adults but also non-school Youth Programmes
3. The Northern Europe and North American Approach
Relies heavily on Partnerships
Includes Open Universities, Distance and Open Learning
Recognises Importance of School Education
Empowerment of People in Industry through Learning

These of course are generalisations and different countries have different perceptions and different approaches. In general, Lifelong Learning is seen as an increasing continuing professional development for employment and employability at adult level. Most are still in the sphere of training and teaching. Current models are therefore neither lifelong nor learning. Further, they exclude large numbers of people.

The Lifelong Model of Learning

Another model is becoming more and more important in Lifelong Learning. This is the whole-person, whole-organisation, whole-nation, whole-society approach favoured by UNESCO, OECD, the European Round Table of Industrialists, the European Learning Cities Network and some of the more enlightened countries of the East. It might be called:

The Integrated 'Learning for a Lifetime' Approach

Cradle to Grave (Lifelong) in a seamless system
Focus on Development of Human Potential through Learning
Applies holistically within and between all sectors of the community - whole-of-life vision
Multiple partnerships for mutual advantage and resource
Focuses on needs of Learners. Empowers Learners by giving them ownership of their own learning

In this the engine of change is the development of human potential at all ages, education is seen as a holistic process and its focus is on the satisfaction of the needs of every learner.

It is lifelong - from cradle to grave, from 0-90, from birth to earth, from maternity to eternity, from hatch to despatch.

It is learning - it focuses on giving learners the tools by which they can learn according to their own learning styles and needs - a 180 degree shift of emphasis from teacher-directed information transfer

It is for all - it excludes no-one and pro-actively creates the conditions in which learning develops creativity, confidence and enjoyment at each stage of life.

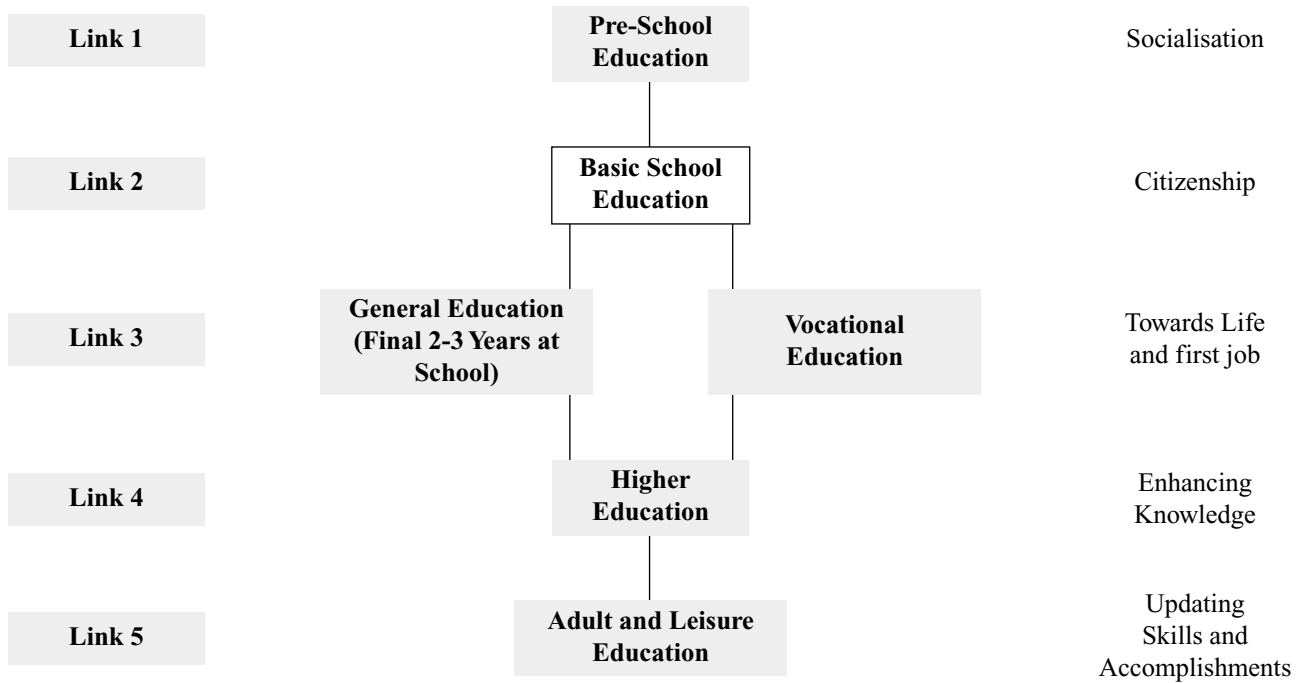
The OECD Ministerial Meetings in January 1996, whose conclusions Europe supported, identified three rationales for Lifelong Learning. These were:

Enriching Personal Lives
Fostering Economic Growth
Maintaining Social Cohesion

These may be seen as interdependent as they emphasise the social and personal as well as the economic.

Lifelong Learning as a Seamless System

Support for this view comes from Industry. The European Round Table of Industrialists' booklet - 'Towards the Learning Society'. In it, life is described as 'a Learning Chain' in which each stage is linked to the next in a seamless vertical progression.



(Education for Europeans - European Round Table of Industrialists)

The holistic seamlessness of this diagram contrasts sharply with present practice in Europe of leaving each sector of education to work out its own curricula, its own rationales and its own methodologies and structures.

In the current system, individuals are subjected to several different educational systems which occasionally talk to each other but which use different languages and operate different learning cultures. Lifelong Learning changes this.

Employment or Employability in Europe?

Europe is rapidly advancing from the industrial age into the age of information, in which the emphasis is on skills and knowledge rather than information, and on personal learning capability and initiative more than imposed solutions. This list of skills engenders both employability and employment. Without them, individuals are disabled, not just mentally and in their ability to find work, but also in their capacity to fulfil their own human potential.

Skills for a Lifelong Learning Age

Learning to learn	<ul style="list-style-type: none"> ➤ Knowing one's learning style, ➤ Being open to new learning techniques and new knowledge ➤ Wanting to learn with self-confidence
Applying new knowledge into practice	<ul style="list-style-type: none"> • Seeing the connection between theory and practice, • Transferring knowledge into action
Questioning and reasoning	<ul style="list-style-type: none"> ✓ Being continuously aware of changes ✓ Continually wanting to improve procedures and processes ✓ Never being satisfied with the status quo
Managing oneself and others	<ul style="list-style-type: none"> ❖ Setting realistic personal targets ❖ Recognising the gap between the current and the target and understanding how to fill it ❖ Continuously developing personal skills
Managing information	<ul style="list-style-type: none"> <input type="checkbox"/> Collecting, storing, analysing and combining information <input type="checkbox"/> Using information technology
Communication skills	<ul style="list-style-type: none"> ■ Expressing oneself clearly orally and verbally in formal and informal situations ■ Persuading others ■ Listening to others
Team work	<ul style="list-style-type: none"> ➤ Sharing information and knowledge, ➤ Receiving information and knowledge ➤ Participating in goal-setting ➤ Achieving common goals
Problem solving skills	<ul style="list-style-type: none"> • Creativity and innovation
Adaptability and flexibility	<ul style="list-style-type: none"> ✓ Facing change with confidence ✓ Adapting to the new situations and tasks ✓ Being ready to change personal direction
Lifelong Learning	<ul style="list-style-type: none"> ■ Continuously upgrading personal skills and competence ■ Cherishing the habit of learning

Empowerment in European Industry

Industry has taken the lead in Lifelong Learning. It has had to in order to survive and to meet the challenge of globalisation. For example, the Car Manufacturers have great experience in empowering the workforce through learning. Often a visitor will see learning principles written on the wall of every plant. This is an example in the UK.

1. Learning is the most natural human instinct
2. Creativity, involvement and contribution are fuelled by learning and development
3. Everyone has two jobs - the job and improving the job
4. People own what they have created
5. People need work and enjoy it if they are valued
6. Creativity and ingenuity are grossly underrated
7. Management does not have all the answers

Empowerment means teamwork and decision-making. Most enlightened manufacturing companies now delegate much of the decision-making to those actually doing the work. They have become 'Learning Organisations'.

tions'. This has great implications for learning. For people to make effective decisions based on a wide variety of informational inputs, other high order skills, such as information-handling, problem-solving and thinking become important. They need to develop the habit of learning and confidence in their own creativity.

Industry invests in many projects to assist in this. These range from personal development courses to on-the-job training techniques, from computer-based learning programmes to frequent team seminars. They make sums of money available to every employee each year to take education outside of the company, irrespective of the subject. They encourage and pay for employees to take first or further degrees through Open Universities or local colleges. In this way all their employees are developing the precious habit of learning.

Such developments in Industry have major implications for education outside industry. They ask interesting questions about the relevance and quality of education in schools, colleges and universities. They have profound meaning for the training of teachers and the provision of adult education. They challenge the Professional Associations and the Trades Unions to participate. They emphasise the necessity of working together, of integrating the different sectors in our society into a combined Lifelong Learning assault on ignorance and exclusion, of educating to make people employable as well as employed.

Creating Learning Organisations in Europe

Many companies now regard themselves as Learning, as well as manufacturing, organisations. But the concept need not be confined to Industry. The following describes ten characteristics to identify the true Learning Organisation and may assist understanding in SMEs, educational organisations, Professional Associations and Government offices. Many may seem quite radical - but they describe how the twenty-first century will affect working and non-working life in ways not yet appreciated by many.

Ten Indicators of a Learning Organisation

1. A Learning Organisation can be a company, a professional association, a University, a school, a city, a nation or any group of people, large or small, with a need and a desire to improve performance through learning.
2. A Learning Organisation invests in its own future through the Education and training of all its people
3. A Learning Organisation creates opportunities for, and encourages, all its people in all its functions to fulfil their human potential
<ul style="list-style-type: none"> - as employees, members, professionals or students of the organisation - as ambassadors of the organisation to its customers, clients, audiences and suppliers - as citizens of the wider society in which the organisation exists - as human beings with the need to realise their own capabilities
4. A Learning Organisation shares its vision of tomorrow with its people and stimulates them to challenge it, to change it and to contribute to it
5. A Learning Organisation integrates work and learning and inspires all its people to seek quality, excellence and continuous improvement in both
6. A Learning Organisation mobilises all its human talent by putting the emphasis on 'Learning' and planning its Education and Training activities accordingly
7. A Learning Organisation empowers ALL its people to broaden their horizons. in harmony with their own preferred learning styles
8. A Learning organisation applies up to date open and distance delivery technologies appropriately to create broader and more varied learning opportunities
A Learning Organisation responds proactively to the wider needs of the environment and the society in which it operates, and encourages its people to do likewise
9. A Learning Organisation learns and relearns constantly in order to remain innovative, inventive, invigorating and in business.

A Learner's Charter

But Learning starts with the individual. Studies and Surveys of attitudes to learning often lay bare the inadequacies of past and present learning provision as being remote, uninteresting, and more oriented to the needs and curriculum of the teacher than the demands of the learner. Most people interviewed have little faith in any improvement in this situation. There is a need for a 'Learner's Charter' to take into account the rights of everyone to develop his or her own mental potential. The following is one model proposed by the European Lifelong Learning Initiative.

ELLI Principles of Learning

1. All citizens of Europe can learn and develop their human potential
2. All citizens of Europe should have access to Learning
3. The learner is the customer and the customer has first priority
4. Guidance and support should be available to help the learner
5. All Learning styles should be recognised and catered for
6. All learning - formal and informal - can be validated in a way appropriate to the learner
7. Collaborative, positive support for learning should accept no barriers
8. Modern aids should be creatively applied to support the learner
9. Leadership and opportunity should be available for all learning requirements, levels and ages
10. Learning should be supported throughout life

Learners come in all shapes, sizes, backgrounds, capacities, interests and ambitions. They have different preferred learning styles, different motivations and different amounts of time available for learning. In Lifelong Learning, the focus for learning must be directed towards the needs of each individual learner as in principle 3 above. The 'throw it at them and hope some of it sticks' approach is gone in modern industrial training - and yet there are large pockets of the formal education systems where it still applies and where the learner has little ownership of his/her own learning.

Modern education technology, used properly and effectively, now makes this more than ever possible and offers the additional advantage of reaching large numbers of people.

A Definition of Lifelong Learning

The Learner's charter also gives rise to a universal definition of Lifelong Learning focusing on the individual's need for support and encouragement.

LIFELONG LEARNING is

The development of human potential through

a continuously supportive process

which stimulates and empowers individuals

to acquire

all the knowledge, values, skills and understanding they will require throughout their lifetimes

and to apply them

with confidence, creativity and enjoyment

in all roles, circumstances and environments

In this, Lifelong Learning introduces several new ideas and becomes distinct from the education and training paradigm. Among them:

Concepts of empowerment

Concepts of Learner Focus

Concepts of Learning as Enjoyment

Concepts of Learning for everyone

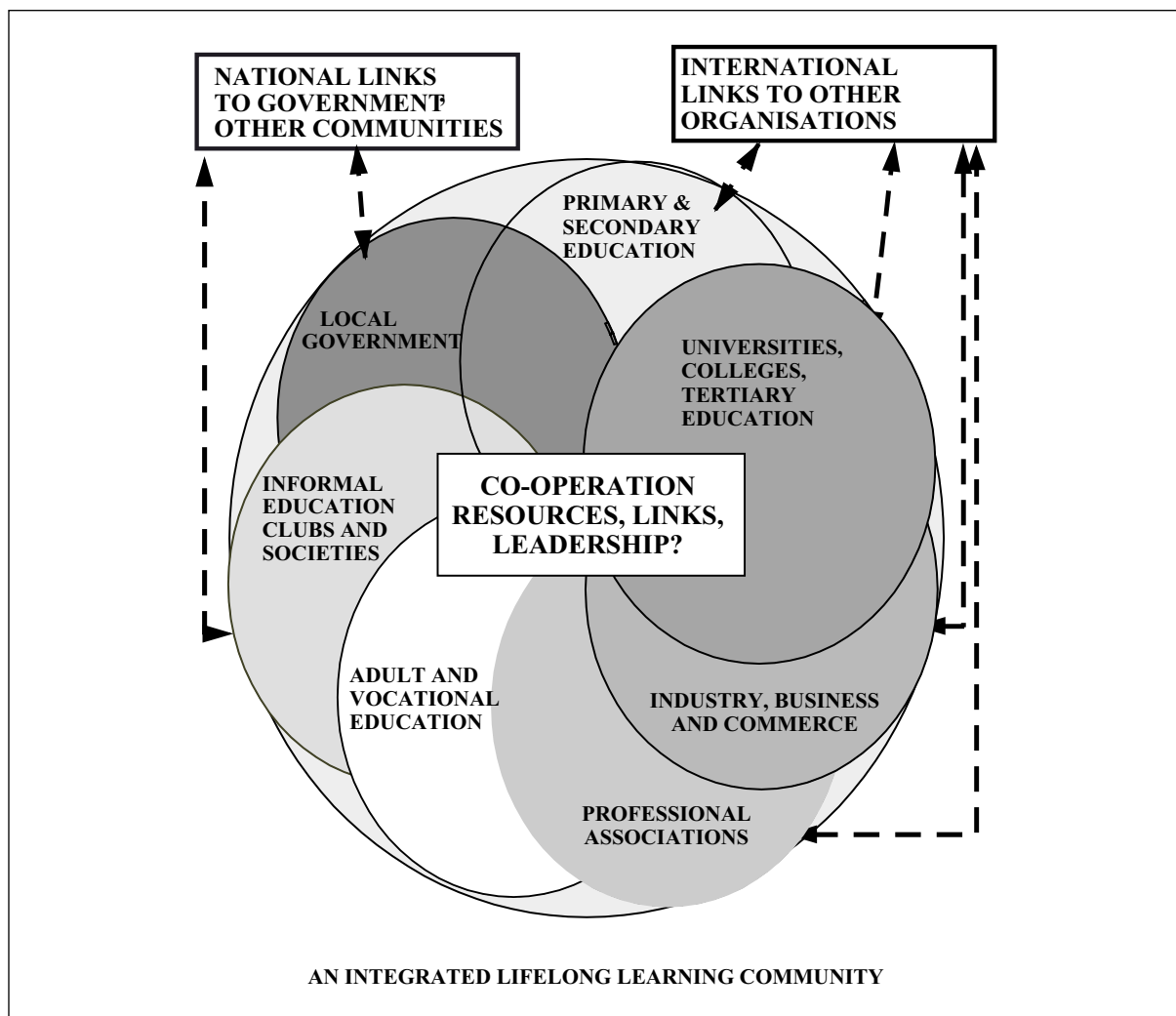
Concepts of Creativity

Concepts that Learning and Education is about the Development of Human Potential

A Europe of Learning Communities

Lifelong Learning is the central unifying factor in Europe's progress to a Learning Society. However the creation of a workable infrastructure within which each sector can communicate effectively with other sectors is an important aspect of that progress.

This introduces the concept of the 'Learning Community' - a city, town or region which provides and promotes learning opportunities for its citizens wherever, whenever and however they need them. A Community is an amalgamation of sectoral interests from Business and Industry -Schools, Higher and Further Education, Special Interest Groups, Professional Associations and Local Government structures. A Learning Community would endeavour to encourage a sharing of the knowledge, the resources, the talents and the expertise of all its citizens for the benefit of all its institutions. In this way it would become a dynamic Lifelong Learning entity.



Characteristics of Learning Communities in Europe

A Learning Community is not static or introspective. It imports and exports knowledge and understanding through those organisations which maintain national and international marketing and communications links. It encourages all its citizens to communicate with people from other Learning Communities nationally and internationally. Electronic networks make this a relatively easy operation. Citizens moving from one community to another would easily fit into the Lifelong Learning culture of the new Learning Community.

In the UK, Liverpool, Southampton, Edinburgh, Sheffield and Glasgow have declared themselves as Cities of Learning. Gothenburg, Bologna, Barcelona and others have been members of an Educating Cities movement for several years. But what is a City (or a Community) of Learning?. How does it differ from other cities? Perhaps the following might throw some light on this.

<i>A Learning Community</i>	
ie a village, a town, a city, a region or any geographical entity implementing a strategy for improving the development of Lifelong Learning among all its citizens	
Learning Communities focus on the development of the human potential of all their citizens by:	
1. Co-operation and Resources	<u>C</u> ommitting all sectors of the Community to cooperate creatively in making learning available for all citizens, and ensuring the optimum use of resources, including human resources
2. Organisational Responsibility	<u>O</u> rganising all departments and services, not just education, to prepare and implement plans to introduce Lifelong Learning in the community
3. Motivation, Audits and Infrastructure	<u>M</u> otivating all citizens to develop their potential by innovative learning initiatives, by auditing the demand and by establishing seamless infrastructures to satisfy it throughout life
4. Mentors, Guides and PLPs	<u>M</u> anaging personal learning plans and mentoring programmes for all its citizens
5. Universal Information Services	<u>U</u> dating all its citizens frequently through easily accessible and attractive information and counselling services
6. Networks	<u>N</u> etworking citizens of all ages, creeds and races to the world by encouraging innovative personal and electronic links
7. Improving the Environment	<u>I</u> nvolving all its citizens in the preservation and improvement of their environment through innovative programmes
8. Transforming Perceptions	<u>T</u> eaching its citizens to anticipate change and to meet the future with confidence, capability and adaptability
9. Increasing Wealth and Employment	<u>I</u> nitiating and implementing sustainable strategies to develop wealth-creation and employment in the community
10. Empowering Leadership	<u>E</u> nergising innovative programmes to develop learning leadership skills in people from all sectors of the community
11. Significance of Learning and Family Life	<u>S</u> timulating the frequent celebration of learning as a creative, rewarding and fun activity and encouraging active involvement by whole families

One can foresee the day when all cities, towns and regions of Europe are Learning Communities, each with their own cultural identity but interacting with each other and with other communities in other countries, helping to solve common educational, environmental and economic problems. The technology of the information revolution now makes that possible.

Using New Technologies for Networking Learning Communities

N.B - Reasons of space do not permit this 7mbyte diagram to be included here - it will be produced in Parma.
- It depicts 6 diagrams as shown on page 11 linked by arrows to demonstrate how inter-sectoral and cross-sectoral links between cities in different countries can develop new European insights.

Linking for What?

1. Business to business for wealth creation
2. School to school to teacher training for collaborative learning, accessing and creating databases, language learning, research into learning, teacher updating, expert contact etc etc
3. University to University to Industry for joint research, joint curriculum development, student exchange, Continuing Education, Professional development, Contact with Experts, joint database dev't etc etc
4. Third age to Third age for social communication etc etc in the later years
5. Hospital to Hospital for medical comparison, exchange of ideas and practice etc etc
6. Local Government to Local Government to Adult Education to museums for collaborative learning projects, twinning activities, language learning, leadership development etc etc
7. Professional Associations to members in all communities etc
8. Vocational Education to Adult for open and distance education development and training etc.
9. Individual to Individual, Community to Community, organisation to organisation for everything under the sun. Schools/Industry links, Inter-community mentoring, volunteer services etc etc,
10. Developed to developing world links for understanding, assistance, research and growth.

An Example - The TELS (Towards a European Learning Society) Project

TELS was a project of the European Commission Socrates Programme. In its first year it made a study of 6 European Learning Cities in 10 domains and 25 sub-domains of their activities. It has developed a Learning Cities Audit Tool with which aspiring Learning Cities, Towns and Regions could understand their present performance in providing learning opportunities for all, and what they would need to do in order to improve that performance. Its main focus is on:

a) <u>Information and Communication</u> - ways in which Lifelong Learning ideas and plans are communicated to a) those responsible for implementing them and b) citizens at large. Including new curriculum development, teacher training, learning centres, use of the media, collection of information on learning requirements etc
b) <u>Partnerships and Resources</u> - the extent to which links between different sectors of the city have been encouraged and enabled, and their effectiveness. Including links between schools, colleges, business and industry, universities, professional associations, special interest groups, local government and other organisations. Includes physical and human resource sharing, knowledge generation, mobilisation etc
c) <u>Leadership</u> - the extent to which lifelong learning leaders have been developed and how. Including community leadership courses, project management, city management, organisational mix.
d) <u>Social Inclusion</u> - projects and strategies to include those at present excluded - the mentally and physically handicapped, the unemployed, minorities, women returners, people with learning difficulties etc
e) <u>Environment and Citizenship</u> - projects to inform and involve citizens in environmental awareness, citizenship and local democracy.
f) <u>Technology and Networks</u> - innovative ways in which information and communications technology is used to link organisations and people internally, and with people and organisations in other communities. Includes use of open and distance learning, effective use of networks between all ages for learning and understanding of the internet.

- | |
|--|
| g) <i>Wealth creation, employment and employability</i> - schemes and projects to improve the creation of both wealth and employment and to give citizens lifetime skills, knowledge and competencies to improve their employment prospects. Includes financial incentives, studies, links with industry, industry links with other communities etc. |
| h) <i>Mobilisation, participation and Personal Development of Citizens</i> - the extent to which contribution is encouraged and enabled. Includes projects to gather and use the knowledge, skills and talents of people and to encourage their use for the common development of the city. |
| j) <i>Learning Events and Family involvement</i> - projects, plans and events to increase the credibility, attractiveness, visibility and incidence of learning among citizens individually and in families. Includes learning festivals, booklets, celebrations of learning, learning competitions, recognition events etc |

The Audit Tool was also designed to assist local and national government in several other ways.

- It helped educate key people in many different departments of the municipality to understand lifelong learning and its implications for their operation
- It provided a set of indicators in all aspects of the learning municipality against which it could measure itself
- It created a pool of good practice examples by which cities could learn from each other
- It provided a rich source of ideas for city leaders
- It started a European-wide movement towards the establishment of learning cities

Schools - Key organisations in the new Europe

Each sector of a city has its own need for indicators. Schools, for example, are a key element in the development of a European Lifelong Learning Society. In theory, they teach the skills and knowledge and foster the values and attitudes which potentially enrich Europe's future. In practice traditional schooling is probably unable to meet the new demands of the knowledge society without new physical nor the mental updating resources and an understanding of the new lifelong learning approach.

<i>The Lifelong Learning School in Europe</i>	
1. <u>S</u> trategy for Development	<u>S</u> timulates progress through a written organisation Strategy, available to all, or developing the full human potential of each student and member of staff
2. Curriculum	<u>C</u> reates opportunities for children to manage change throughout their lives through a curriculum based on the enhancement of personal skills and lifelong values
3. <u>H</u> igh Standards	<u>H</u> elps to maintain a culture of quality and respect for high standards in Everything it does through continuous improvement programmes for staff and students
4. Outreach to Community	<u>O</u> pens up new resources for the school by harnessing the skills, talents and knowledge of governors, parents and everyone in the community to create new learning opportunities and to implement school strategies
5. <u>O</u> ptimisation of Opportunities	<u>O</u> ptimises the development Lifelong Learning attitudes in all its children and staff by involving them in the use of personal learning plans, guides and mentors
6. <u>L</u> earning through Networks	<u>L</u> inks staff and children to the world through networks to enhance collaborative learning opportunities and promote a sense of tolerance, justice and understanding of different races, creeds and cultures
7. <u>T</u> echnology Focus	<u>T</u> aps the motivational power of modern information and communications technologies for teaching across all disciplines
8. <u>I</u> nvolvement of the Family	<u>I</u> nvolves the family in the life of the school through increased home-school Cooperation
9. <u>M</u> otivation	<u>M</u> otivates people to celebrate learning frequently as a desirable, permanent and enjoyable habit
10. <u>E</u> xtra-curricular Activities	<u>E</u> nhances self-esteem, confidence, creativity and the cultural vision of staff and children through a wide range of extra-curricular activities

Such a set of general indicators could be developed into a specific set of requirements within each action. Most schools would claim to be, and mostly are, caring communities developing the talents and skills of their pupils. In a Lifelong Learning world they would release the knowledge, talents and energy of people in the Community to help achieve fully their objectives.

The Lifelong Learning University in Europe

Universities too have an important part to play both in the Learning Community and in their wider national and international roles. Conceptually they have all the advantages to take a leadership role. They lie at the hub of local life in all sectors of activity. They are natural places to initiate, develop and maintain lifelong learning programmes within their geographical area while also maintaining links with national and international projects and activities. Since Lifelong Learning is one of the most powerful philosophies of our time, its influence in opening up new opportunities and new horizons, empowering people and expanding ideas, concepts and actions makes it a prime target for research. The University which does not want to be a part of that scene is indeed an ivory tower, fossilised, full of its own intellectual self-importance - and irrelevant.

But European Higher Education has problems of its own. As in many countries it needs to seek alternative sources of finance. The student boomtime of the 70's, 80's and 90's is now becoming a bear market for 18 year old students and a new community role is needed to take the slack.

In ELLI's 'Action Agenda for Lifelong Learning for the 21st century', it is remarked that 'universities should treat the whole community as comprising past, present or future students'. How that would open up new perceptions of the purpose of the university. Instead of an institution for educating an elite of highly intelligent undergraduates and researchers, it becomes a universal university, open to all irrespective of background, of qual-

ification, of age, of subject. To create the sort of society in which learning is natural and pervasive, that is the way the traditional university must go. It would demand wise leadership.

There is no doubt about the challenge and the opportunity of leadership. What is needed is a willingness to embrace and manage change, vision to extend opportunity, openness to serve the community, dynamism to act upon needs and humility to share the learning load. There are some radical questions about the definition, role, function in society, responsibilities and accountability of higher learning. Universities can choose to hide behind ancient tradition and play a restricted role. Or they can pick up the gauntlet of leadership and use their power and their reputation to move into the twenty-first century as truly universal organisations. Whatever their decision, they will have to address these issues created by the shift to Lifelong Learning.

New ideas on accreditation, qualifications and standards - examinations as non-failure oriented learning opportunities to measure individual progress
A vastly increasing number of maturer students from wider backgrounds
Increasing reliance on Continuing Education and joint teaching and research partnerships with industry as a source of finance
A new emphasis on quality and continuous improvement programmes for staff and in teaching, research and administration
A more innovative approach to the use of education technology, networks and open/distance learning in teaching and research
Strategies to engage the Community in which it resides in its research and use it as a vast learning laboratory with national and international connections
New opportunities for research into how people learn and learner focus
Greater internationalisation of research activities through networks etc
More efficient internal administration and use of human resource
Strategies to turn the university into a learning organisation
New entry rules to widen range of students and new approaches to teaching to compensate for this
More effective decision-making and promotional and marketing programmes reaching out into the community to teach and learn.

From the Age of Education and Training to the era of Lifelong Learning in Europe

The Age of Education and Training, which has served us well in the industrial and post-industrial age, is giving way to the new paradigm of Lifelong Learning which will dominate the 21st Century - the Learning Century. In the new millennium we must make the preparations to welcome the new thinking which it engenders. The new approach is summarised below.

Education and Training	Lifelong Learning	Difference
1. Teacher rules and decides. Ownership of the need to learn and its content is with the teacher	Learner, as customer, rules. As far as possible ownership of the need to learn and its content is given to individuals	Variety of techniques and tools to be developed to fit in with the individual's needs, demands and learning styles
2. Compartmentalised according to age	Lifelong in concept and content, providing links vertically and horizontally between age groups	A seamless system providing learning support from cradle to grave, from 0-90
3. Knowledge and Information based - what to think	Skills and values based - how to think	Empower people to carry out a wide range of activities in all walks of life and work
4. Based on the needs of the organisation, nation or society	Based on the desires of the individual and the need of organisations and nations to develop potential	Encourage and stimulate people to recognise the power of their own human potential and develop it
5. Authority decides where, why, when and how	Learner is empowered and mentally enabled to decide where, why, when and how	Alternative learning methods. Learning taking place everywhere - home, school, work, pub, shops etc
6. Validated to separate failures from successes	Validated to confirm progress and encourage further learning	New non-failure oriented examination and accreditation systems
7. Re-active - meets identified needs of organisations and some people	Pro-active - encourages the habit of learning in all people	Audit learning needs of the whole community and nation. Learning Counselling.
8. Each sector of society determines its own needs	Holistic - encourages each sector of the community to cooperate	Combines and uses whole community human resources for the benefit of each part
9. Educates and trains for employment and short term need	Educates for employability in the long-term	Development of personal skills and competencies
10 Work-based	Life-based	Work and life outside work as part of same human need
11. Inward-looking - to satisfy specified needs	Outward-looking - to open minds, encourage broader horizons and promote understanding of others	People understand other creeds, cultures, races and customs through learning and technology
12. Satisfies the present	Prepares for the future	All people can meet future confidently and creatively
13. Learning as a difficult chore and as received wisdom	Learning as fun, participative and involving, and as perceived wisdom	Frequent celebrations of learning by individuals, in families, in organisations and in communities
14. Education as a financial investment for organisations and nations	Learning as a social, personal and financial investment in and by people for the benefit of nations, organisations, society	By a nation in its citizens, by a business or government organisation in its workforce, by educational organisations in the students' future, by people in their own worth and happiness

European Teacher Education for a Lifelong Learning Future

The change of paradigm from teaching to learning will demand a radically different approach to the training of European teachers. In many parts of Education there is already a demand for the new profession of Learning Counsellor and some universities are working on how to define the job description and responsibilities of such a person. Teacher Training Institutions, whether based at Universities or in specialist colleges will increasingly be required to insert relevance to, and participation in, a whole-community approach to teacher education. The following suggests guidelines for the future education of teachers.

<i>Ten Guidelines for Transforming Teacher Training Organisations into Lifelong Learning Organisations A Learning Teacher Development Organisation:</i>	
1. Creates an annually updated and flexible organisational learning strategy for developing the full human potential of each student and member of staff taking into account individual learning needs.	
2. Promotes, through specific courses and programmes, a culture of quality and respect for high standards in everything it does	
3. Involves itself fully with the community in which it resides by:	
<i>a) creating active partnership projects for students and staff with industry and commerce</i> <i>b) making a positive contribution to the welfare of the community's people including the aged and disabled</i> <i>c) actively seeking to use the experience and expertise of people from the community in the learning process of the organisation</i> <i>d) carrying out learning audits and providing a central focus for leadership among all sectors in the growth of a learning community in the locality</i>	
4. Looks outward to the world by:	
<i>a) creating collaborative and productive links with teacher training organisations and schools in other countries through the use of networks</i> <i>b) instilling a sense of tolerance, justice and understanding of different cultures, creeds and languages in all its students and encouraging positive supportive action</i> <i>c) becoming involved in national and international research into learner-centred methods and technologies and the creation of learning societies</i>	
5. Expands Lifelong Learning vision in all its students and staff by	
<i>a) developing, cooperatively with all sectors of the community, Lifelong Learning courses, seminars and activities as a part of its curriculum</i> <i>b) encouraging the use of personal learning plans, counsellors and mentors</i> <i>c) developing creative, rewarding, enjoyable and productive learning programmes and activities which stimulate a permanent habit of learning in all staff and students</i>	
6. Develops strategies to become a true Learning Organisation by reading and implementing the 10 indicators of the Learning Organisation	
7. Concentrates on the development of personal and leadership skills, particularly those high order skills which enhance understanding, insight and knowledge	
8. Uses modern information and communications technology appropriately particularly in:	
<i>a) the effective use of educational and commercial software and multimedia tools</i> <i>b) the creative use of electronic networks in learning situations</i> <i>c) the flexible use of distance and open learning tools and techniques</i>	
9. Involves itself in the development of local, national and international non-failure oriented validation and accreditation systems and self-assessment strategies	
10. Involves the schools in all of these activities and uses them as a strategy for updating in-service teachers and giving Lifelong Learning skills to children	

Where do we go from here? The Role of Government

Our preliminary journey into Europe's future is almost over. A profound understanding of the concepts described in this paper is crucial first step. Beyond that there are a host of actions, projects, discussions, policies and strategies to be taken and devised.

The overall responsibility for success or failure lies at Governmental level. It should be the first to recognise that the ability to learn will increasingly determine the strength of the nation - that means that it will be dependent on the extent to which it can create a highly educated, socially cohesive and individually participative population imbued with the habit of learning throughout life. At this embryo stage in the development of Lifelong Learning, National Government has a large part to play. The following suggests some actions Government can take to help create a Learning Nation and implement a Lifelong Learning Society in Europe. It is a preliminary list.

1. Generates a national Task Force or Steering Group to examine how Lifelong Learning can be implemented
2. Organises the development and delivery of courses, seminars and workshops on Lifelong Learning to civil servants and key implementers in national and local government and the professional associations
3. Vitalises the public acceptance of learning as a desirable and pleasurable activity through promotional campaigns such as television advertising, newspaper advertising, billboards, learning tv programmes, film and video, mass distribution of leaflets etc
4. Encourages communities (cities, towns, regions etc) to set themselves up as 'Learning Communities', and develops guidelines on how all citizens can be empowered to Share knowledge, expertise, values, skills and talents for the benefit of the whole Community
5. Restructures the financing of Learning through integrated budgets, the use of electronic tools and techniques for open and distance learning and resource sharing, including human resource
6. Negotiates Green, and eventually White, Papers outlining agreed policy and Action in Lifelong Learning over a relatively long period of time
7. Motivates people to learn through the development of new assessment and accreditation systems which reward learning positively however it has taken place, and which encourage further learning
8. Enlists the help of Industry through discussions with CBI and companies about improving the image of learning among the workforce and strategies for improving Lifelong Learning awareness
9. Nourishes international co-operation and encourages the transfer of ideas, concepts and actions between nations
10. Transforms educational and social systems through strategies and policies which cascade quickly through the normal channels of communication to those who will be responsible for implementing them in the field
11. Promotes Lifelong Learning through proactive national and regional marketing strategies
12. Organises a programme of Learning Festivals which bring learning to the people (as in Japan)
13. Lubricates the development of all types of organisation into 'Learning Organisations' through a system of benchmarks, exemplar practices and reward systems
14. Initiates a 'Learner's Charter' which sets out every citizen's entitlement to learning
15. Commission reports on Lifelong Learning strategies in specific fields eg the use of information and communications technology, new learning methods, personal learning styles, quality in schools etc
16. Influences people into learning through Personal Learning Plans, Guides, Mentoring, the development of Learning Counsellors and Learning Leaders
17. Establishes Lifelong Learning research centres in Universities or other non-partisan public research bodies
18. Stimulates and Supports International efforts to create Lifelong Learning at a Global level

The initial letters indicate that Government *can* make a difference. Some of these pro-active actions may be outsourced to other organisations. Many do not involve extra resource, rather a rescheduling of existing resources. But, if Lifelong Learning is to take place at all, it will need commitment from the top and a national action plan with short, medium and long-term strategies.

Finally - the need for Studies and Research

Members of the TELS project were asked to organise a seminar of experts to advise the Commission on its policy for local and regional lifelong learning development. They made ten recommendations, four of which are relevant to the need for statistics. They are summarised on these two pages.

Recommendation 2. - Monitoring, Measuring, Data-gathering Surveys and Studies - Indicators of Growth

European policy should encourage continuous measurement and monitoring of learning growth in Cities, Towns and Regions as a service to its member states, its institutions and the cities themselves. OECD and the TELS project have already gathered much data on current activities in cities and regions. In the latter the Learning Cities Audit has served an additional function as a sensitiser of key people and as an ideas generator. But there are many more cities and towns in Europe as yet untouched by those ideas. The process of data gathering should continue and be linked to a central European web-based data-handling facility disseminating the results. Two levels of data collection offer themselves

- ✓ General macro data about Cities and their lifelong learning progress (e.g. the Learning City Audit). This would be useful for planners in Municipalities, in regions and at European level
- ✓ New Micro-Surveys of Sectoral Lifelong Learning practice in the city/town/region based on a set of Lifelong Learning Indicators, roles and best practice examples. These would be useful to planners and administrators in government in Member States, in municipalities and in the institutions studied. These might include:
 - a) Lifelong Learning in Schools including their relationship to Learning City development
 - b) SMEs and Learning development including opportunities through European cooperation
 - c) Lifelong Learning in Industry including collaborative learning with other sectors
 - d) Lifelong Learning in Universities including University roles in Learning City development
 - e) Lifelong Learning in Adult Education Colleges and second-chance learning
 - f) Lifelong Learning in Local Government Organisations and their role in Learning City development
 - g) Lifelong Learning practice in Teacher Training Establishments and the new skills of teachers to help create a Learning Society
 - h) Lifelong Learning in Voluntary Organisations, and their contribution to a Learning Society
 - i) Effectiveness of City Lifelong Learning Partnerships

Questionnaires can be carefully designed to improve knowledge and promote change where it is desired. Planners and administrators in the European Commission, national government, the regions, the municipalities, Associations and the institutions themselves will obviously benefit from the collecting of accurate data. The TELS Audit has shown that it can generate a large quality of new knowledge, while at the same time dispensing ideas and expertise. It would benefit from a more scientifically generated sample with the imprimatur of the Commission.

Recommendation 4. - Create a European network of one or more university departments in each country able to specialise in Learning City Research and Development

Policy-makers may wish to consider how to establish a number of research centres based on Universities in each country of Europe - linked together through joint European research and to municipalities to provide the research test-bed. They would have several functions

- a) implementing the measuring and monitoring function described in 2 above,
- b) training governmental staff, city and region leaders and others in Learning Community matters
- c) developing new courses and diplomas in learning community topics

- d) developing web-based materials
- e) specialising in research in Learning Community matters such as
 - New learning methods improving the capacity of citizens to learn
 - New methods of financing the Learning City
 - Developing and testing Learning tools and techniques (as in 6 below)
 - Developing audit Tools and carrying out audits of learning needs in the community at large
 - Developing and disseminating examples of good practice
 - Researching examples of partnerships as generators of New Resources
 - Design and delivery of tailored courses, conferences, seminars and workshops
 - Learning City and Regional strategy design and development
 - Advising on the effective use of electronic networks and the internet for lifelong learning
 - Developing booklets, leaflets and brochures for Learning communities
 - Providing facilities for people to study Learning Community matters
 - Stimulating effective interaction between people of all ages
 - In depth studies of chosen Learning Cities

There are advantages in this proposal for all sections. Local and Regional communities would benefit from the teaching and research work and the expertise built up in the municipalities, Member States would have a point of reference for Learning Community research and development and Europe would have a growing network of such centres able to recommend and implement special projects.

Recommendation 6 - Create a Technical Assistance Facility to a) To provide technical assistance to improve the knowledge of key people about Lifelong Learning in Cities, Towns and Regions and b) To raise the profile and importance of the Learning Community in the minds of leaders, administrators and citizens

a) Courses and Materials

for specific key target populations, in particular, the following.

- ☐ city learning leaders
- ☐ elected representatives
- ☐ learning marketers
- ☐ teachers and lecturers
- ☐ industrialists
- ☐ adult educators

b) Lifelong Learning Tools - Several active tools and techniques exist for stimulating individuals to improve their own learning performance in cities and towns. They include

- Templates for tailored city/regional personal learning plans - to encourage citizens to record their plans for learning over 1,3 and 5 years for leisure, for life, for work
- Guidelines for mentoring programmes - in the community, in schools, in industry etc
- Personal Learning Requirements Audits - encouraging Learning Providers, communities and companies to discover the learning needs and requirements of their people
- Development of Family Learning Plans - encouraging families to learn together.
- Effective partnerships and how they help Learning City development
- Local and Regional Study Circles
- the widespread use of the NICT tools to stimulate learning, interaction, contribution and planning in and between communities These include
 - ✓ the use of the internet to increase communication between citizens of all ages in different cities.
 - ✓ The use of open and distance learning techniques to include a wider range of learners
 - ✓ The information-giving to improve access to learning opportunities in the city
 - ✓ multimedia software to increase the range of learning methodologies
 - ✓ The 'Wired City' Concept

Recommendation10 - Establish and exploit the links between Lifelong Learning approaches generally and those issues for the development of a Learning Community These include

- ☐ Developing City Learning Charters
- ☐ Social inclusion
- ☐ Immigrant acclimatisation
- ☐ Learning for Special Needs
- ☐ Learning for the unemployed
- ☐ Learning for the reluctant learner
- ☐ Women returners and Learning
- ☐ Second-chance learning
- ☐ APEL strategies
- ☐ The many ways of Learning Celebration in the City/Region
- ☐ Reward and Recognition Strategies in the Learning Community
- ☐ Information and Communication of Learning Opportunities - Local, National, European
- ☐ New Financial Strategies for Lifelong Learning in the local Community
- ☐ Participation and Contribution of Citizens in the city for active citizenship
- ☐ The Marketing of Learning
- ☐ Using the Media to improve learning
- ☐ The Learning component of City Regeneration Strategies

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ISSUES AND PROBLEMS - THE USERS VIEW

NI CHEALLAIGH Martina

CEDEFOP

P.O. Box 22427

55102 Thessaloniki

GREECE

Mnch@cedefop.eu.int

Cedefop as a user of VET indicators: Some issues and problems

The most important issue is that we do not create a new set of data under the banner lifelong learning. As the Commission Memorandum points out, LLL is 'the guiding principle', or in the words of Grepperud and Johnson (2000, p. 281) an overarching philosophy for the future structure and development of the learning society. What is needed, therefore, is to improve existing statistics on all aspects of education and training, fill in the gaps, and widen the sphere of data collection or rather relate it to some other series of data which have an impact on the larger social, economic, cultural and technological settings which form the context for LLL and the learning society.

- Existing statistics are « economy-oriented » : general/ vocational education and training are seen primarily as a link to labour market. However, the Memorandum and other policy documents from the Commission insist that other aspects of LLL should be considered. LLL should also be analysed in terms of social, cultural, personal and technological effects, which have been largely ignored up to now.
- The dynamics between the single elements should also be considered. What we have now is a collection of « pictures » on various aspects of education and training. We should try to make « a movie » out of these pictures, trying to link and to articulate them better.

Cedefop as a producer

Our involvement is two-fold. On the one hand we are generators of data with Eurostat. However, our role here is mainly advisory in planning questionnaires and new data collections, identifying user needs and gaps, and helping to design classifications or harmonised terminology. We do not initiate data collection independently. This is and should be the role of Eurostat. However, more recently through the ETV, Cedefop has commenced its own user surveys, particularly in the field of eLearning. These are, of course, limited in their coverage and use because they are restricted to the public using the ETV, which is *per se* computer literate, so the results may not be the same as they would be if a comprehensive survey of an entire target group was undertaken. This method of doing online surveys does have implications for future work on indicators: its value for sample surveys of Internet users is invaluable, and it has the added value that it can be implemented in a way that allows easy processing of the data. Some such surveys give automatic access to the results, even as the replies are coming in. This methodology therefore has tremendous implications for currency of data.

Use of statistics by Cedefop

Through our publications, we make extensive use of indicators, because we feel that the reader is attracted to concise information supported by clear statistical data from current sources. However, we have also had feedback on many occasions that the data in our publications is far too old and that more up-to-date information is

available nationally. We must choose between trying to produce material quickly, in which case it is purely descriptive and for one country, or to provide a comparative overview which gives the added value of a European dimension. The latter approach relies on European statistics which are inevitably older than national sources.

Descriptions of the national vocational education and training systems are an important product of Cedefop. When we commission these descriptions, it is easier for the author to use national statistics and they are more up-to-date. But each national statistical agency has its own way of describing and presenting its data, so that there is no consistency or uniformity with regard to how data appears in these monographs, even if we do try to rationalise them and use the same graphic artist throughout. It would be an improvement if Member States could harmonise their data collections and how they are presented. They should also link their collections to European data sets, because the next problem arises when we try to present national data in a comparative table to show it in the European context. For this latter purpose, we also often have problems finding suitable data at Community level. For the background information on demographic trends, labour force and unemployment statistics, etc., Eurostat's *Demographic Statistics* and *Labour Force Surveys* are useful and up-to-date. We have also drawn on data from their *Social Portrait of Europe*.

However, a major problem occurs when we want to provide comparative information on vocational education and training because its production is still very sporadic at European level, and I say this even though my colleagues are involved in its preparation with Eurostat. Cedefop as one of the main users of the vocational education and training (VET) data collection, which provides relevant information on aspects of VET that cannot be covered by other data collections, will cooperate with Eurostat to evaluate the relevance of the present data set and suggest changes to the questionnaire accordingly.

The types of data collected and how often they are collected present further difficulties. Comparative tables in our publications are often taken from OECD indicators, such as, *Education at a glance*, which appears annually. VET is only partially covered in such indicators, as the title suggests. Intervals between Eurostat VET collections are too intermittent, and the coverage keeps changing: *Education and Training*, 1985; *Key data on vocational training in the European Union*, 1997; *Young people's training: Key data on vocational training in the European Union*, 1999 (in which the data describe the situation in 1995-96). There is a conflict between the necessity to improve and update data collections to answer and to anticipate current data needs, on the one hand, and the need for stability in data collected and in methodology (to allow the development of time series) on the other. But to be fair, data collections on preparation of people for working life, by level and type of training path etc. have improved and should now be maintained to allow us to study development over time. More elaborated data still needs to be added on aspects such as, work placements and apprenticeships.

In contrast, European unemployment statistics are published on a monthly basis. Their usefulness is without doubt, but even the latest figures are not wholly accurate because a few countries are not up-to-date. However, it is an example of what can be provided on a regular basis, even if it only gives the negative side of the story. Personally, I think it is a mistake that the monthly unemployment statistics are no longer published in hard copy but only available in New Cronos. If they are only available electronically, then at least they should be openly available on Internet.

Cedefop also specialises in thematic studies, e.g. sectoral analysis, anticipation of trends in occupations and qualification, mobility, training leave arrangements, etc. Comprehensive comparative European data are not available on these themes. In country studies, it is usual for the authors to use whatever sources that are available to them nationally. When we take these national data provided and try to process them and use them to provide a comparative overview, we find the results are not comparable. While for larger descriptive monographs on the systems, attempts are made to standardise data and use international sources, these thematic studies remain at the level of subject analysis, perhaps illustrated with some indicators provided from national sources.

Data collection on subjects learned would fill one part of this gap. Eurostat and Cedefop have created a sub-classification of the ISCED classification by field of education, with the double objective of providing more detail and precision and simultaneously maintaining the logic and structure of ISCED. This manual, *Fields of training* offers guidelines on how to apply a consistent classification across countries. It would be advantageous if the same fields were reflected in data collections on continuing vocational training, so that patterns and changes in direction as careers progress or non-formal learning could be tracked. As much coherence as possible between fields of training and occupational fields should be maintained. With this in mind, a « classifi-

cation of learning activities » that can be used in household surveys – e.g. LFS ad-hoc module on LLL – or in surveys on individual adult learning, is being launched by Cedefop, in cooperation with Eurostat.

Enterprises are investing in learning in their own right. However, current statistics and surveys do not display this involvement in the best light. Attempts have been made by the OECD and EUROSTAT to collect harmonised data on workforce training. The differences in the way initial and continuing vocational training are defined and measured both at national level and in these international data collections makes it difficult to get a comprehensive picture of the situation at EU level. Moreover, they cover only formal courses, which are easily measured by questionnaire surveys, etc. They do not, for example, take into consideration the extent of non-formal learning in enterprises, which is an inherent part of lifelong learning. Four useful sources are worth a mention: the European Labour Force Survey (which only surveys training over the prior 4 weeks, the period of reference for the other three surveys in 12 months); the Continuing Vocational Training Survey - CVTS - which last collected data in 1994 (EUROSTAT, 1997); the Adult Literacy Survey (OECD and Statistics Canada, 1995); and the OECD/INES Indicators of Education Systems. CVTS is the only one which is an employer survey and it surveys the volume of training participation in hours and cost of courses; the others survey households and total hours only. These statistical sources are analysed in detail in the OECD's *Employment Outlook 1999*, where the point is made that a continuous measure of the resources invested in training would be more informative than simple yes/no participation rates, but that this data is difficult to collect in interview surveys as employers and individuals do not routinely track the extent of their training investment.

The research report is another big consumer of data and its analysis. CVTS data was used in the 1st edition of the report on current VET research in Europe, 1998, and now again, in the 2001 report, the same data source is used. The most recent CVTS II survey took place in 2000 and the data have still to be analysed. Data are starting to arrive at Eurostat (and the pre-accession countries have been included). However, publication of the data is not expected until 2003. New data in the 2nd research report therefore was taken from the VET data collection in so far as are concerned young people, and data on adults from UOE (the joint collection of OECD, Eurostat and Unesco on key aspects of education), which forms the basis for INES.

Some of our contractors would be particularly interested in analysing statistical data such as CVTS which they feel is currently under-exploited. However, these data are sensitive because they were gathered from individual companies; even when name are removed, it is not difficult to recognise specific companies by their characteristics or because they are located in a small region. Perhaps it should be made clear to those surveyed, at the time of data collection, that the data might be used in a wider context.

Alternatively, the suggestion in the *Report on measuring LLL* that 'the best source of information for LLL is the individual' might be a way of overcoming such problems. By asking the worker instead of the company, maybe the question of anonymity can be overcome. Also, data on the actions and attitudes of the most important actor, the individual, would complement existing data collections which reflect the actions of governments and enterprises towards LLL.

If we want to look at learning in the learner's own environment, 'closer to home' in the words of the Memorandum, we need to have access to regional and local statistics. These may vary enormously from centrally collected data. For example, the introduction of procedures for the accreditation of prior learning (APL) is more difficult in Germany, with its holistic, dual system, than in countries which have a more modular system (Bj_rnåvold, 2000). Germany's formal system of education and training is extensive and covers substantial proportions of each age group, reducing people's likelihood to request recognition of non-formal competences. But, as in other countries, specific regions in Germany, e.g. Chemnitz, are developing 'learning regions'. These micro-regions, when examined individually, will have a profile which differs markedly from the national profile and which may exhibit many of the traits of LLL strategies and culture: more informal learning in companies and as part of community initiatives, new partnerships, etc.

Indicators on literacy are becoming increasingly important, given the rise in programmes and initiatives to improve the level of basic education of people in various age groups. The International Adult Learning Survey - IALS - by OECD is the only comprehensive data collection on this topic, but not all the EU Member States participated, so it cannot be used to get an overview of the situation in the Union. It also seems that for various reasons, some countries are not willing to participate or finance a repetition of this unique data collection.

We need to widen our coverage of aspects which facilitate LLL, e.g. access to learning at work, households and workplaces with PCs and Internet connections, use of these tools and for what purpose, supply of eLearning, who is using it, what are the preferences of the population with regard to learning. Indicators should be concentrated on those not in the learning net; why aren't they, what would make them change their minds.

Although we cannot expect to cover non-formal learning in the same way as formal learning, more thorough information is required on individuals' use of their leisure-time before we can try to promote its use for learning. Time use surveys (TUS) could include indicators on reading habits, newspaper purchases, time spent on internet, voluntary activities in the community, etc.

Cedefop fully appreciates that the true range of LLL stretches from the 'cradle to the grave'. That our work concentrates mostly on VET during that period of life starting at the end of lower secondary education, when in most Member States VET usually begins, and continuing throughout working life is due to the fact that the centre was created in an era when education and training were compartmentalised. To work in a lifelong learning context, we have to work closely with other bodies working in the field. Cedefop's work complements the work of Eurydice (The Information Network of Education in Europe), with whom Cedefop has been collaborating since the early 1980s. More recently we have been deepening this cooperation. The Eurydice European Unit and Cedefop jointly produced an overview of action undertaken to promote lifelong education and training in different European countries. The purpose of the document is to describe current initiatives which support and promote lifelong learning, both at European and national level, and to support consultation and debate on the six key messages of the Memorandum. Together we managed to give a holistic picture. In the field of indicators and measuring LLL, such cooperation will also be necessary, and it must also be extended to a much larger network of organisations.

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MEASURING LIFELONG LEARNING THE CASE OF ITALY IN THE EYES OF SOCIAL PARTNERS

PAPARELLA Domenico

Secretary General
CESOS
Via Po 102
I – 00198 ROMA
ITALY
Mc8838@mclink.it

1. Foreword

The aim of this document is to discuss the understanding requirements of social partners taking part in decision-making processes relating to investments in lifelong learning.

Italian legislation and the local, national and European statutory framework attributes growing responsibility to social partners for training-related decisions and the ways learning processes are delivered. In the Italian context, social partners also have a primary role in identifying professional and training needs, training standards and in certifying the results of learning activities. These responsibilities begin at school-leaving age and involve social parties in the management of obligatory training and lifelong learning.

Hence the interest of social partners in an organic monitoring system and a system for gathering information to support decision-makers and institutions presiding over the various segments of the educational and vocational training systems.

This document has three parts.

The first illustrates the statutory framework for lifelong learning in Italy, which has been put in place partly as the result of initiatives by social partners over the past decade.

The second summarises the problems faced by social partners in delivering lifelong learning, identifying operational areas where a strategy is required for the purposes of understanding.

With each identified sector, the third part of the document identifies some parameters and instruments for fine tuning the monitoring system and gathering statistics on lifelong learning, which respond to the needs of social partners.

2. The role of social partners in the modernisation of the educational and training system in Italy.

Since 1992, in Italy, social partners have carried forward an important joint initiative for the modernisation of the educational and vocational training system within a European framework¹.

Joint action has concerned two priority areas:

- a) the modernisation of the educational system, now defined by legislation as “an integrated system”;
- b) the reorganisation of lifelong learning and adult education.

¹ P.A. Varesi, Professional training in employment agreements, Employment information, no. 8, 1999.

The initiative has included four important steps:

1. A confederation agreement between the Trade Unions (Cgil-Cisl and Uil) and the Confederation of Industry, dated 20 January 1993, laying the foundations of the strategy to be pursued by social partners;
2. A 3-party agreement, dated 23 July 1993, defining the new institutional set-up of the educational and training system, attributing a key role to social partners;
3. A 3-party agreement, dated September 1996, specifying the general objectives of the reform the educational and vocational training system, with the raising of the school-leaving age to 15 and the introduction of obligatory training to the age of 18;
4. The agreement of 22 December 1998 specifying the features of the system and, within the principle of autonomy, making Regional and Local Authorities largely responsible for carrying out the reform of the educational and vocational training system.

3. Innovations in the training of adults

3.1. Adult education

The reorganisation and upgrading of permanent adult education (PAE) was the subject of an agreement dated 2 March 2000 between the State and Regional Authorities. The aim of the agreement is to increase the provision of adult education and to integrate all the various training systems.

The aim is to reorganise PAE both for the purposes of creating employment opportunities and to ensure that adults can exercise their full rights as citizens.

Recent data on the educational levels of the work force show that the general level needs to be strengthened, since half of the work force has no qualification whatsoever, and left school either after primary school or at the revised school-leaving age.

Adult education requires customised training for the weaker members of society and socially outcast.

Adult education has three institutional levels:

- ◆ national (mainly concerned with integrating systems);
- ◆ regional (for planning and scheduling of integrated adult training programmes);
- ◆ local (with roles and functions shared by the Provincial Authority, City Authority and mountain community authorities and the Local Committee, as the forum for agreed vocational training programmes).

3.2. Lifelong learning

The system of lifelong learning in Italy has recently gained two important statutory features:

- a new circular by the Employment Ministry (no. 30 of 3 June 2000), implementing the reforms of Law 236 of 1993 which, through Regional and Provincial Authorities, places new resources at the disposal of companies for company training programmes. Training programmes may be for a single company, for many companies or for individuals;
- Law 53 of 8 March 2000, introducing the right to employment leave for the purposes of training.

Law 53/2000 promoting equal opportunities and the right to unpaid leave for the healthcare of children is the basis for lifelong learning and the right to lifelong learning of all employed adults.

The acceleration in the process of affirming the right to lifelong learning can be traced back to Law 236/93 with the experimentation of training programmes organised at the request of employees.

With the provision of the right to use resources not only for company projects, but also for projects put forward by employees, the Committee set up by Law 236/93, accepted the spirit of lifelong learning, introducing the possibility of making financial contributions to the implementation of continuous training projects put forward by individual employees.

This opportunity is restricted to companies subject to pension payments of 0.30% of the overall wage bill, about 50% of the entire labour force. The self-employed, company owners and state employees are excluded.

Employees can take part in training programmes both during working hours and outside working hours.

In the former case, the company must agree to its employee taking part.

The employment agreement of 24 September 1996 enshrines the subjective right of employees to train themselves according to their needs, which may or may not coincide with the particular area in which they are employed. The needs of employees are distinguished from the needs of the company, but the activity must have an impact on professional skills.

The individual is therefore at the centre of initiatives, although it is useful to promote agreements which can involve Trade Union representatives and not only individual employees.

This framework was strengthened still further by Law no. 53 of 8 March 2000.

Article 5 affirms the right of employees with at least 5 years service, to take employment leave for a maximum period of 11 months.

Employment leave is unpaid but the law (art. 7) allows employees to use part of their staff leaving indemnity.

The right to employment leave is nonetheless subject to the approval of the company who may refuse permission for reasons related to company needs.

Article 6 of the Law also specifies that “employees and non employees have the right to lifelong training, to increase their knowledge and professional skills.”

The article also specifies that this right must be guaranteed by the State, Regional Authorities and other Local Authorities by means of articulated training courses throughout the territory.

Training programmes must be customised, certified and recognised in the form of training credits within the national and European framework.

In this case too, as for individual training specified in Law 236/93, the training may correspond to the individual needs of an employee or, alternatively, may take place within the framework of company training programmes or territorial programmes agreed between social partners.

A great deal of uncertainty remains about how these programmes should be financed: in the case of employees, the resources should come from the inter-professional fund set up by article 17 of Law 196/97.

3.3. Joint Inter-professional Funds

For the purposes of prompting the development of lifelong professional learning, with a view to guaranteeing company competitiveness and the professional skills of employees, each area of industry, agriculture and the service sector, shall set up joint national inter-professional funds for continuous training. Trade Union and Employer organisations can set up funds for other sectors. The fund for company executives can be set up by agreement between Employee organisations and executives. The funds cover company training programmes or programmes within the territory or sector, agreed by the social partners, as follows: 100% of the project in depressed areas classified as objective 1 in European Regulation no. 1260/1999; 50% in other areas. Funds receive the payment of 0.30% from companies participating in the fund.

Social parties have the responsibility for defining priorities on the basis of which the financial arrangements are made. Obviously these priorities are related to the competitiveness of the company and the professional skills of the employee.

Hence, on the basis of specific studies, the need to identify the innovation requirement so various business sectors and to encourage companies and social partners to promote programmes in line with these priorities.

The management of Funds presupposes the availability of a front-end assessment of projects, the ability to monitor their implementation and evaluate the results in terms of learning and impact on the organisation.

4. Information requirements of social partners

The difficulties over the next few months concern the enormous innovation introduced by legislation over the past four years to integrate individual educational and training programmes into a global system able to make lifelong learning a concrete reality.

This operation is far from simple, given the sheer number of innovations introduced, either structurally or culturally, given that the public administration in Italy is not used to implementing and monitoring reform, in terms of formal obligations and, above all, results.

Social partners must keep the door open to co-operation with regional and national administrations, in order to implement a monitoring system able to produce information useful to social partners and institutions in the decision-making process.

The actions of social partners in the reform of the educational and vocational training system for lifelong learning are based on “the social pact” of 1993, which defines professional training as a privileged terrain for the co-operation between social partners.

Sharing concerns the management of strategic interests in common between companies, employees and Trade Union organisations in the area of training. The social pact is based on the understanding that the competitiveness of companies and the professional skills of employees are strategically important for both sides of industry now and in the future.

To reach these aims, social partners have set up bilateral bodies at the local and nation-wide level².

They have a key role in all phases of training, from the analysis of training needs, to the allocation of public and private resources, the negotiation of company, sector and territory training programmes, and the certification of results.

The innovative element with which social partners and institutions need to come to terms is the individual dimension now enshrined in law for lifelong learning in Europe.

Within the framework of promoting lifelong learning, the individual dimension is essential to integrate informal activities whether these occur in the workplace or outside.

Points of reference for monitoring able to produce information of use to political and social decision-makers, must include the effects training have on the skills of employees and on company competitiveness.

The fundamental interest is in measuring the efficiency and effectiveness of continuous training investments and the impact of training on the company and its employees.

These elements must be understood if effectiveness is to be achieved within the logic of joint management of training investments.

On the basis of the priorities mentioned above, at least four factors can be identified in terms of information for which parameters may be drawn up to assist decision-makers. These are:

- Training and/or learning activities;
- Participants in training and/or learning activities;
- The company interested in carrying out training programmes;
- The training and/or learning process.

The ability to produce information on all of these fronts requires monitoring programmes for all training activities, however they are designed, including the assessment of the effectiveness of programmes as they are delivered.

The following section illustrates the areas where information is required and the parameters that may be used to support the decision-making process of social partners at the management and resource allocation stage of training programmes.

² For details on the joint management of financial resources for training before 1993 see: Cesos, *The role of Trade Unions in professional training: joint bodies for the management of training programmes*, Ministry of Employment, 1993. For details on Joint Bodies and professional training after 1993, see: Cesos, *The training resource in joint management by social partners*, Chirone 2000, 1998; D. Paparella Bilateral management in Italian industrial relations in “Studies to honour Guido Baglioni”, Il Mulino 2001.

5. Training and/or learning activities

A **training activity**³ is any formal training activity, whether organised in annual training programmes or programmes over a number of years or consisting in individual training or/learning initiatives. The elements characterising training activities or formal learning which are indispensable for decision-makers include:

Who the training is intended for They must be identified on the basis of two factors *employment position* and *professional condition*. Employment position means whether the participant is *self-employed* or an *employee*, according to Italian law. In the latter case, the position of the employee must be described in terms of his/her *professional condition*⁴.

Strategic aims: these describe the aims of the training programme within the context in which the company works. Strategic aims may be: *reactive*, when the training programme is designed to give employees skills made necessary by changing market conditions and/or regulations governing the company's activities; *proactive*, when training programmes are designed to create new forms of organisation and/or activities relating to the company's products/services or markets where the company needs to reposition and the company needs to change its business culture.

Aims of training programmes: these define the technical features and range of training activities. In this case, the objectives can be described in terms of *reorganisation*, i.e. the activities aimed at improving the company organisation without modifying products and services or the strategic positioning of the company in the market; *restructuring*, or the introduction of a new company structure to facilitate new working and/or production methods, without changes to products or markets; *manufacturing diversification*, or activities designed to create differentiation or the broadening of the range of products/services provided by the company; *conversion*: or activities aimed at radically altering the company's products/services and customers/markets.

Preliminary activities: these indicate technical activities useful for improving the effectiveness of training programmes. They include the following categories: *the analysis of professional needs*, *training needs*, *the skills survey*, and activities related to *orientation* and *counselling* for employees.

Monitoring and assessing training activities: these include all activities to gather information about the efficiency, effectiveness and impact of the training activities. The assessment may be *initial*, or front-ended, before training activity is carried out, to map baseline skills, *in itinere*, when the assessment is made during the training activity to establish its coherence with the overall programme, *ex-post*, when the results are measured after training, or *impact-related*, when the impact of the training activity on the overall company organisation is measured.

Duration of activity: shows the number of man-hours for training.

Cost of activity⁵: shows the overall cost of training.

6. Who takes part in training and/or learning activities

The beneficiaries of training and/or learning activities are all those who participate. The individual dimension to lifelong training requires proper statistical methods to record an individual's training activities and learning both in formal and informal contexts.

This information should be kept in a personal record specifying new skills and the certification of these skills by bodies appointed by the law for this purpose. The elements which should be included in personal records, aiding decision-makers, are:

Professional setting: beneficiaries should be identified by at least two parameters: *employment position* and *professional condition*. Employment position means whether the participant is *self-employed* or an *employee*, according to Italian law. In the latter case, the position of the employee must be described in terms of his/her *professional condition*.

³ This definition includes both organic training programmes and individual programmes

⁴ In Italian law: factory workers, office workers, middle managers, executives, entrepreneurs.

⁵ Costs can also be specified in more detail: however, the overall cost, both in terms of direct and indirect costs, is the most significant factor and hence the most useful data upon which to base unit cost parameters.

Aim of the activity: this describes the aim of the training activity in relation to the participant. The aim may be to *update skills*, to match the skills to the current employment position and responsibilities of the participant, *professional qualification*, when skills are related to a specific qualification; *specialisation*, when specific skills are added to a basic area of competence, *requalification*, when skills related to a new area of skills related to current skill, or *professional retraining*, when the participant is given completely new skills.

Aims of training activities: this specifies the aims in terms of the individual participant. The following aims are included: *new job function in the company*, to allow the participant to undertake new functions within the same organisation; *new job function outside the company*, to help the participant develop new skills for another company; *adaptability*, to help the participant develop new skills within the company; *equal opportunities*, to correct a position of disadvantage in the labour market; *positive action*, connected to a change of role, such as from employee to self-employed or entrepreneur.

Skills to acquire: it is well-known that social partners and institutions have not agreed a list of skills. Within the framework of the analysis of professional and training needs, social partners are currently drawing up descriptions of activities and skills. These descriptions will then be used by both sides of industry to define training standards and the skills required to obtain a qualification. The definition of training standards requires the description of professional positions in terms of skills. This will give rise to a dictionary of skills to be used by institutions.

Certification of results: the certification of the results of training and learning activities, within a context of lifelong learning, is a crucial part of the system. It must be based on shared procedures, involving companies, Trade Union representatives, educational and vocational training systems and institutions. Certification must go as a priority to new skills. The question of the description of skills is still open, both in scientific terms and in statutory terms. Discussions should continue at the European level in the understanding that the adoption of the skills concept is a fundamental building block for learning strategies.

Training credits: the certification of outcomes must be accompanied by the allocation of training credits following formal and informal training and learning activities. The certification body must be able to not only certify results but also ensure that they are translated into training credits; this is necessary in order to guarantee the “permeability” of the education and vocational training system, customised training and alternating periods of work and training.

Co-investment: this shows whether the employee made a contribution to the cost of the training programme⁶.

7. Companies interested in training actions

Companies are *per se* areas of learning and are ideal locations for measuring learning throughout life. Its production activities and continuous updating of skills are achieved by informal means as well as by formal training. Companies are therefore asked to generate information and keep records of professional training for individual employees as well as for their own training needs. In addition, companies are at the focus of the world of vocational training, and think of training as an investment. Within this framework it would also be useful to keep a record of negotiations with employees, employees representatives and third parties, whether institutions or private agencies.

The elements of a company where information may be gathered, in addition to mere data about the company⁷, include:

Local units: which identify the type of organisation involved (division, factory, company, group, sector) etc.

Organisational functions involved: i.e. the company functions involved⁸ in training and/or learning activities.

Training time: shows whether training takes place during or outside working hours.

Training location: shows whether training takes place on the company premises or outside;

⁶ Using unpaid leaves, holidays, etc.

⁷ Tax code, company name, corporate style, economic sector, classification of employees.

⁸ A systematic approach was worked out by the research team investigating professional and training needs, appointed by the Joint Trade Union and Confederation of Industry Body: Administration, Commercial, Logistics, Product/process Innovation/Development; Quality Maintenance; Production.

Services acquired or managed in-house: shows whether the company manages the training or acquires training programmes from specialist third parties.

Cost of training: shows the total cost of the activity in question.

Cost of labour: shows the cost of salaries sustained by the company for employees undergoing training.

Financing: shows recourse to public, local, national or Community finance for implementation of the training programme.

Sharing: the process of sharing indicates to what extent employees representatives were involved in the decision-making process. In these cases, the negotiation can be identified in terms of *information*, when the company informs representatives of the purposes, aims and contents of training programmes, *consultation*, where the aim is to share the goals of training programmes, *negotiation*, when the process of interaction between the parties refers to the entire training process and, in particular, training programmes with strategic importance. This may mean the impact the action has on *company strategy*, on the *organisation of the company* and the *skills of employees undergoing training*.

Those involved: identification of all those involved in decision-making activities and in the negotiation process. Those involved may work at the company, category or institutional level, or, in the case of Italy, for *bi-lateral bodies* which have a relevant role in the management of training resources, as stated earlier.

8. The training or learning process

The structured training and/or informal learning process represents an essential cognitive ambit for decision-makers.

All intentional events, whether structured or not, that engender learning are to be seen within this scope. Particularly important are the training and/or learning activities aimed at acquiring new skills or improving the single worker's performance. Also activities of individual learning⁹ by single employees either within their company or outside it, should somehow be identified and endorsed. The elements characterising the training and/or learning process are:

Nature of the process: the nature of the learning process must be identified in its nature, which can be either *individual* or *collective*.

The learning process may consist of programmed periods of learning organized in structured *training courses* or in *experience through the use of working tools with the aid of a tutor* or facilitator, learning through *job rotation*, the improvement and *sharing of work experiences*, *participation in self-improvement groups*, *participation in the activities of a learning centre*, *self-education* by means of distance learning or courses supported by computerized programmes, learning through *classroom*, *seminar*, *lecture*, *conference attendance*, etc.

Process articulation: this indicates the technical articulation of the learning process. Next to structured learning activities, the process can involve *orientation*, *competency balance*, *counselling*, *tutoring*, *mentoring*, etc.

Process management: this entails the identification of the agency managing the learning process. In some cases, the process may be managed *directly by the employer* or by an *outside agency*, depending on the nature of this actor, whether a *training agency*, a *consultancy firm*, a *supplier of durable goods* combining the supply of technical durables with the training of the workers who will ultimately use them.

Services utilized: by this we mean the services that the manager of the learning process will provide for the achievement of the process itself. They may include such preparatory activities needed for the implementation of the process as *occupational needs analysis*, the *training needs* of the individual participants, *activities planning*, the *production of teaching materials*, *teaching aids*, *organization and logistic support*, *administration and accounting* in the event of public funding, the management of *local or international partnerships*, the planning and management of *activities of monitoring and assessment* of the learning process.

⁹ Particularly relevant are also the individual learning initiatives currently being developed in the learning centres that some companies are organizing for their employees.

Teaching technologies: they describe the use of learning-support teaching technologies. They include *distance learning*, the use of *multimedia* tools, and *computer-based* learning tools.

Monitoring and assessment: these indicate the existence of structured monitoring and assessment procedures for all the stages of the learning process. The procedures *for the upstream assessment of the learning strategy, and for planning and project during performance* in order to keep the project closely monitored, and *the final assessment* of the activities outcome in terms of *individual learning* and *impact* on the organization. Particularly interesting for social partners is *impact assessment*, whether referred to the occupational condition of the individual who is the subject of the learning activities, or to the effect the learning has had on the organization in which the individual operates. This records whether the new knowledge has *spread throughout the organization*, has been *transferred to other individuals*, or has translated into *improved personal and/or collective performance* in terms of efficiency, effectiveness, or quality of the working activities.

The monitoring and assessment procedures enacted must involve the supervisors of the learning activities (consultants, planners, teachers and trainers, etc.) as well as the participants in the learning activities. The latter are not just the object of monitoring and assessment, but are called upon to express their opinion on whether they liked the learning activities they attended and on their efficacy.

Teaching methodologies: this includes the methodologies and teaching techniques adopted to facilitate and improve the learning activities. Learning situations may be classed as *face-to-face lectures* by the teacher; *drills or simulations* reproducing real operative conditions, carried out either in the classroom or on the workplace; *role play*, i.e., learning by play-acting occupational roles different from the ones usually covered; *project work*, in which learning is achieved through the completion of realistic work projects; *distance learning* with the help of multimedia tools, or *individual learning, or self-education*, either computer-assisted or otherwise.

9. The requests to the statistic system

On the basis of the general formulation outlined above, the social partners and institutional decision-makers are the main users of information on life-long learning. In spite of their considerable management responsibilities, the social partners are not objectively able to create and manage a training system with this kind of impact. At the very most, they can contribute, with the important role of employers, to providing basic information on the continuous training programmes they run. It is indispensable for national and EU statistical systems to be involved in this cognitive effort aimed at improving the effectiveness of training investments and in support of skill acquisition policies for EU citizens.

The only available source for data on lifelong learning is the 1999 Eurostat survey. Clearly, the approach of that survey could not take into account the development of lifelong issues in recent years. In addition, a survey carried out several years after the preceding one and with a different approach cannot adequately show the evolution of the phenomenon it is intended to investigate.

As we have said previously, the improved effectiveness of the decisions social partners are called upon to make cannot but be founded on non-stop monitoring activities for learning and training, and on the effects on enterprises and their employees.

In the first part of this documents, I outlined where monitoring activities should be developed.

We need frequent surveys, yielding prompt information.

Efforts should be focused on two areas: the local dimension and individual scope for learning and training.

Employment and development promotion policy activities which include investments for lifelong learning, are addressed to the local labour market. The very same policy-makers are called upon to develop their activities locally. This requires increased monitoring and statistical coverage in order to provide overall data by territory and by production areas.

The other area in which innovation is needed is the individual scope that lifelong learning ultimately privileges. After the enterprise, the traditional source of information on training and learning, comes the role of individual workers. A particularly interesting example in this direction is Sweden. In Sweden, labour force analysis includes a regular 6-month survey on a limited sample of workers in relation to the learning and training activities each individual has taken part in during the previous semester. The Swedish experience takes on particular

significance since the people involved are not only polled on their training and learning progress, but they also provide information about the enterprises in which they work. The experience of our Swedish colleagues deserves a more thorough investigation. The essential element to be verified is whether the people who participated in the learning activities might be an exhaustive source of information for the statistical system of life-long learning.

In this case, the work of statistical institutions would be simplified and social partners could use an efficient and prompt information system.

MEASURING LIFELONG LEARNING

BLOMQVIST Irja

Statistics Finland

FIN – 00022

STATISTICS FINLAND

Irja.blomqvist@stat.fi

1. Introduction: Lifelong learning and Finland's Adult Education Survey

The globalisation of the economy, increased international interaction and technological development have made change a permanent state of affairs in society. People are constantly faced with situations that require new learning and competence. Fast changes in society and working life, the growing average age of the population and a high level of structural unemployment will bring inequality and social marginalisation if conscious measures are not taken to counter them. The starting point of *Finland's national strategy for lifelong learning* is that the only way to respond adequately to the need for broad and continuous learning caused by the social change is to promote people's learning in their all living environments: not only at educational institutions but also at work, in voluntary activities, at home and in leisure pursuits. (The Joy of Learning 1997).

The objective of lifelong learning is to support the development of personality, to strengthen democratic values, to retain social cohesion in active communities, to nurture internationalism and to advance innovations, productivity and national competitiveness. (Op. cit.).

Continuous learning of new matters requires people to have basic knowledge and skills on which to build new learning. To this end, the national strategy lays emphasis on reinforcing the role and responsibility of the family in the development of the child's capacity for learning and on creating a foundation for the child's knowledge and skills much before the present school age. In addition, development of learning motivation and study skills should be intensified in the school system. Knowledge and skills level of adults with a poor basic level of education should be raised and the basic skills of the information society should be adopted as part of every citizen's basic knowledge. (Op. cit.).

Today it appears to be generally agreed that we live in a knowledge-based society and economy. Knowledge and competence are considered essential for economic growth and national competitiveness and the meaning of human capital from the viewpoint of productivity and economic development has been underlined in many connections. Lifelong learning has been discussed on that basis but the reasons for taking it up have increasingly been non-economic as well. Besides skills needed in working life, abilities that advance people's activity in social networks and that are essential for citizen's activity and well-functioning democracy have also been considered essential. (Op.cit.; Memorandum on Lifelong Learning 2000; Education Policy Analysis 2001.)

The principle of lifelong learning places the learner and his or her motivation and ability to learn into the very centre of things. These competences are created already in early childhood during pre-school education or at comprehensive school and they create the foundation for learning at adult age. Therefore these parts of the school system are decisive in examination of lifelong learning.

Statistics concerning education in the regular school system are at the moment fairly exhaustive, although great care should be taken when making international comparisons. There are still differences between countries in the contents and coverage of concepts and in the classifications and measurements used. These shortcomings are, however, even greater as regards statistics on adult education and especially on adult learning.

This paper intends to present in what way surveys have been carried out in Finland concerning participation in education and training specifically by the adult population and what kinds of problems and difficulties have been encountered in implementing the surveys and analysing the results. The final part of the paper focuses on the perceived development needs for future surveys.

2. Starting points of Adult Education Surveys made in Finland

Statistics Finland has carried out four Surveys examining participation in adult education and training in Finland. The first such Survey was made in 1980, the second one in 1990 and the third in 1995. The data for the fourth Adult Education Survey were collected in 2000. The Surveys were financed by the Ministry of Education and carried out jointly by the Ministry and Statistics Finland. The Ministry of Labour has also participated in the planning of the Survey and has made active use of the data produced by the Surveys. The Ministry of Labour also contributed to the financing of the 1995 Survey.

Adult Education Survey 1980

At the end of the 1970s, the prevailing view in education policy was that adult education could help to increase educational equality. All the task areas of adult education were considered equally important but particular emphasis was given to vocational adult education and training. Statistics Finland's first Adult Education Survey in 1980 was made with the aim to produce statistical data for planning and decision-making on adult education and training and particularly on vocational adult studies. It was a fairly typical interview survey intending to create statistical tables. The Survey was carried out in connection with the reliability study of Statistics Finland's population census.

Adult Education Survey 1990

Towards the end of the 1980s the issue discussed in education policy concerned the possibility of adult education to solve problems relating to structural change in society. The occupational profile of the population was no longer considered to correspond to the requirements of the rapidly changing working life. The target population of education was not only those with insufficient basic education but the entire population of working age. It was thought that vocational adult education and training would help employees' skills to meet these new requirements, because it was clear that initial education and training could not provide such skills that would last throughout people's work career.

Towards the end of the decade the statistical data from 1980 seemed outdated and new information was needed to support decision-making. Now it was considered essential to obtain more in-depth information than before about adults' motives for, views on and obstacles to education and training as well as on their needs and interests concerning education and training.

In the planning of the Adult Education Survey 1990 attention was paid to new kinds of needs, not just with respect to the contents of the Survey. In addition to producing statistical tables and analyses for political decision-making, the object was to establish a high-quality database that would provide numerous analytical possibilities for extensive studies. The Turku University's Research Unit for the Sociology of Education took an active part in the planning of the Survey from the start together with Statistics Finland and the Ministry of Education experts. The Ministry of Education in its part aimed to increase researchers' use of the data by carrying the costs on behalf of researchers on the production of service data files and instructions for their use. The research data were used in about ten different researcher communities.

Adult Education Survey 1995

Unemployment increased explosively in Finland in the early 1990s. The planning for the 1995 Survey was influenced by the new social situation, the economic recession and massive unemployment. The population of the Survey was working age population (aged 18 to 64) and questions describing links between education and training and working life were added to the questionnaire. It was now possible to concentrate more on the description of connections between unemployment and education and training in the analysis of the results. Other new focus areas in the 1995 Survey were foreign language skills, education and training abroad and intentions to participate in education and training abroad. A new theme on the questionnaire concerned the students' beliefs regarding the future.

Acquisition of comparable data from several cross-sectional periods gave additional value to the 1995 Survey and thus it was possible to pay more attention to the description of the changes in the analysis and reporting of the results.

The key questions of the Survey were kept unchanged, only minor modifications and improvements being made to the old questions. Data were now collected by computer-assisted face-to-face interviews. A group of experienced interviewers also participated in the development and testing of this technically new instrument. A small-scale pilot survey was made before the actual data collection.

Adult Education Survey 2000

Finland's strategy for lifelong learning was published during the analysis and reporting of the 1995 Survey. The strategy lays emphasis on promotion of education and learning as ways of answering to many social problems and on efforts to support people's learning in their all living environments (see also page 1).

The principle of lifelong learning was taken into account in the planning of the Adult Education Survey 2000 as well as the development work on statistics and indicators concerning adult studies and lifelong learning in progress within the OECD, Unesco and the EU.

When reviewing the data contents, discussions centred on how to widen the study measuring participation in formal education and training towards informal learning. It was considered interesting to study the effects of everyday experiences on learning processes, thought models and skills, and the connections between everyday learning and participation in formal education and training. To specify further the data contents and other development needs of the Survey a seminar for experts was arranged and collaboration with university researchers and other experts continued close.

3. Adult Education Survey 2000

3.1 To which questions does the Survey seek answers?

- How do different population groups (age, sex, level of education, status at work, family situation, etc.) participate or have participated in adult education and training?
- In what ways does adult education and training agglomerate by population group?
- To what extent and in which way do different population groups find it necessary to study and how willing are they to participate in education and training?
- What terms and conditions do different population groups set on their own participation in adult education and training and what obstacles and difficulties do they report in their participation in education and training?
- How do different population groups view adult education and training and what kind of effect and significance do they think adult education and training has in working life?
- What is the effect of adult education on the regional, professional and workplace mobility of different population groups?
- In which ways have participation in adult education and training, need for, obstacles to, conditions for, effects on and views on education and training changed since the 1980s?
- How is Finland placed in international comparison regarding participation in education and training, participation activity and experienced obstacles to education and training?
- How do Finns themselves rate their language skills?
- How active computer users are Finns and how have they acquired their skills and what differences are there between different population groups?
- How do people analyse learning of life skills important to them?

3.2 Development and contents of the data collection questionnaire

The Adult Education Survey 2000 questionnaire is based on the questionnaire of the 1995 Survey. At the initial stage of questionnaire development the model used in the 1995 Adult Education Survey was assessed at

Statistics Finland's Survey Laboratory. The assessment was made using the classification developed for systematic analysis of problems regarding survey questionnaires. The assessment proved to be useful not only by helping to make necessary changes in question formulations but also with regard to the analysis of the data and the reflection of the results.

The data include:

- Background information;
- Information describing participation in adult education and training;
- Self-directed studies;
- Learning at work, learning and development possibilities provided at work, solving problems at work and information acquisition;
- Use of professional literature;
- Views on benefits of education and training, experienced need for education, interest in education and training, interest-stimulating factors;
- Obstacles to education and training, information acquisition on educational possibilities;
- Use of information technology;
- Foreign language skills;
- Everyday learning.

Background information

In addition to typical personal information (age, sex, marital status, etc.) background information includes questions on educational and family background, work, work history and workplace. The questionnaire contains a lot of information describing working conditions, but those questions were not left out since work is a very important learning environment for many adults.

Analyses are made by using background information with respect to special groups, such as those with little basic education, aged, unemployed and genders.

Previous Surveys have indicated that people's basic education is the most decisive individual factor in explaining participation in adult education and adult functional literacy as well. Information concerning educational history, such as education completed and times and places of completion, is obtained from the registers. In the light of previous Survey results, the parents' educational background in Finland (as in many other countries) has an influence not only on their children's educational level but also on their literacy level and participation in adult education and training. Information on parents' educational background is also available from registers.

Information on the questionnaire relating to the person's work history can be supplemented with suitable longitudinal data files, and thus professional mobility, for example, can be described by looking for information on the person's occupations, employers and possible unemployment at specific cross-sectional periods during about thirty years.

Participation in education and training

The Adult Education Survey 2000 examines participation in education and training in general, not only in adult education. Participation in education and training is surveyed over the whole life span of the respondents on an overall level: what the respondents' level of education is and to what extent they have participated in education and training related to work and occupation and also education abroad. The type of adult education the respondent has taken part in during the 12 months preceding the interview is studied in more specific detail.

Adult education and training was categorised on the basis of the **organisation providing the education**. Since participation in different types of educational institutions and organisations is taken into account in the data collection questionnaire, it is possible to make the definition of adult education and training even at the analysis stage of the Survey using different perspectives.

The instructions given to the respondents in this study set the minimum limit of education and training at **six hours**. Discontinued studies are also included if they have lasted at least six hours. Education and training is

defined as an activity separately and specifically organised and arranged and the purpose of which is to achieve learning. It is also typical of education and training that there is a curriculum or a study programme prepared in advance and the supplier or provider of education is responsible for the arrangements.

Regular attendance to radio and television educational programmes and participation in conferences, seminars or the like are also included in forms of education.

The respondents were given for viewing a list of educational organisations from which to choose the form of education and training they had participating in during the 12 months preceding the Survey or sometimes earlier. The list is there to help the respondents to remember different training events, which will reduce the measuring error connected with remembering. Because in these kinds of surveys overreporting is easily generated to provide socially acceptable replies, it was also possible for the respondent to tell about participation in education and training earlier, not just in the past 12 months.

As much detailed information as possible is requested on all those types of adult education and courses in which the respondent has participated **during the 12 months preceding the Survey**. Regarding each type of studies inquiries are made as to **the contents** of the studies, **the provider**, whether the studies **related to work or occupation, positions of trust, leisure interests or general education**, whether **working time** or other time had been used for studies, who had **financed** the studies and **how many days** (hours) of studies the respondent had had during the past 12 months.

Work or occupation-related and general education studies or leisure-interest studies are thus separated from the point of view of the individual in that the respondent specifies the purpose of the studies. It is sometimes difficult for the respondent to make this difference. This is understandable because the difference is not always clear, nor important for learning if the objective of studying was in any case development of skills. Although the purpose of studies had been own leisure interests (such as language courses), they may become useful later on at work.

Due to the strenuous and tedious nature of the questionnaire questions on the **qualification to be attained, effects** of studies, reasons for **participating** in education and **initiatives** for participation were asked with respect to **one randomly selected type of education/course**. The method relating to random course selection and its reliability were tested before data collection. The results were promising.

Self-directed studies are also examined on the questionnaire. Such studies are considered to be target-oriented studies arranged and organised separately outside the formal educational system. The questions were already developed in connection with the Adult Education Survey 1990 and at that time they were not consciously intended to measure informal learning. The questions requested information on only such target-oriented studying which had lasted at least 20 hours. These questions were not removed for now in order to give them additional value by this new measurement.

Learning at work, learning and development possibilities provided at work

Questions relating to changes and problems experienced at work, inadequacy of one's knowledge, information acquisition strategies in problem situations and following of professional literature were left unchanged from the Adult Education Survey 1995. In addition, questions describing the nature of work as provider of learning and development possibilities and questions on connections between work and education were unaltered.

Need for and willingness to participate in adult education, views on and obstacles to education

The need for education and training and the willingness to participate in education are surveyed using direct questions and by questions on obstacles to and difficulties in participation and the desire to participate in education. Further insight is obtained by including questions about views on and attitudes to education in general, as well as questions aiming at evaluating the effects and relevance of the received education from the viewpoint of working life. These questions were particularly important when analysing the group who has not participated in adult education and training during the 12 months preceding the interview.

Information technology skills

A new subject on the questionnaire concerned computer use. Since Statistics Finland examines Finns' use of information and communications technology extensively in its separate Information Society Survey, user skills

of information technology are limited in the Adult Education Survey to relate only to computer use and frequency of that use (information retrieval from the information networks, reading of web magazines, word processing, e-mail, etc.). This measure is used to describe computer user skills so that self-assessment of one's skill level is not necessary. The respondents' own estimation of the need to improve their skills is brought up elsewhere in the questionnaire, where it is asked what specific needs for training they have, and what skills and abilities they would like to develop further.

Foreign language skills

Foreign language skills are determined on the basis of the respondents' own assessment of their skill levels. Self-assessments were first tried out in the context of the 1995 Adult Education Survey. The results were encouraging. They formed the basis for a wide-ranging report, compiled at the Board of Education, evaluating for the first time the foreign language skills of Finnish adults and foreign language studies from primary to tertiary level of education. Basing on experiences from the used measure and to ensure international comparability, the scale of foreign language skill levels was revised for the 2000 Survey. The currently used classification is based on the Council of Europe 6-category scale, modified for use in interview surveys. Expert advice on this was received from the University of Jyväskylä.¹

Everyday learning

A major challenge to the Adult Education Survey 2000 was widening the examination of formal education and training and participation in training courses to cover also learning that takes place outside the scope of education proper in other, everyday environments.

Aittola (1997) extends the concept of learning from conventional education to relate to learning experiences in family, at work, at leisure, through the mass media, in human relationships and in consumption.² He drew up a proposal for a measure to describe everyday learning for the Adult Education Survey. After thorough development work, Aittola and Adult Education Survey researchers jointly arrived at a model that was tested with qualitative interviews performed by the Survey Laboratory of Statistics Finland. Just over 20 qualitative interviews were made and these were taped and transcribed. The qualitative data form part of the Adult Education Survey data material but they are not freely available to other researchers.

The aim of the set of used questions on everyday learning is to produce information about where people themselves think they gain the knowledge, skills and competences that earlier surveys about learning have shown to be the ones people generally regard as important life skills. Besides charting out people's learning environments, the questions are also designed to find out how important people regard these skills areas in their lives and how the opinions of different population groups differ in this respect. The outcome from learning, not the learning process, is the point of departure for the measure.

In the place of knowledge, skills and competences, the working concept, used at the initiative of Aittola, was so-called meta competence (see e.g. Nordhaug 1991). The respondents were asked to evaluate the following **23 meta competences** with regard to the above-mentioned **eight life environments**: ability to judge, acquisition of new experiences, tolerance of uncertainty, adaptation of changes, sensible consumption and management of finances, taking care of personal relationships, consideration for others, self-knowledge, conversation and interaction skills, acquisition and development of language skills, ability to make selections and decisions, spontaneity, management of one's time use, construction of one's values and world view, familiarity with one's cultural traditions, taking care of one's health, problem-solving skills, development of learning skills, organisational skills, tolerance and acceptance of differences, responsibility for things, actions and people, development of co-operation and group work skills, attending to common causes, extension of general knowledge and cultural understanding, and caring for the environment, appreciation of nature.

On the basis of preliminary results we may note that the quantitative method used produces similar results on people's views as the ones Aittola gained in his studies using the qualitative approach. The adults considered that in their family they had learnt spontaneity, sensible consumption skills, human relationship skills and re-

¹ The contact person at the University of Jyväskylä was Professor Sauli Takala. He is involved in the DIALANG project financed by the SOCRATES programme (see DIALANG e.g. <http://www.dialang.org/>).

² PhD Tapio Aittola is a Senior Researcher at the University of Jyväskylä.

sponsibility. The most general of the meta competences acquired at school were learning to learn, group work, language and interaction skills, while in adult education the most common meta competences learnt were acquisition of group work and interaction skills. Spontaneity, ability to make selections and decisions had been learnt at work, as well as interaction and problem-solving skills. Of present development needs the ones most often mentioned were taking care of one's health, language skills, human relationship skills, ability to acquire new experiences and caring for the environment.

3.3 Data collection

The population and the sample

The Adult Education Survey 2000 focuses on the whole population, not just the population of active working age. For this reason it was desired that the upper age limit could be put up from 64 years. For reasons connected with the practical execution of the interviews, the upper age limit of the population was set at 79 years.

The population of the Adult Education Survey 2000 is made up of persons aged 18 to 79 permanently resident in Finland. With systematic sampling, 5,000 persons (4,700 from the 18 to 64 age group and 300 from the 65 to 79 age group) were drawn to the sample. When those not belonging to the population, i.e. overcoverage, were removed from the gross sample, the final sample comprised 4,605 persons from the 18 to 64 age group and 283 persons from the 65 to 79 age group. Persons who had died since the last updating of the register, persons who had been abroad for the entire reference period, persons living in institutions, persons seriously ill, and persons who could not be interviewed because of language problems were deemed to form the overcoverage.

The interviews

The Survey material for the Adult Education Survey 2000 included: the CAPI (Computer Assisted Personal Interview) questionnaire and its paper version, reply cards, interviewer instructions, Survey brochure, accompanying letter and letter to persons refusing to participate, as well as Survey familiarisation tasks for interviewers. A one-day training event was arranged for the interviewers. Its main objective was to introduce the purpose, objectives and use of the Survey and explain the meaning and aims of certain key questions. Another object was to come to an agreement with the interviewers which actions in practical interview situations were possible, dependent on interviewers' consideration and permitted and in which cases quality requirements necessitated compliance with detailed instructions. A major part of the training was spent in discussing fieldwork practices and ways of motivating interviewees to respond.

The data of the Adult Education Survey were collected with computer-assisted personal interviews (CAPI), performed by approximately 150 interviewers between February and June 2000. The interviews were carried out in Finnish and Swedish, because the sample contained Finnish and Swedish-speaking persons pro rata to their proportions of the whole country's population.

As the final stage of data collection of the Adult Education Survey the interviewers gave feedback on how well the fieldwork had gone. The purpose of this was to gain information that might help in analysing and assessing the quality of the material, as well as give ideas for further development of the contents and tools for the next possible Adult Education Survey. The results were published as a report.

The response rate of the Survey

The rate of non-response was greater in the Adult Education Survey 2000 than in previous Adult Education Surveys. In the 18 to 64 age group the response rate was 74 per cent and in the 65 to 79 age group 64 per cent. Even with special efforts to keep non-response to the minimum, the rates could not be improved upon. Particular attention was given to keeping the respondents motivated and the field unit of the Interview and Survey Services organised their own scheme for the implementation and development of non-response prevention measures. Regional interviewer groups processed non-response cases and discussed methods to persuade persons who had refused to participate. The originally planned fieldwork time was even extended somewhat.

The results of the non-response analysis show that on the whole the data obtained with the interviews of the 18 to 64 age group match relatively well with the population. Weight coefficients introduced into the Survey data have adjusted minor skewnesses by educational level and region of residence. In respect of the 65 to 79 age group, the observed differences between the population and the persons interviewed can largely be explained

by the small sample size and high non-response rate. The sample of aged persons cannot be analysed in respect of multiple category background variables. The data were weighted using the so-called calibration method. The analysis of non-response and the weighting of the data will be reported upon separately in the context of the quality report of the Survey.

3.4 Publication of the Survey results

Preliminary results from the Survey have been produced on Statistics Finland web pages (http://tilastokeskus.fi/tk/he/aku00_ennakko1_en.html). The page also has a link to the questionnaire. The analysing of the Survey data has been started but the bulk of the reporting will take place in 2002.

The service data file for outside researchers' use will be completed in early autumn 2001. Subject to separate user right agreements, the file can be handed over to universities and research institutes for statistical and research purposes. Users of such files from previous Adult Education Surveys have published approximately 100 research reports and articles based on the data in the file.

4. Problems and development needs of the Adult Education Survey

Contents and quality of the Survey

Both the respondents and interviewers have commented on the **strenuous, tedious and repetitive nature of the questionnaire**. For technical reasons, the questionnaire gives a lot emphasis to **formal education and training** and specifying the educational institutions in question. For the time being, information about providers of training has also been needed since organisation-based statistics provide information on cases registered and not on those persons having participated. The Adult Education Survey has produced indicative information on the real number of students at certain educational institutions.

The object of the information produced by the Adult Education Survey is to describe changes in participation in and attitudes towards education and training, which makes it necessary to retain the indicators similar and the related **changes small**. Therefore we have decided to keep the basic structure of the questionnaire unchanged and construct new questions on topical themes around them.

Questions relating to quantitative information have been particularly problematic. For example, the number of study years completed and days of participating in adult education and training have been difficult to respondents because of diverse modes of studying. This same problem has come up in the Second International Adult Literacy Survey (SIALS) carried out in Finland.

The numbers of **days of participating** in education and training have been asked of the respondents in the Adult Education Surveys. The general guideline has been that one training day usually consists of six lessons. In connection with the Adult Education Survey 2000 the question concerned both days and hours in order to get some idea of how people count the number of days of participating. For example, the distributions of the numbers of lessons produced from the data of the International Adult Literacy Survey (IALS) indicate that with respect to several countries the respondents estimate the number of lessons included in one training day to be eight hours.

To evaluate the quality of the participation hour indicator we need thorough cognitive tests on how people in practice arrive at their answers and how they sum up the number of lessons taken.

The hour of participation as an indicator has other shortcomings as well. Participation hours are just part of the training whole which usually also contains the student's independent work. This may involve familiarisation with relevant literature, writing essays or various kinds of studying made by means of remote studies. The proportion and significance of independent studying may be considerably greater for the result of training than those of lessons received. The number of lessons does not either reveal anything about the quality and results of teaching and learning.

The **reference period** used for surveying adult education events and self-directed studies was 12 months prior to the interview. Selecting the best possible reference period is connected with the contents but also with the methodology.

The reference period of one year (12 months) makes it possible to form **annual level estimates**. It is easier to interpret and report annual level estimates and they are needed for political decision-making. On the other hand,

the long reference period increases the risk of measuring error and therefore comprehensive cognitive tests would be needed for selecting the best reference period in relation to remembering training events, in particular. If a shorter reference period is to be justified by reasons related to measuring error, we should be able to create a method with which to form annual level estimates. In this connection it should be borne in mind that training and learning are not distributed evenly into all months, weeks and days of the year. Intensive learning periods also vary according to the persons' occupational group, used studying/learning methods and other such factors.

In the sphere of the academic labour market study it has been suggested that a more **dynamic approach** should be taken in the questionnaire towards both working life and life in general. This could take place by concentrating, instead of general questions on work history, on significant life changes in the near past and in the future as well. The following questions have been asked: what kinds of transitions have been typical in working life and what kinds of individual training solutions have been important in that context, what kind of experiences the persons have on existing socio-political actions and in what way the family and the employer have taken part in decisions that are significant for the person's life.

The Adult Education Survey is not concerned with hobbies and participation in organisations and voluntary work. With regard to reading, only reading of professional literature has been the subject of study. The **significance of informal learning** to people's life should gain more weight in the contents of the Survey in future. The analysis of the questions in the 2000 questionnaire on everyday learning will probably bring about new experiences and ideas for developing the measurement of these matters. In addition, questions regarding the formation of social capital should also be studied in more detail.

In future it should also be considered whether it is possible to connect with the interview genuine assessments of knowledge and skills in addition to self-evaluation indicators. Besides literacy, problem solving skills and foreign language skills would be interesting areas of study.

Sample size, methodology and response rate

The **small sample size** of the Survey narrows down analyses – studies on special groups and regions cannot be made with the present sample size to the extent needed. The size of the sample does not either allow us to study the effects of training by type. These analyses require separate follow-up studies.

For the time being it is not possible to increase the size of the sample. The costs of the Survey are at present fairly high as the data are collected with personal interviews. From the viewpoint of the **quality of the Survey**, **personal interviews** have been thought necessary, as the questionnaire is complicated and broad. Several reply cards are used in the interview and the interviewers are trained to help the respondents understand the meaning of factual questions and remember difficult things. Due to the wide content of the questionnaire the interview has taken one hour, on average, which is too long for a telephone interview. Ten per cent of interviews lasted at least one and a half hours.

Using personal interviews as the data collection method is also defended by the acquisition of comparable data with respect to the previous Survey years. Starting to use telephone interviewing would probably produce estimates describing lower participation. There is a clear technical difference between personal interviews and telephone interviews: short and fast telephone interviews do not allow the respondent to think over the past events thoroughly and at length. Long silent pauses are also felt to be uncomfortable on the telephone and questions to be used in telephone interviews should be such that can be answered quickly and that make the interview run smoothly.

The fall in the **response rate** since 1995 is a serious matter. Although unwillingness to reply is common to today's inquiry and interview surveys, we should put more effort in ways of motivating respondents. Even the most sophisticated weighting methods do not expel the doubt of the quality of a survey with a high non-response rate when the object is to study attitude changes in relation to different population groups. In connection with the Adult Education Survey it is essential to obtain information from persons who have not taken part in training and whose need and motivation for training is lowest. It is general for interview surveys concerning education and training, learning and competence that such persons are both the most difficult to be reached and persuaded to take part in the survey.

Needs for developing the planning and analysing processes of the Survey

In the planning, analysing and reporting of the Adult Education Survey we have co-operated with researchers working in different universities in Finland. However, the data could be used still more widely in the researcher communities and its **marketing** may not have been all that successful. Firstly, we have not been able to convince researchers of the significance of extensive quantitative data. The qualitative research paradigm predominates in the social sciences and especially in education and university researchers do not have much interest and not always even sufficient skills to use wider empirical survey data. Secondly, we should try to develop further those co-operation and discussion modes that are needed when working with the academic community.

Now we should start to **compile together** the results and outcomes that different researchers have achieved on the basis of the Adult Education Survey data. This is important not only to the users of the data but also for directing future analyses. Examinations in the future should be aimed at areas where the need for information is highest and on which the analyses made have been insufficient.

The objective of the Adult Education Survey is not to produce information about training costs, about employers' efforts to improve the companies' human capital, or about employers' training strategies or attitudes to training. Such information can be best surveyed with an inquiry targeted to employers, of which the most significant is the CVTS (Continuing Vocational Training Survey) project covering European countries.

In addition to analysing the adult population's learning and participation in education and training by **means of several data collections**, the data should also be used to specify **research-methodologically interesting questions**. It should be examined to what extent different data collection methods produce commensurate information about one and the same phenomenon and where the greatest differences lie. We should also direct more studies to **the joint use of survey data and register data**.

Significance of international references

Development of indicators enabling international comparisons is important in order to obtain a reference base for data concerning one's own country. The indicators can show connections with other countries but they can also be used to find characteristics of specifically one's own country and culture. The comparisons help to understand which political actions have been effective and which have produced the desired results. At best, the indicators stimulate positive debate that enables open exchange of experiences and learning from them.

Significant savings in costs can be attained through international co-operation relating to development of indicators. The co-operation will prevent reiteration of the same actions and errors in different countries, expertise will thus cumulate and the labour input of the researchers and experts involved in the development work can be rationalised. This is an important issue for a small country like Finland.

International comparisons and the indicators used as their bases have to be built on the foundation and the experiences that are already in existence.

Eurostat has made international summaries concerning adult education utilising the data of surveys carried out in European countries (CVTS1, European Labour Force Survey and European Community Household Panel). The OECD has published summaries on several countries in its own publications (e.g. Education at a Glance, Education Policy Analysis and Employment Outlook). In these the focus has been on work or occupation-related adult education and training.

Information describing participation in adult education and training has been presented more widely in the reports of the International Adult Literacy Survey (IALS), but specifically in connection with literacy. The data have also been used for more in-depth analyses in the following special reports: *Belanger, P. & Valdivieso, S. (eds.) 1997. The Emergence of Learning Societies: Who Participates in Adult Learning?*; *Belanger, P. & Tuijnman, A. (eds.) 1997. New Patterns in Adult Learning: A Six-Country Comparative Study*; and *Tuijnman, A. & Hellström, Z. (eds.) 2001. Nordic Adult Education Compared*.

Interesting results are expected of the currently undergoing OECD country survey of the adult education policy entitled the Thematic Review on Adult Learning. When preparing the background reports, countries had to direct their conventional examination of participation in adult education more towards informal learning.

The above-mentioned analyses are rendered none the less significant by the fact that they also reveal distinct difficulties in comparing countries to one another. This is partly caused by that the indicators have been applied differently in different countries, the concepts and classifications differ and so on, and partly because in some cases quantitative indicators do not allow for cultural characteristics.

Eurostat's task force "Measuring Lifelong Learning" has been successful in utilising the experiences already gained on the subject of lifelong learning and adult learning. The memo of the task force has presented the Europe level data collection systems that already now survey some of the issues related to lifelong learning. The task force has also made a proposal on how to develop the present data collection systems to take better account of the principle of lifelong learning and how development work is to proceed at Eurostat. The report clearly manifests the need for producing internationally comparable information so as to ensure sufficient uniform use of concepts, definitions and classifications and research methodology.

By means of its INES Network B the OECD has launched a project to develop a so-called module of questions relating to continuing education and training (CET) to be made conjointly with applicable household surveys carried out in different countries. The project works in co-operation with Eurostat.

This seminar is also one example of the interest and need for discussing and exchanging experiences on questions relating to measurement and development of lifelong learning. Discussion and development of indicators should be guided by the objective to produce reliable information that could be used to support political decision-making when aiming to improve citizens' wellbeing, quality of life, success and equality.

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MEASURING LIFELONG LEARNING

MURRAY Scott

Director General
Statistics Canada
R.H. Coats Bldg Tunney's Pasture
Ottawa, Ontario
CANADA
scott.murray@statcan.ca

1. Introduction

The following paper has been drafted as input to the 14th Seminar of the European Advisory Committee on Statistical Information in the Economic and Social Spheres on Measuring Lifelong Learning.

The paper attempts to set out future needs and demands for information related to lifelong learning from the perspective of a producer of official statistics, specifically that of Statistics Canada. Statistics Canada is the Government of Canada's national statistics office responsible for a highly centralized system of official statistics in the economic and social domains. Readers requiring additional information or clarification may contact:

T. Scott Murray
Director General
Institutional and Social Statistics
Statistics Canada
17-B R.H. Coats Building
Tunney's Pasture
Ottawa, Ontario
Canada K1A 0T6
Telephone: 613 951 9035
Facsimile: 613 951 9040
Email: scotmur@statcan.ca

2. Organizing Framework and Objectives of Statistic Canada's Program of Work in the area of Lifelong Learning

Statistics Canada's work in the area of lifelong learning is conceptually rooted in our interest in understanding human and social capital: profiling the available stock, tracking their flows and understanding their contribution, both positive and negative, to economic and social outcomes at both the individual and the aggregate level.

This work adopts the OECD's definition of human capital: the knowledge, skills and competences and other attributes embodied in individuals that are relevant to economic activity, and Coleman's definition of social capital: the networks, norms and trust that allow social agents and institutions to be more effective.

In our work we tend to focus on skills and competences as proxies for human capital and transaction and social support networks as proxies for social capital. As noted above the tendency has been to focus on measuring both the stock and the flow of skills and learning flowing out of various learning and life domains, including the formal education system.

3. Uses

The fitness for use of any statistical information can only be judged in terms of the uses to which it will be put. Those responsible for the production, analysis and dissemination of official statistics have developed a variety of ways to classify their output (Overgaag and Godeburre, 1988), classifications that provide a useful context within which to judge the current coverage and design of Statistics Canada's program of Statistics related to skills and learning.

The most basic of such classifications defines use in two dimensions i.e. the level of abstraction and/or aggregation of information required and the level at which the information will be applied. The most statistically demanding of uses involves the acquisition of data at the individual level for use at the individual level. For example, the standards of criminal evidence in a homicide investigation require acquisition of primary data related to an individual to reach a determination of guilt about a particular individual.

At the other end of the spectrum lie far less demanding applications, where highly aggregated data are required to reach subjective determinations about entire populations. For example, the Human Development Report combines a small number of statistical estimates into an overall human development index to characterize and compare the progress of entire nations.

In between lie a host of statistical applications that require intermediate levels of acquisition and aggregation. For example, the Employment Insurance Program of the Government of Canada determines eligibility and benefit amounts for individuals on the basis of estimated unemployment rates for economic regions provided by Statistics Canada's monthly Labour Force Survey.

Generally speaking users require access to one or more of the following types of statistical information:

They need estimates of the numbers of individuals sharing a given set of characteristics with a defined set of geography (ies). From a statistical perspective generation of this type of reliable point estimates requires relatively large sample sizes, in the order of 100 to 400 cases per cell to be estimated.

They need estimates of the relationship between key variables for the population as a whole and for important population sub groups. Longitudinal designs allow one to understand status at one point in time conditions states observed later in life.¹ Socially important relationships can generally be detected with sample sizes of less than 100 cases per cell to be estimated.

They need some notion of whether the observed relationships are socially meaningful i.e. they are associated with outcomes that carry social or economic consequences, either positive or negative.

They need some notion of the degree to which the observed relationships are deterministic or, rather, the degree to which outcomes can be modified through conscious action/choice.

They often need measures of trend to determine if a particular situation is getting better (or worse).

Statistics Canada's the program of work on skills and learning is intended to satisfy the preoccupations and information needs of a broad range of users and uses, including the information needs of policy makers in Canada.

It is useful to think of these needs in two dimensions: Statistics Canada's work in this area is both lifelong, from birth through death, and life wide, a fact that acknowledges that learning takes place in multiple domains of life. This latter dimension implies that measurement of learning must go beyond the traditional domain of the formal education system to include learning within the context of the family in early childhood, workplace learning, learning in the community and individual learning.

First, the work seeks to understand the role that skill plays in generating economic growth at the individual, firm, community and aggregate level. The globalization of markets and the attendant pressure this places on firms to compete has led to a homogenization of the organization of work and the technology of production. This fact has increased the demand for skill and made human capital relatively more important as an instrument of public policy. Macroeconomic theory in these areas is not well developed. For example, economic growth models have tended to ignore social capital entirely and have substituted measures of educational at-

¹ Retrospective surveys have the potential to yield the same information but rarely do because of problems in reporting anything but the most major life events. More ephemeral events, particularly socially loaded ones, tend to go unreported in such surveys.

tainment as a proxy for labour quality in models that explicitly incorporate human capital. Unfortunately, educational attainment has little to do, statistically speaking, with what individuals and communities can actually do i.e. they are a poor proxy for the human and social capital of either level. Even so human capital thus measured appears to have a greater impact on over rates of economic growth the previously thought. Similarly, microeconomic theory that seeks to explain the behaviour of firms has tended to treat technical change as the driving force, arguing that it is skill-biased. The availability of direct measures of skill suggest that human capital, particularly the skill level of the average worker, is far more important achieving high rates of technical innovation than previously thought pertains.

Second, the work attempts to shed light on the role that skill plays in creating social inequity in economic outcomes. Skill seems to play an important mediating role, offering economic opportunity to those with higher skill levels and constraining the labour market opportunity of those with poor skills. This strand includes how skill acts as a barrier to adult learning, particularly how it influences access to training in the workplace. Evidence in North America suggests that employer-allocated training is allocated to the most able, a fact that tend to amplify inequity in economic outcomes over time. Policy makers in Canada are fretting about the need for intervention to compensate for this “market failure”.

Third, the program is focused on understanding how markets for skill work, with a particular focus on how efficient labour markets are at matching skill supply and demand. As noted above, labour market economists have spent 30 years elaborating and seeking empirical confirmation of Becker’s human capital theory, in large part using educational attainment and labour market experience as proxies for actual skill. This has led to the formulation of increasingly complex theory – segmented labour markets, information signaling failures, credentialism and, worst, the presence of huge levels of systemic discrimination. Each of these theories has spawned a host of well meaning public policies, some on a massive scale. Unfortunately, much of the underlying theory collapses when confronted with objectively tested skill measures. These data suggest that labour markets, and more specifically employers, are able to identify and reward skill commensurate with the marginal productivity it imparts. While it is troubling that much public labour market policy in recent years has been driven by these empirical chimera, the new evidence transforms many divisive and politically charged policy issues into more tractable problems of educational access.

Fourth, the work seeks to understand the social distribution of opportunity to learn and barriers to participation in adult education and training. Such learning is a key source of additions to the stock of skill available to the economy and affords participants access to higher wages. It is clear, however, that many subpopulations face significant barriers to participation, a fact that constrains their labour market opportunity and even that of their children. Much public policy in OECD countries is devoted to increasing opportunity for disadvantaged groups but policy makers do not yet have a complete understanding of the role that public institutions could play in reducing inequity in participation and what instruments are most effective.

Fifth, effort is devoted to obtaining a better understanding processes of skill loss operating in OECD countries. Skill loss serves to deplete the stock of available skill and represent a potential loss of educational investment. Thus, understanding the social and economic forces that mediate these losses becomes a priority.

Sixth, little is known about the impact that informal and non-formal learning have on the available pool of skills. Evidence from the International Adult Literacy Survey (IALS) reveals that large numbers of adults with little formal education have acquired advanced levels of literacy skill. The diffusion of computer technology and Internet-enabled distance learning has greatly increased the availability and efficiency of informal and non-formal learning, with an unknown impact on the overall skill profile of the population. The scope and nature of public policy in the area of learning in the years to come will depend, on large measure, on the degree to which informal and non-formal learning are complements or substitutes for formal learning systems.

Seventh, education ministries in most countries are under pressure from parents and employers concerning the quantity and quality of their output and the relative efficiency with which it is produced. In the absence of a reliable external standard, such as afforded by the OECD PISA assessment of the skills of 15 year olds, this is difficult to address empirically.

Finally, much of the program is devoted to understanding how learning outcomes are distributed at each stage of the lifecycle and how social and economic outcomes at later ages and stages are conditioned by skill at earlier ages. This requirement has important implications for measurement and provides a useful context within

which to raise the issue of the need for international comparability. National statistical systems reveal what is but offer little explanatory power due to the limited heterogeneity of the observed populations. Where international statistical systems offer comparable information, they can provide insight into what might be. This includes determining what social and economic forces are responsible for the observed empirical reality and what economic and social consequences are associated with them. This latter information is crucial to the priority and nature of public policy formulated to redress any perceived injustices or market inefficiencies.

With this in mind we turn to a description of the data the information and data needs of each of the key users of official statistics that convey knowledge on skills and learning.

The general public in their roles as citizens

The general public requires information related to skills and learning in their role as citizens. While it is true that individuals learn in a wide variety of social contexts, a good deal of learning has been institutionalized in the form of publicly financed education. Along with health, public investment in education represents a large fraction of total public investment. Thus, at a minimum, citizens need information on the efficiency and effectiveness of these public institutions and their relationship to other learning contexts such as the family and the workplace.

For the most part, citizens do not wish to undertake primary data analysis themselves or even to read published material themselves. Rather, they are generally content to rely on secondary sources such as the media to provide them with the information that they require.

In most cases, they need only very highly abstracted information about the performance of Canada's learning systems. A growing fraction of citizens are, however, able and interested in having access to data tables, particularly tables that relate to their own locality or circumstances.

One major weakness in the current information and data delivery system is that little of the available tabular information is made freely available electronically to the general public. A related weakness is that current cost recovery policies render much of what tabular is available beyond the financial means of many.

Finally, with the exception of the Census of Population, sample sizes available from many data sources do not support the production of estimates for small areas by direct means.

The general public in their roles as parents

Education has become one of the key vectors of intergenerational knowledge transfer and one of the key mediating forces in the determination of economic and social success. As noted above publicly funded education, along with the family, play central roles in the provision of education and learning. Thus, parents have a self-interest in understanding how the education system is serving their children, what impact education will have on their children's lives and how they can influence their children's learning.

As above, parents need access to highly abstracted information on the overall performance of the system but they also need comparative information on achieved outcomes and what factors influences performance. Such information is crucial to judging risk and deciding where to invest scarce financial and other resources in their children's education.

The general public as learners

The rhetoric about lifelong learning suggests that adults are required to learn throughout their lives. Adult learners, however, face a host of competing demands for their time and resources. Thus, they need information to guide their decisions about the level and nature of their own investments in learning, particularly the costs associated with under-investment.

Researchers: Academic and otherwise

Researchers in all domains play a central role in designing statistical enquiries and in transforming the resulting data into information for other users. Researchers employ the tools and techniques of science to ensure that what is observed can be safely generalized.

Many of these researchers require only access to published reports.

A second group requires access to published reports and need to be able to specify tailored outputs for their private use.

Finally, a third group requires access to the primary data at the micro level in order to extract the maximum of information. The current state of theoretical development, measurement and analysis requires that such access be to unscreened records, a fact that poses a significant problem to the protection of individual confidentiality.

For the most part researchers possess the financial and technical resources to undertake their analyses, so that price is not a significant barrier to access.

Policy Makers, senior officials and politicians

This group can generally be thought of as those responsible for making public policy, for taking the decisions regarding expenditures from the public purse on behalf of the body politic. In theory this group requires objective information to reach optimal decisions about public investments. In reality, however, they rely on highly abstracted information produced by others, often employing information to rationalize rather than inform decisions. In many cases they are as much influenced by what they have personally read or heard in the media than by specific analyses prepared on their behalf. This fact reinforces the role that official statistics play in providing a rhetorical structure and commonly held fact base upon which public discourse rests.

Cost does not generally represent a barrier to access and use of available statistical sources but can often pose a serious barrier to the development of new primary data sources. Because they control the content and timing of much of the new data collections, this group can exert a profound influence over the content of the national statistical system.

The media

The media play a key role in transforming the output of national statistical systems into digestible chunks, alerting readers/viewers to the importance of particular facts and highlighting their implications for individual and public policy.

Ironically, many journalists are, for all practical purposes, innumerate, relying on others to provide them with reliable information. This fact poses a challenge for providers of statistical information – output must be highly abstracted and must be proof against misinterpretation by naïve users.

In general, data providers in the national statistical system provide output to the media free of charge so cost does not pose a barrier to access and use.

Administrators and advocates

This group of users requires statistical information to manage their affairs at the strategic and tactical level. As a group, they will use data at the finest level of detail available. For example, businesses require aggregate information on the state of the overall economy and on their own industry.

Similarly, managers of educational institutions require information on demographic trends, participation rates and economic and social outcomes associated with study in specific programs to inform their program offerings, including changes in the demand for specific skills emerging in the labour market.

Organizations with an advocacy role in the educational sector have the same needs as commercial enterprises but often lack the technical and financial resources to take full advantage of the available data. Cost does not generally represent a barrier to access and use of available information for the balance of the group of users.

4. The role of the national statistical office in meeting the needs of users

Canada has, by international standards, a highly centralized national statistical system in which the national statistical office, Statistic Canada, plays a central role in the collection, analysis and dissemination of statistical information on all aspects of Canadian society. The Statistics Act includes specific direction to collect, analyze and disseminate statistical information related to education and Statistics Canada devotes roughly 1% of its annual Parliamentary appropriation to things educational. The bureau's own program of statistical collection and output in the area of skills and learning benefits greatly from the investment of significant resources by Human

Resources Development Canada, and to a lesser extent, Heritage Canada, Indian Affairs and Northern Development and Citizenship and Immigration Canada.

Statistics Canada's role in the provision of statistical data and information is limited by four constraints.

First, it is constrained by the current state of theory and measurement technology to deliver data of adequate reliability.

Second, information derived from its collections must not be used for "administrative" purposes i.e. it must not be used to reach administrative determinations in respect of individuals except where expressly prescribed in law.

Thirdly, it is enjoined from identifying a person, business or other organization without the express written permission of said body.

Finally, its role is constrained by the amount of money available to be devoted to producing, analyzing and disseminating information related to skills and learning and the institutional structure devoted to its generation.

Collectively, these constraints serve to define and limit the products and services that Statistics Canada can offer which relate to skills and learning.

5. Characteristics of an ideal data system for skills and learning

Before reviewing the state of the current statistical system for skills and learning at the national level it is useful to reflect for a moment on the characteristics of an ideal system of official statistics in this domain. The authors have identified eight characteristics that would typify the ideal system and that would, by extension offer the maximum social value or return for a given level of investment of public resources. Each of these characteristics is described below:

Wide

Statistical systems related to skills and learning must be wide, i.e. they must be rich in data elements that provide a means to characterize the populations under study and which offer a mechanism to understand the causes and consequences of the phenomenon being observed. By definition they must be life long and life wide, covering all socially important transitions and life cycle phases, from birth through death.

Deep

Statistical systems related to skills and learning should be deep i.e. they should yield sufficiently large sample sizes to profile the characteristics of the overall population and key population sub-groups.

Individual

Such systems should use the individual as the key unit of observation and analysis. While useful for some purposes, aggregate estimates do not allow one to understand the social and economic processes effecting individuals.

Hierarchical

While learning is by definition an individual attribute, learning takes place in a variety of social and institutional contexts. Full understanding of the factors that influence the acquisition of skills and learning and its social distribution require that statistical systems provide explicit statistical linkages across the various contributing levels. For example, surveys of educational outcomes should ideally be sampled in such a way as to yield reliable estimates of the relationship between outcomes and characteristics of the individual, classroom, school, school board, and province. Although useful information can be obtained from statistical systems that do not respect all of these conditions the findings can prove sensitive to misattribution of cause.

Longitudinal

The data systems feeding the statistical system should be longitudinal, i.e. they should follow the same individuals through important transition points in their lives. Longitudinal data systems allow one to estimate con-

ditional probabilities at the individual rather than the group level, thereby getting much closer to underlying causal structures, state dependence and persistent of social pathologies..

Repeated

Repeated cohorts need to be studied longitudinally in order to disentangle period and cohort effects. The timing of the introduction of new cohorts must reflect the rate at which underlying social and economic processes are thought to driving change in key outcomes and by the ability of current measurement technology to detect socially meaningful change. Unlike physical systems, social systems evolve, sometimes quite rapidly. Thus, measurement must be frequent enough to detect socially important change.

Rooted

In order to be useful, statistical systems must be rooted in appropriate theory, but not wedded to a particular theory. Official statistics provide a rhetorical structure and shared information base from which public discussion and debate flows. It enables discussion of what should be by establishing the stylized facts about what is. Study designs must allow for multiple theories to be tested and underlying data must be made available to allow the broadly defined research community to replicate published results. In practice, this has meant adopting a systems approach as the primary organizing framework for measurement. The measurement framework adopted for skills and learning identifies four elements:

- Context (social, cultural, economic, environmental)
- Inputs (human and physical)
- Processes (instructional, accreditation, certification)
- Outcomes (cognitive, social, economic)

Each individual data system should be configured so as to shed light on causal pathways and mediating variables that serve to amplify or attenuate the probability of positive or negative outcomes. As noted above, longitudinal data systems (surveys and administrative sources) are ideally suited to delivering data of this type because one can directly observe the conditional state probabilities of important events.

Direct measures

Finally, statistical systems should include direct measures of key outcome variables rather than indirect proxies. In the area of skills and learning this implies the development and administration of measures that are psychometrically valid, reliable and comparable.

Accessible

In order to extract maximal information value from the primary data they themselves must be made accessible to researchers with the skill to analyze them. While not a characteristic of the data themselves this does imply a level of documentation or metadata sufficient to enable use and mechanisms that afford access to primary micro data in a way that protects the confidentiality of individuals, organizations and firms.

Integratable

Clearly statistical offices will never be able to field a single survey that provides the scope and depth of information implied in the forgoing attributes. Thus, care must be taken to provide sufficient common information to integrate information from multiple sources at the level of population subgroups. Although less powerful than full linkage at the individual level, such synthetic linkage can identify economically and socially important relationships that would otherwise remain undetected.

6. Characteristics of an ideal knowledge and information system on skills and learning

The idealized data system outlined above is, in fact, only one of the required ingredients to sustain an effective and efficient knowledge and information system on skills and learning. While no such system can prosper without sufficient inputs of primary data, success depends on several other inputs including:

Technical expertise and operational infrastructure to extract information from the primary data
Mechanisms to afford access to primary data, mechanisms that respect individual confidentiality
Dissemination mechanisms that render findings accessible to the broadest possible range of uses and users (where access is defined in terms of cost, technical expertise and technical infrastructure)
Sufficient funding to support collection, data processing, analysis and dissemination
Management structures and institutional linkages that foster cooperation and collaboration and that establish common priorities for collection.

Although this paper does not include any discussion of the adequacy of these other systems in the Canadian context suffice it to say that they are imperfect to the point of seriously impairing the social return on the public investment in information. The balance of this report is devoted to a consideration of the current state of the primary data systems related to skills and learning and their adequacy.

7. The current configuration of the system: key data systems

The following section outlines the coverage of the current statistical system for generating data on skills and learning. Basically, these data systems can be categorized as follows:

Sources of longitudinal micro data
Sources of cross-sectional micro data
Sources of aggregate data

This section provides capsule summaries for each of the key data systems that offer information on skills and learning.

Sources of longitudinal micro data

Canada currently has a reasonably well-developed program of longitudinal surveys and administrative sources that are capable of providing a wealth of data on learning inputs, processes and outcomes that cover all of the important life cycle stages/transition points. Most of these sources incorporate direct measures of cognitive outcomes built on a common theoretical framework.

The National Longitudinal Survey of Children and Youth (NLSCY)

The **NLSCY** is a long-term study of critical factors influencing child development and well-being. The NLSCY sampled a large number of households containing children aged 0 - 12 in 1994, children that have been re-interviewed on a biennial basis since the cohort was introduced. Although the sample sizes are not particularly large for any given age, the survey provides a remarkable range of variables related to the child, their families and their schools. These variables include a range of age appropriate measures of motor, social and cognitive development, measures that allow for an exploration of relative success and the duration of disadvantage.

The survey, administered to children, their parents, their teachers and their school administrators covers such subject areas as demographic information, socio-economic background, family functioning and parenting, child health and development, behaviour, relationships and interaction with the community and includes direct measures of children's skills. The fourth survey cycle was conducted in 2000-01 with a sample size of 40,000 children. For this cycle, the maximum age of participating children is 17. As participating children age, future cycles will explore issues related to school-work transitions, however, the sample size of any given age group is small. The panel is not expected to continue beyond age 25.

The Youth in Transition/OECD PISA Study

The Youth in transition/OECD PISA study of 2000 samples a large cohort of 15 year olds from schools, students that are administered a very reliable assessment of their literacy skill. The survey provides, among other things a wide range of variables that are expected to influence directly observed cognitive outcomes, including variables that reflect the structure of the secondary educational system. Students will be followed biennially to the age of roughly 25 to profile their labour market, educational and social trajectories and relate these to tested proficiency. Sample sizes are large enough to yield reliable estimates for both official languages within each province.

The **Youth in Transition Survey (YITS)** is a longitudinal survey that targets a specific population: those aged 15 and 18-20 in 2000. YITS is designed to track the dynamics of youth development over several years to provide policy relevant information on school to work transitions and on factors influencing pathways. Objectives include the provision of information to understand determinants of postsecondary entry and postsecondary retention, including education financing, as well as most labour-market activities. It will provide excellent information on early characteristics, particularly for the cohort aged 15. Moreover, data for the 15 year-old cohort will include a direct measure of student achievement provided through the integration of this survey with the **Organisation for the Economic Cooperation and Development (OECD) Programme for International Student Assessment (PISA)**. The longitudinal nature of the data will permit exploration of causal relationships among youth characteristics, decisions, activities, and outcomes. Each panel is not forecast to continue beyond age 29 and may end as early as age 25. For the cohort aged 15 in 2000, over 30,000 youth from 1,000 schools were surveyed. The sample size for the cohort aged 18-20 was 23,000

The Youth in Transition Survey – 18-20 Year Olds

In order to begin to provide more immediate information on the school-work transitions of young people, the Youth in Transition Survey included a second cohort in 2000, of 29,000 youth aged 18 to 20 years old. Transitions measured through YITS include all formal educational experiences and many labour-market experiences. YITS allows comparative analysis of early school leavers, those completing high school, and those going on to post-secondary education. The survey collected a wide range of information on attitudes, behaviors, academic achievement, labour market experiences, and the socio-demographic characteristics of youth, thus allowing identification of factors that are more likely to lead to successful transitions.

The National Graduates Survey (NGS)

The **National Graduates Survey (NGS)** is a longitudinal survey of graduates that provides a wide range of information on education and labour market outcomes and helps to describe the transition of graduates from the public postsecondary education system to the labour force at two and five years following graduation. The sample design affords precise national and provincial estimates of school-work transitions of graduates by field of study and level of certification—a level of detail available from no other data source. This design permits detailed interprovincial comparison of labour-market outcomes, postsecondary education financing and debt repayment of graduates for all levels of public PSE and major fields of study.

The sample for the NGS is drawn from a frame provided by public PSE institutions and is designed to be representative of all institution types, fields of study and levels of study. The NGS includes an oversample of Master's graduates and a census of Ph.D. graduates to allow for detailed analysis of highly skilled professionals. The sample design also allows comparisons both within and across cohorts. The cross-cohort comparisons are particularly important in times of rapid social and economic change. The design, including tracing of graduates to the US, enables analysis of interprovincial and international mobility of skilled professionals.

Its large sample provides reliable estimates at the provincial level, at the postsecondary education program level and at the detailed field of study level. It covers all age groups who graduated from a postsecondary education public institution. It provides a wide range of possible analysis such as the relationship between the graduates' fields of study and their occupations in the labour market two and five years after graduation. The NGS permits exploration postsecondary financing for the population that has attained a postsecondary qualification. The NGS has been conducted for the classes of 1980, 1986, 1990 and 1995. The next survey is proposed for 2002. The effective sample size is over 40,000 graduates.

The Enhanced Student Information System (ESIS)

Canada has collected individual student level data on postsecondary education participation since the early 1970's. These systems while advanced at the time, have remained static and no longer adequately reflect changes in postsecondary education, and the needs for a richer data to better understand the system. The Enhanced Student Information System (ESIS), with PRDG funding, has been developed to meet these new information needs. ESIS will provide a student level database, linked longitudinally and across institutions and levels of PSE. Its content is enriched to include program of study coded to a new North American classification system (CIP), identification of co-op programs, courses by subject area, student workloads, and mode of delivery (traditional or E-learning). The longitudinal nature of ESIS will enable the study of pathways within postsecondary education, which can be used to study system efficiency and other issues. ESIS may also be

linked to survey data thereby enriching survey databases with additional detailed information on academic activities and achievement that is typically burdensome and often difficult to collect. ESIS would also provide a sample frame for future postsecondary education surveys. The ESIS sample frame will be rich enough to provide the information needed to launch inquiries targeted to special sub-populations of interest, such as postsecondary leavers or participants in particular fields of study, and foreign students. ESIS is expected to be fully implemented in 2002.

The Survey of Labour and Income Dynamics (SLID)

The **Survey of Labour and Income Dynamics (SLID)** is a longitudinal survey designed to track the experiences of individuals in the labour market, their level and sources of income, and changes in family life over a six-year period. The first panel began in 1993 and ended in 1998, with labour and income information collected from about 31,000 people. A second panel, introduced in 1996, will end in 2001 and a third panel, introduced in 1999, will end in 2004. Information on educational attainment is explored in detail, however, information on access to and persistence within PSE is not available..

The Workplace and Employees Survey (WES)

The Workplace and Employees Survey (WES) is based upon a longitudinal sample of Canadian establishments from which a small sample of workers are also selected and interviewed. Although the sample size of workers selected from within each firm is insufficient to estimate firm effects directly the survey does allow for a direct analysis of the interaction between various indicators of firm success, such as profitability and income growth, the technology of production and the organization of work and the skills of the workers.

Sources of cross-sectional micro data

The Census of Population

The Census of Population provides demographic, social, economic and cultural information on the Canadian population, including landed immigrants, refugee claimants and persons in Canada on student visas or work permits. Education data are collected via the 20% sample, for the population aged 15 and over excluding institutional residents. While the information collected is rich and detailed, education measurement is focused on educational attainment. It is very difficult to lobby for inclusion of additional content within the Census, as respondent burden is closely monitored and the resulting Census questionnaires come under close public scrutiny.

The Census provides sample sizes large enough to yield reliable estimates for target groups such as visible minorities, religious groups, immigrants, and persons with disabilities, and for analysis at low geographic levels. There are an extensive number of characteristics available for cross-tabulation, including labour and income data, demographic variables, ethnic background, mother tongue, place of birth, and citizenship. A strength of the Census is its accuracy and historical consistency.

Education data collected include: the highest grade of secondary or elementary school attended; completed years of postsecondary education; enrolment in education in the previous nine months; all postsecondary certificates, diplomas or degrees ever obtained; and the major field of study of the highest postsecondary qualification.

The Labour Force Survey (LFS)

The main objective of the **Labour Force Survey (LFS)** is to determine the labour force status of Canadians aged 15 and older in all ten provinces on a monthly basis. The survey provides unemployment rates, among other key economic statistics. Education related information, however, is extremely limited and permits categorisation of Canadians by their highest level of attainment.

The Adult Education and Training Survey (AETS)

The Adult Education and Training Survey is conducted as a supplement to the Labour Force Survey. The survey measures participation by adults (aged 17 and over) in education and training activities, both in terms of incidence and intensity of training. AETS examines who provides training (education institutions, employers, etc), who pays for it (employer, individuals, government), and mode of delivery (distance education, traditional). Combined with the socio-economic variables of the Labour Force Survey, the survey yields rich informa-

tion on trends in participation, factors affecting participation in learning activities, and on barriers limiting access of Canadians to further education. The survey also informs on the motivations of participants and the supply characteristics of the adult education and training system.

The General Social Survey (GSS)

Several of the cycles of Canada's General Social Survey (GSS) has been devoted to survey topics that shed light on skills and learning in Canada, including work on time use, learning and use of information and communication technology.

The Post-secondary Education Participation Survey (PEPS)

The **Postsecondary Education Participation Survey (PEPS)** survey is proposed as an annual survey focusing on measurement of accessibility of postsecondary education and retention at the postsecondary level. PEPS will provide basic indicators of annual trends in secondary school completion; postsecondary accessibility, particularly by family socio-economic status; persistence at the postsecondary level; the role played by student loans and other financial aid; and adequacy of student financing. PEPS will not provide the kind of detailed information on life transitions that can be provided through a longitudinal framework. PEPS will allow monitoring of the impact of economic, social and government policy change and provide indication of areas requiring further investigation. The first administration of PEPS will be in the winter of 2002 with an expected sample size of 5,200 young adults between the ages of 18-24 (17-24 in Quebec).

The International Adult Literacy Survey (IALS) and the Adult Literacy and Life Skills Survey (ALL)

This international comparative survey program attempts to profile the skills of the entire adult populations in a valid, reliable and comparable way within and across countries, to understand the factors that underlie the observed skill profiles and to shed light on their social and economic import at the individual and aggregate level. This type of survey is the only way one can obtain unbiased estimates of the true skill supply, estimates that reflect differences in the quantity and quality of initial education, additions to the stock of skill embodied in formal and informal adult learning and due to immigration, as well as reductions in the supply of skill associated with emigration, death and processes of skill loss effecting adults. The next survey cycle, to be fielded in 2002, will carry direct assessments of prose literacy, document literacy, numeracy and problem solving, indirect measures of teamwork and information and communication technology, information on the determinants of skill, including indicators of skill use, as well as the economic, social and health outcomes that are associated with different levels of skill.

The Survey of Approaches to Educational Planning (SAEP)

SAEP is the first survey conducted by Statistics Canada to collect detailed information about how Canadians prepare for their children's post-secondary education. The survey's objective is to profile ways in which Canadians prepare their children for post-secondary studies including financial and non-financial preparation. The 1999 survey included information from a sample of 36,000 households with children aged 18 and younger. Financial preparation included whether savings have been set aside for PSE; awareness of PSE costs; types of savings vehicles; expectations regarding other means of financing PSE), while non-financial preparation included communicating PSE aspirations and expectations to their children; involvement in school; homework practices. Background information on both child and household characteristics, allows for analysis by age, gender, academic performance, parental education, and household income.

The Post-secondary Education Participation Survey (PEPS)

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8. Data gaps

The staff in the Center for Education Statistics, in consultation with the CMEC, federal policy departments and provincial ministries of education and labour, have identified a number of important data gaps and data weaknesses. There is a general paucity of data at the micro level that relates to inputs and processes in the formal education system, particularly at the primary and secondary level.

Transitions out of Secondary Education

Each year about 300,000 students graduate from the secondary education, and a further 10 % leave school prior to graduation. The Youth in Transition Survey has been designed to study the transitions youth face between secondary and postsecondary education and between education and work. A longitudinal secondary student information system, paralleling and linked to ESIS, will permit improved measurement and understanding of these transitions. It would serve as a frame for future YITS panels, and would permit targeting and oversampling of groups of particular policy interest, such as school leavers, and secondary graduates not pursuing postsecondary education. It would allow for improved analysis of variability in secondary completion and postsecondary transition level at a school level, which combined with information from school surveys will help to better understand the relationship between school factors and education outcomes.

An increasing number of jurisdictions are collecting student level information at least for the upper secondary level, and a well-designed data-model and systems for student level information have been developed within ESIS. Hence, by building on what already exists, and given the less complex nature of secondary education, a simplified version of ESIS for secondary students will be less expensive to develop, implement and maintain than ESIS.

Proposal

The proposal is to implement a simplified version of ESIS at the upper secondary level, in order to improve our understanding of the transitions of individuals from secondary education to postsecondary education and the labour force. Development costs will be small relative to those for ESIS. Nevertheless, the implementation will necessitate adjustments to the administrative systems housed in the jurisdictions, and needs to be phased over a 3-year period. Costs will be \$ 215,000 per year over the 3-year implementation period. Ongoing costs thereafter will be \$180,000 per year, which includes the conduct of analytical studies and dissemination.

Data on public expenditures per pupil at the school level, financial priorities and decision making

Currently, estimates of public expenditure per pupil are derived by dividing the total number of students in a particular province into the total expenditure on primary and/or secondary education.

Thus, no data is available that reflects true variation in financial resources devoted to participants in the primary and secondary educational systems below the provincial level.

Without variation in expenditure per pupil below the provincial level it is impossible to ascertain the degree to which financial resources influence the level or distribution of achievement.

Proposal

It is proposed that a series of case studies be undertaken to demonstrate the range of true per pupil costs and their influence on achievement. These case studies should also indicate the type of information that can be obtained from local administration (e.g., school boards and school districts). The cost of these case studies is estimated at approximately \$ 35,000/case. In order to be reliable, this will require approximately 10 cases, at a cost of \$175,000 per year for 2 years.

Data on school and teacher attributes

The literature from other countries and the limited amount of national comparative achievement data suggests that principal, teacher, classroom and school attributes have a significant impact on achievement, retention and successful completion of the secondary level.

Provincial education ministries and school boards currently collect a significant amount of information related to teachers and schools but coverage and concepts and definitions tend to be idiosyncratic.

National and international comparative surveys also collect a wide range of information related to the teachers and schools that fall into their samples, placing a serious response burden on the system, particularly in smaller jurisdictions.

The Canadian Education Statistics Council (CESC) has recommended that a co-ordinated survey on these important factors be put in place. The proposed system would implement a process to harmonise current provincial collections and to collect a modest amount of additional information on the characteristics of schools and teachers, information that could be shared with all legitimate users. Such a system would reduce the overall reporting burden on the system at the primary and secondary level and would provide many of the missing data elements on educational inputs and processes.

At an international level, OECD is taking a lead in efforts to harmonize school and teacher surveys, and to link them through a co-ordinated sampling strategy to studies of student achievement. The developments within Canada will tie into this international framework, hence the resulting information will be internationally comparable.

The school survey will collect information on a number of characteristics of the education systems, with a view to better understanding variations within and across provincial education systems. Moreover, through linkage to student outcome surveys, a better understanding of the impacts of these factors on learning outcomes. The school survey will collect information on: the distribution of decision-making responsibilities; the school environment; the social and economic characteristics of the student intake; tracking and streaming of students; services offered to a number of target groups, namely disabled, visible minorities, immigrants, religious groups and the aboriginal population; student monitoring and assessment; absenteeism and behavioral problems; issues of school leadership; and availability and use of information and communication technologies. The teacher survey will examine teacher qualifications in relation to subjects taught, mobility, and demographics, all of which bear on the important issue of teacher supply and demand. It will collect data on teacher moral, in-service training, time use, staff co-operation and collaboration, pedagogic approaches including approaches to homework, availability of equipment and resources.

Proposal

The proposal is for surveys of principals and of teachers developed as sample surveys and co-ordinated with other existing data collection mechanisms.

The cost of developing and implementing the school survey will be \$ 400,000 per year for 2 years. Thereafter, ongoing cost of the survey, including analysis and dissemination of results will be \$ 320,000 per year.

The cost of developing and implementing the Teacher sample survey will be \$400,000 per year for 2 years, with ongoing costs thereafter, including analysis and dissemination of \$ 400,000 per year.

Both these surveys will be developed with a GOL-compliant online response option.

A mechanism to equate provincial, national and international assessment results

Provincial level assessments of achievement tend to be tightly bound to notional curriculum, national assessments focus on curriculum common to all provinces whereas international assessments tend to employ skill-based models that are not explicitly bound to curriculum. The information value of these assessments could be greatly enhanced if a mechanism were put in place to understand how achievement on each of the provincial proficiency scales related to achievement on national and international scales in the same domain. Achievement results from different assessments can be equated in a scientifically satisfying way by having a relatively small number of students take both assessments. It is recommended that a program of linking studies be funded to establish these scale equivalencies.

Proposal

To be developed. Notionally about \$300,000 per year for 3 years to develop methodologies, and \$250,000 per year thereafter to compile provincial, national and international assessment results, and apply methodology to equate results.

Pre-school administrative data on enrolments, survey of providers

The National Children's Agenda states that we should strive to make our children: physically and emotionally healthy, safe and secure, successful at learning, and socially engaged and responsible.

Additionally, results from different studies indicate that pre-school programs and activities usually impact positively on the academic achievement of children at least in their early school years.

Yet the available information base on early education is limited and fragmented. There is a lack of comparable information needed to understand the types of programs available to Canadian children, the extent of participation, about quality of care, duration, educational content, and characteristics of instructors and care givers. In addition to better understanding the system, this information will complement data on participation in early childhood education programs in NLSCY, to better understand the relationship between such participation and outcomes later in schools and later in life.

Proposal

It is proposed to develop a survey. Initial steps will include preparation of a frame of universe of pre-school service providers, and developing and testing of survey content relating to typology of programs, quality of care, duration, ed. content, characteristics of instructor.

Costs will be \$325,000 per year for 2 years for frame and survey development and testing. Ongoing costs thereafter will be \$300,000 per year to carry out the survey, including analysis and dissemination.

Information technology in schools, its impact on student achievements, human resources and financial resources

Presently there is very limited information on the extent of use and the impact of this relatively new education factor. This begs the questions "What are the trends in the subjects taught using ICT? What are the characteristics of teachers using these resources? Will this impact on Canada's ability to maintain its leadership role in an information society. What is the impact of ICT on student achievement? Does ICT impact on the delivery of education? Will ICT breakdown geographical barriers within Canada and toward internationalisation of education?

Furthermore, information on the current inventory of hardware and software is becoming more readily available in numerous jurisdictions. SITES module 1 is a good benchmark upon which progression can be measured through time. However, there are no plans currently to gather these administrative data on a regular basis, possibly every 3 or 4 years. Along the same lines, information on the cost of maintaining an inventory of equipment and software, training teachers and ensuring the availability of informatics support personnel is very limited or simply non-existent. These costs continue to have a significant impact on education budgets and of course on funds previously available to other education factors.

Proposal

It is recommended that Canada participate to the Second Information Technology in Education Study Module 3. This participation will evaluate the computer skills of students and teachers. The cost of this participation is estimated at \$550,000.

The other topics related to this identified gap will be collected through the principal and teacher's survey recommended above.

OECD Programme for International Student Assessment (OECD PISA)

The Organization for Economic Cooperation and Development (OECD) Programme for International Student Assessment (PISA) is an international study of achievement of 15 year-olds in reading, mathematics and science. The purpose is to cross-nationally compare the level and distribution of achievement and to investigate how performance relates to individual, school and institutional factors.

The first cycle of PISA was administered in 2002 with reading as the major assessment domain. In Canada, this first cycle was integrated with the first cycle of the Youth in Transition Survey. The project was funded by the

Applied Research Branch of Human Resources Development Canada and was conducted through a partnership with the Council of Ministers of Education, Canada, and provincial ministries and departments of education.

Proposal: Provision has not yet been made to participate in the next two PISA assessments – neither the assessment of mathematics in 2003, nor the assessment of science in 2006. These studies provide highly desirable, high quality international benchmarks of proficiency and Statistics Canada would like to ensure participation at a level to support the generation of reliable proficiency estimates for each official language of instruction at the provincial level.

The PISA assessment in 2003 will require an investment of \$5.8 million, while the assessment in 2006, benefiting from efficiencies in development costs, will require \$5.4 million.

The Youth in Transition Survey (YITS) and OECD Programme for International Student Assessment (OECD PISA)

The Youth in Transition Survey (YITS) is a longitudinal survey designed to provide policy-relevant information about school-work transitions and factors influencing pathways among education, training and work. A cohort of youth aged 15 and of youth aged 18-20 were introduced in 2000.

Cycle 1 of YITS for the cohort aged 15 was integrated with the OECD PISA study. The YITS/OECD PISA study samples a large cohort of 15 year-olds from schools. Through the OECD PISA study, selected students are administered an assessment of competency in reading, science and mathematics. Background information is collected from students, parents and school administrators and the student participants. The survey provides, among other things, a wide range of variables that are expected to influence directly observed cognitive outcomes, including variables that reflect the structure of the secondary educational system. Youth will be interviewed every two years to profile their labour market, educational and social trajectories and to relate these to tested proficiency, personal, family, and school factors. Sample sizes are large enough to yield reliable estimates for both official languages within each province.

The sample design for the YITS cohort aged 18-20 is similar to that of the Labour Force Survey. This cohort provides more immediate information on secondary completion, postsecondary accessibility and retention, and the labour-market pathways of youth following secondary schooling. Sample sizes are large enough to yield reliable estimates at the provincial level.

Proposal: The cohorts introduced in 2000 will provide valuable information on the transitions of youth. By 2006, the initial cohort aged 15 will be aged 21. The PISA study in 2006, provides an opportunity to launch a new YITS cohort with the same benefits of integration as described for the 2000 cohort. This new cohort will illuminate the progress of youth under the economic and social environment of 2006 and will provide a means to evaluate the effectiveness of policies, programs and practices implemented to address problems in school-work transitions identified through the 2000 study.

Costs for collection years where two cohorts are interviewed exceed \$5.5 million.

Collection year 2005-06 includes only a follow-up of the cohort initiated at 15. Consequently, costs for that year are \$3.8 million. In years without collection, where activities include survey processing, analysis and development, costs exceed \$2 million.

Programme for International Student Assessment - Longitudinal Option (PISA-L)

PISA-L is a longitudinal option being proposed for PISA 2003 in response to the need for internationally comparable, policy-relevant data on young people's school-to-work transition. This need for longitudinal data has been endorsed by a number of sources including the OECD's recent comparative review Making Transitions Work (OECD, 2000). The basic idea is to take advantage of the high-quality and internationally comparable data to be collected by PISA in 2003 as the starting point for the first-ever set of internationally comparable national longitudinal studies. PISA-L offers a unique opportunity for policy-makers and researchers to build on the PISA 2003 data and establish links between: school, social background and individual effects, educational achievement, and the pathways followed by young people as they make their way to adulthood and the world of work.

PISA-L would directly contribute to research in the area of social cohesion and inclusion. The Policy Research Initiative indicates that we must address pressing issues that are vital to Canada's social fabric such as access to work, education and social inequalities. These are the very issues that PISA-L will allow researchers to examine as its focus is the transition of youth into adulthood and the world of work. PISA-L will contribute to identifying the characteristics of those included and excluded from successful transitions. The advantage of PISA-L is its international comparability. Global concerns are responsible for the resurgence of interest in social cohesion. Economic, technological and social developments brought about by globalisation have put pressure on social relations (Horizons, Feb.2001). It follows that our understanding of social inclusion can only benefit from looking beyond our own borders. The search for remedies to social exclusion is a global one. The PISA-L project would collect an on-going core of common data on key transition variables. This data would enable Canada to compare and contrast its patterns of education participation and school-to-work transition with those of other countries in a rigorous manner. Such comparisons will help Canada: benchmark its performance in youths' transitions against other countries, more clearly identify strengths and weaknesses, have a sounder knowledge base for identifying priority areas for improvement, broaden the debate about policy and practice, and learn best practices from other countries. It is only by comparing results from a number of countries that it is possible to identify which factors affecting young people's transition to work are nation-specific and which are more universal in nature. Participation in PISA-L allows Canada to benefit from international policy forums and collaborative research projects that address issues of social inclusion among youth.

Proposal: PISA-L will begin in 2003 with the addition of contact information and key variables to the PISA instrument. Core content to update educational and labour-market histories will be collected annually until the panel reaches their late 20s and there will be biennial collection of more detailed information to address transition issues.

Funding for development work in 2001-02 has been secured and discussions for funding development work in 2002-03 are underway. Funding is required for national implementation beginning in 2003. The advantage of PISA 2003 as the starting point for PISA-L is that the costs that would be incurred for a longitudinal survey are offset. Because Statistics Canada will lead the international Consortium responsible for PISA-L, a portion of national development costs is covered by international overheads (such as the creation of computer interviewing applications). Development costs for PISA-L are being shared internationally thus reducing the overall national costs that would be needed for such a project. Provincial buy-ins will be explored.

Costs for the initial year, 2003-04, are estimated at \$320,000. Annual collection costs for the national sample are estimated at \$500,000 with an additional \$250,000 required every second year to support the biennial collection of more detailed information.

Early Childhood Educational Preparation Study (ECEPS)

ECEPS is designed to provide provincially representative data for Canadian-born children on: 1. the education-related experiences of children prior to their entry into the formal/compulsory school system; 2. how various factors (including social background, early childhood care, etc.) contribute to a child's preparation for formal education; 3. children's transitions from being cared for exclusively by parents to participation in out-of-home programs and school; and 4. children's readiness to learn.

Prior to entering the formal/compulsory school system, most children experience a variety of care and pre-school educational situations. Linked with other distinct but overlapping factors (including parenting styles, health, and economic and social resources), these experiences and the advantages and disadvantages accruing to children who lived them, influence future educational success. The proposed ECEPS will contribute to research on social inclusion/exclusion of Canadian children by providing data on the health, early care and education of the nation's children. These data will enable research into the factors influencing every child's "...opportunities to develop his or her unique physical, emotional, intellectual, spiritual and creative potential." (PRI Horizons, February 2001) The ECEPS will allow for research into various forms of early childhood care and education alternatives, the factors parents consider when selecting among them and how children who have experienced the different alternatives fare once they have entered the formal school system. With the large sample size of the proposed ECEPS, researchers using data from the study will be able to explore differences that might exist across provinces, programs, outcomes and family characteristics.

Proposal: ECEPS is a longitudinal survey that will gather data annually, beginning when the children are aged between 22 and 34 months. Data collection will cease when the children have almost completed grade 1. Children selected to participate in the survey will be drawn from birth records of children born in Canada in 2002. The sample size will be large enough to allow for comparisons among various sub-groups of children, including groupings based on province of birth, socio-economic status of parents, and child-care arrangements. Each year, data will be gathered from parents/guardians, the children themselves, and, for those children who are not cared for exclusively by a parent or guardian, care providers/pre-school teachers.

The interview with the parent/guardian will collect information on child health and development, the home environment, factors influencing participation in, and choice of, non-parental care arrangements, as well as the neighbourhood. Children will participate in activities designed to measure their development in several domains (e.g., cognitive, social, emotional, and physical). With the permission of the parents, the individuals and organizations who provide regular care for a child will be interviewed/surveyed. These care givers/pre-school teachers will provide data on the child's out-of-home activities and experiences. In order to increase understanding of child care and pre-school arrangements, observation assessments of a selected number of care situations will be undertaken.

Development activities, including consultation, preparation of survey conceptual framework, sample development, questionnaire development, development of documentation, and respondent relations activities will require an initial investment of \$500,000 in 2002-03 and \$2 million in 2003-04. Data collection will begin in 2004-05 and will require an annual investment of \$7 million for six years.

The Longitudinal Study of Schools and Students (LSSS)

LSSS has two purposes: 1. to respond to the need for data on the elementary school system in Canada and 2. to study the impact of a wide range of factors, including social background, community, schools, and teachers, on the achievement and educational outcomes of Canadian children. Currently, no program at Statistics Canada has the design necessary to measure the influence of schools and teaching practices on the outcomes of Canadian children.

LSSS contributes to research on the social inclusion/exclusion of Canadian children by providing indicators of well-being across a variety of dimensions but most particularly, in our education systems. By virtue of design, the study will allow researchers to look at disadvantage, equality of educational access and opportunity, and life chances beginning at a very young age. Fundamental to child development is the educational experience and the outcomes associated with that experience. In a feature article of a recent issue of the PRI's Horizons (Feb.2001) the impact of neighbourhoods on inclusion is discussed. The message is clear: growing up in a distressed neighbourhood where, among other factors, over-stretched and under-resourced schools prevail, increases the vulnerability of children to exclusion. The LSSS design will allow for analysis among subgroups of Canadian children and will incorporate indicators of family, social and cultural background and community.

Proposal: LSSS is a longitudinal survey with two distinct sampling units: schools and young children. The two-stage design first samples public and private elementary schools to fill current data gaps in the areas of: finances, resource allocation, school environment and climate, class sizes and composition. Schools are followed annually with plans for periodic sample refreshment. The school data will provide representative information that will allow for profiling the elementary school system in Canada. The second sampling stage is that of 6 year-old students. From each school a sample of 6 year-old children, who will most likely be attending kindergarten or grade 1, is drawn and followed annually until age 19, which represents the end of secondary schooling and the transition to postsecondary or the labour-market. The advantage of the proposed study design is that data from schools and students can be linked. Sample sizes will be large enough to assess school effects on educational achievement.

Furthermore, the sampling design will allow comparison of the educational experiences and outcomes of three groups of young children: Canadian-born, immigrant, and aboriginal. As a measure of "stock", children will be asked to complete a cognitive assessment at the first data collection. Information on social background and prior care arrangements will be gathered from parents. Data gathered from "the main or most knowledgeable" teacher will provide further indicators of children's experiences in the classroom and educational outcomes. Incorporated in the study design will be a focus on teaching practices and classroom dynamics to be gathered using a variety of alternative techniques, such as direct observation or a video study. To obtain achievement data

or outcomes, results from provincial tests and any other prescribed tests will be gathered. Aggregate community indicators from the Census will be used to assess community effects.

Development activities including consultation, preparation of the survey conceptual framework, methodology and sample development (including sample frame preparation), and questionnaire development and testing (including development of alternative techniques and a pilot test), will require an investment of \$5.5 million over fiscal years 2001-02 to 2004-05. Data collection will require an annual investment of \$7.5 million from 2005-06 forward.

National Graduates Survey (NGS)

The NGS program is an integral component of the provincial and federal government's education information system. The sample design affords precise national and provincial estimates of school-work transitions of graduates by field of study and level of certification—a level of detail available from no other data source. The NGS includes an oversample of Master's graduates and a census of Phd graduates to allow for detailed analysis of highly skilled professionals. The sample design allows comparisons both within and across cohorts. The design, including tracing of graduates to the US and other foreign destinations, also enables analysis of inter-provincial and international mobility of skilled professionals.

The NGS is designed to meet the following objectives:

- To study the short- to medium-term labour-market experiences of graduates, for counselling on careers and post-secondary education course selection;
- To support occupational supply and demand projection models and studies of supply-demand imbalances in the labour market, by field of study;
- To understand labour market experiences of employment equity groups (women, aboriginal peoples, persons with disabilities and visible minorities) to formulate job equity policies;
- To explore the relationship between education, training and labour market experiences, and the exposure of graduates to additional job-related training;
- To track school-work transitions and return to human capital; and
- To study postsecondary education financing.

In the knowledge based economy and society, the capacity to learn and to accumulate skills and competencies is becoming an imperative for individuals to access employment and to adapt to changing circumstances and, for an economy, to innovate and achieve growth (Horizons, April 2000). Importantly, access to human capital development is also a key component of social inclusion and participation (Horizons, 2001). Thus, to achieve both the goals of social inclusion and growth and innovation, the policy challenge is to maximise development of a highly skilled and adaptable workforce. The National Graduate's Survey provides the only means to study school-work transitions of highly qualified graduates by detailed level of education and field of specialisation.

"The migration of skilled, high-income personnel is an exceptionally important issue, not only because Canada may be losing too many of its "best and brightest", but also because the dynamic may put pressure on the government to reduce the higher taxes that are able to fund Canada's more generous social programs." (George Hoberg, Canadian Public Policy, August 2000). The importance of monitoring the "brain-drain" phenomena is expected to increase with the proliferation of trade liberalisation agreements. At the same time, there is retention of a portion of foreign students in Canada after graduation. The NGS program enables exploration of graduate retention and mobility.

Proposal: The NGS survey program includes the classes of 1982, 1986, 1990, 1995 and 2000. The project would be to continue the National Graduates survey program by collecting information on the class of 2000 at five years after graduation, launching a new cohort of graduates in 2005, and enhancing the NGS design to include a follow-up interview at nine years after graduation.

The next waves of NGS could include the following enhancements:

- Expand the NGS program to include a 9-year follow-up, to enhance understanding of longer-term labour-market outcomes, patterns of life-long learning and skill maintenance, and the return to investment in education. (*1995, 2000, and 2005 cohorts*)

- Include a full labour-market history of graduates to facilitate analysis of occurrence and timing of spells of employment and unemployment. *(2000, and 2005 cohorts)*
- Expand the in-scope sample to include foreign students and Canadian students living in the US and other foreign countries to further potential to explore mobility and propensity of highly qualified people to remain in Canada. *(2000, and 2005 cohorts)*
- Profit from the new standard classification system for institutional programs (CIP) to both ensure sample selection is representative of emerging fields and to facilitate analysis of emerging fields. *(2000, and 2005 cohorts)*
- Enhance content to facilitate understanding of delivery of e-learning. *(2000, and 2005 cohorts)*
- Profit from the ESIS student information system to track subsequent education *(1995, 2000 and 2005 cohorts)*
- Profit from the expansion of ESIS to private postsecondary institutions by including graduates of private programs in the sample design. *(2005 cohort)*

NGS is currently funded by the Policy Research Initiative GAPS II allocation for the study of postsecondary transitions. Annual requirements from 2003-04 onward for the proposed enhanced NGS range between \$1.2 million (development, processing and analysis) and \$1.9 million (data collection).

Postsecondary Education Participation Survey (PEPS)

PEPS is proposed as an annual survey focusing on measurement of accessibility of postsecondary education and retention at the postsecondary level. PEPS would track the following:

- Potential to access: secondary school withdrawal/non-completion;
- Access to postsecondary education;
- Impact of student loans on PSE accessibility;
- Impact of parental socio-economic status on PSE accessibility;
- Characteristics of postsecondary programs pursued;
- Postsecondary withdrawal/non-completion;
- Impact of student debt on persistence;
- Mechanisms through which students finance PSE;
- Accessibility and use of student loans;
- Awareness of student loans among those not participating in PSE;
- Adequacy of student financing and the cost of education for students through examination of tuition fees, other education costs and major monthly expenses of current students; and
- Socio-demographic characteristics of PSE participants and non-participants.

PEPS is part of the network of Statistics Canada surveys that explore postsecondary education participation. With an annual PEPS, we will be able to collect information on a broader population than that included in Statistics Canada's longitudinal surveys of youth or postsecondary graduates. The PEPS survey will not, however, be able to provide the kind of detailed information on life transitions that can be provided through a longitudinal framework. PEPS would provide basic indicators of annual trends in secondary school completion; postsecondary accessibility, particularly by family socio-economic status; persistence at the postsecondary level; the role played by student loans and other financial aid; and the adequacy of student financing. This annual data will allow monitoring of the impact of economic, social and government policy change and provide indication of areas requiring further investigation.

The accountability framework developed by the Harmonisation Group of the Canada Student Loans Program identified four key indicators requiring annual monitoring— access to postsecondary education; persistence/completion at the postsecondary level; student indebtedness and capacity to pay; and loan default/delinquency rates. As a result, annual data provided by PEPS would support the implementation of the accountability framework would provide data for policy and provide accountability to the Canadian public.

The Council of Ministers of Education Postsecondary Accessibility Project has also identified indicators of access and retention and the determination of factors influencing access and retention, particularly financial barriers, as existing ministerial information needs and a focus of on-going investigation. Recently, the Canadian Millennium Scholarship Foundation identified issues of postsecondary accessibility and postsecondary financing as key areas requiring further research. The foundation is also interested in identifying determinants of access and retention and major sources of student financing, examining how well informed youth are about postsecondary financing, and determining to what extent the overall cost of postsecondary education is a real or perceived barrier to access. The 1999 report of the Canadian Education Statistics Council Pan Canadian Education Indicators Project also identified postsecondary access, retention and financing as important components of the indicator set that require development.

PEPS would directly contribute to research in the area of social cohesion and inclusion. The Policy Research Initiative indicates that we must address pressing issues that are vital to Canada's social fabric such as access to work, education and social inequalities. A substantial body of evidence suggests that participation in postsecondary education confers significant benefits to those who gain access. Given that the decision to pursue postsecondary studies is a defining moment for many individuals and has many future life-cycle implications, it is important that equality of opportunity exists across social classes. Governments have an interest in ensuring that access to the postsecondary education system is equitable and that financial barriers associated with the cost of attendance do not unduly influence it. Without PEPS, there is no mechanism for monitoring PSE access and persistence or for understanding the impact of economic pressures and policy and program changes on access and persistence.

Proposal: PEPS is being developed by Statistics Canada with the support of the Privy Council Office Policy Research Committee GAPS II initiative for the measurement of postsecondary transitions and the Harmonisation Group of the Canada Student Loans Program of Human Resources Development Canada (HRDC). PEPS is a supplement to the Labour-Force Survey and thus will be conducted using computer-assisted telephone interviewing. The target population is restricted to those most likely to be considering participation in or withdrawal from postsecondary education. This includes young adults between the ages of 18-24 (17-24 in Quebec).

PEPS current funding is sufficient for the initial year of data collection only. An annual PEPS would require an investment of \$960,000 per year, of which \$100,000 would continue to be provided by HRDC.

Enhancement of education concepts within existing surveys

The network of surveys providing information to inform discussion of policy issues in the field of education extends to those developed outside of the Centre for Education Statistics. Examples of survey vehicles that shed light on the relationship between educational attainment, employment, training and life-long learning include the Labour Force Survey, the Survey of Labour and Income Dynamics, the General Social Survey and the Workplace and Employee Survey. The Aboriginal Peoples Survey and the Survey of Persons with Activity Limitations help us to understand accessibility of educational opportunities and the relationship between attainment and employment among key populations. The Survey of Household Spending can help us to understand how Canadian families allocate resources toward educational products and services and to understand how families support their children's education.

The content of these surveys has been developed to meet the needs of the stakeholders supporting these undertakings. Thus, measurement of education-related concepts have evolved independently and differently and, in certain aspects, all of these surveys contain impediments to the full exploration of education policy issues. A substantial investment of public resources has already been made in these surveys and all have established funding streams. Thus, a relatively small investment in enhancements to the education-related concepts measured within these surveys represents a tremendous opportunity for the future exploration of information gaps.

Furthermore, longitudinal studies, such as the Survey of Labour and Income Dynamics and the proposed longitudinal children's module of the Aboriginal Peoples Survey would be greatly enhanced by the addition of direct measures of cognitive development and skill. These surveys contain information about the social and educational background of survey participants, as well as their current occupational or educational statuses. Allowance can therefore be made for relevant aspects of background when investigating the impact of policy or practice on outcomes. Key skills, such as literacy and numeracy, have a critical influence on later educational

and labour-market outcomes. Analysis of data from existing survey vehicles, such as the International Adult Literacy and Life-skills Survey and the Longitudinal Survey of Australian Youth, have shown that without the inclusion of direct measures of skill, analyses of the influence of background factors on educational and labour-market outcomes can be misleading.

The Workplace and Employee Survey (WES) affords access to representative samples of workers drawn from a representative samples of firms. WES would serve as an ideal vehicle for launching a study aimed at understanding the role that skills, such as literacy, play in determining the success of firms and, conversely, how firms vary in their demand for and utilization of skill conditioned on their technology of production and corporate culture. This could be achieved by administering a skill assessment to a sub-sample of WES respondents.

Proposal: Establish funding for the involvement of education analysts in the content development of key Statistics Canada surveys taking place outside of the Centre for Education Statistics. This activity would require the investment of \$100,000 in 2002-03 followed by an annual maintenance investment of \$50,000.

Establish funding to support the expansion of education content within existing surveys, including the addition of skill assessments, where appropriate and desirable. This activity would include investment in feasibility studies for each survey under consideration and would require an investment of an additional \$500,000 per year, to be divided across survey vehicles.

A program to explore the variability of educational outcomes at the community level

A good deal of recent research suggests that much of the variation in educational outcomes can be related to community level characteristics. This finding has important implications for public policy, particularly in the area of funding allocation formulae. A program of analysis of student achievement outcomes linked to community level data derived from the Census and other sources would contribute greatly to our understanding of the variability of educational outcomes at the community level and the social and economic processes that underlie such variation.

Participation in the OECD/PISA Survey in every cycle

As noted above, Canada is currently participating in the 2000 cycle of the OECD's PISA assessment of literacy skill. Provision has not yet been made to participate in the next two PISA assessments – neither the assessment of mathematics in 2003 nor the assessment of science in 2006. These studies provide highly desirable high quality international benchmarks of proficiency and Statistics Canada would like to ensure participation at a level to support the generation of reliable proficiency estimates for each official language of instruction at the provincial level.

A Skill Assessment as a supplement to the WES survey

As noted above WES is unique in that it affords access to representative samples of workers drawn from representative samples of firms. Such a vehicle would serve as an ideal vehicle for launching a study aimed at understanding the role that literacy skill plays in the determining the success of firms and, conversely, how firms vary in their demand for and utilization of skill conditioned on their technology of production and corporate culture. This could be achieved by administering a variant of the IALS instruments to a sub-sample of WES respondents.

Introduction of a new NLSCY cohort

To date only a single NLSCY cohort has been fielded. It would be useful to field a second cohort to detect period effects and to place an upper bound on measurement errors, particularly those associated with estimating cross-sectional distributions from a depleted longitudinal cohort.

Introduction of focused NLSCY cohorts for low income families, immigrants and aboriginal Canadians

In its original conception, NLSCY was meant to provide a national benchmark against which the performance of selected subpopulations and provinces could be compared. Analysis has revealed that three particular subpopulations are at particular risk of suffering problems related to skill acquisition and learning: low income families, immigrants and aboriginal Canadians. These deficits are sufficiently large to warrant introduction of focused NLSCY cohorts for each within the context of the new NLSCY cohort.

9. Conclusions and Recommendations

It is clear from the foregoing discussion that much remains for Canada to do if the goal is a integrated system of official statistics related to skills and learning, a system that is both lifelong and life wide. Yet much of the system that is currently in place or that are coming on line meet the criteria set out for the ideal system.

Access to funding is the first and most obvious thing that will limit the pace at which the data gaps can be filled.

Perhaps the greatest challenges with respect to measuring life long learning lie in the measurement itself. Despite a long history of assessment in schools, the direct assessment of skill levels in other life domains is at a nascent stage of development. The suggested improvements set out below would greatly enhance the quality and utility of the next generation of assessments. In fact, much of what is suggested has been incorporated into the design of the planned Adult Literacy and Life Skills Survey (ALL) being fielded jointly by Statistics Canada and the US National Center for Education Statistics in collaboration with the OECD.

Four other elements are crucial to making progress.

First, serious theoretical development needs to be undertaken to inform the design of studies seeking to objectively measure skills. In the absence of such theory measurement will be unreliable both within and between countries. The absence of firm theoretical roots also risks over-interpretation of what can be currently measured at the expense of less tractable skill domains.

Second, mechanisms need to put in place to finance the development and validation of instrumentation that reflects the theory to an acceptable degree. The resource implications of such research and development are well beyond the financial means of individual countries, suggesting a role for multilateral organizations.

Third, technical advances are needed in two particular areas – in the statistical techniques for summarizing proficiency and for compensating for bias in the estimation of proficiency.

Finally, mechanisms must be put in place to enable the conduct of international comparative work in the area of assessing key aspects of lifelong learning. It is not clear that the approach of the IEA, Statistics Canada nor the OECD represent an optimal approach to the conception, management and dissemination of information on skill and learning.

LIFELONG LEARNING IN ITALY: CURRENT STATISTICAL SITUATION AND POSSIBLE DEVELOPMENTS¹

MICALI Aurea

ISTAT

Viale Liegi 13

Rome, Italy

Micali@istat.it

Summary

Italy's tardiness in easing the strictures of its educational system, together with a production system with little interest in education and training, is reflected in the scarcity of available statistical information on lifelong learning.

The speedy changes that are taking place, in both the educational and economic spheres, nevertheless make a better understanding of the phenomenon a matter of urgency. In this context, official statistics have to deal with two problems. In the case of lifelong learning in terms of supply, the problem is how to investigate a phenomenon whose scope is poorly understood by those who are supposed to describe it. On the demand side, the problem is how to make available information about new (and old) education and training requirements stemming from ICT.

1. Situation in Italy

Italy does not have any information on lifelong learning of its own. Almost all the information that is available on the subject in fact comes from internationally harmonised surveys.

The reasons for this statistical "oversight" can be found in the specific circumstances of the Italian education system until now and in the way in which it has interacted with the labour market. Some data will serve to explain these features.

Among the developed nations, Italy has one of the lowest rates of school enrolment. This fact can be seen by looking at the figures for the percentage of the population with at least upper secondary schooling (Chart 1). In the 35-44 age group the percentage of the population that has completed ISCED level 3 is 50%, one of the lowest figures among the countries reviewed.

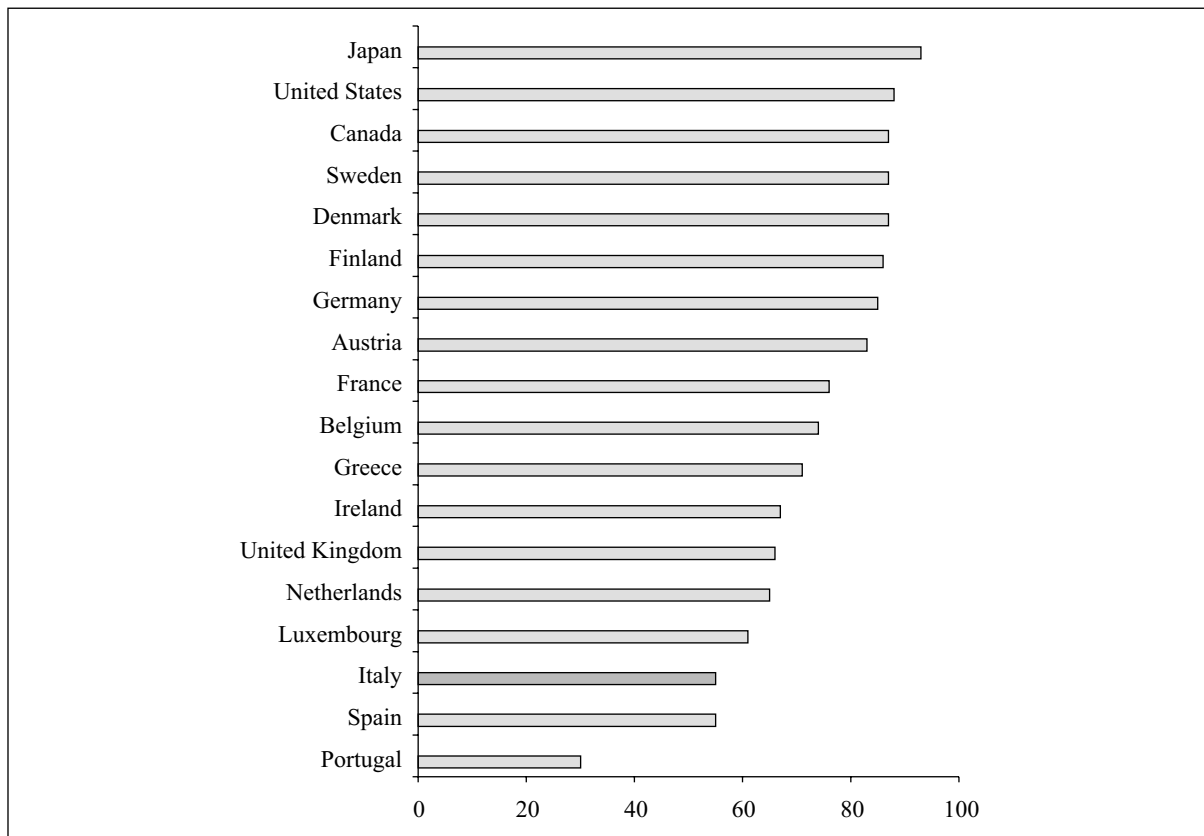
All this has a considerable impact on lifelong learning. It is a well known fact, internationally as well, that there is a definite correlation between the level of schooling that a person has completed and his "likelihood" of receiving further training in the future. The readiness of firms to invest in training is directly related to the initial educational level of their employees.

The percentage of workers aged 25-64 receiving training (in the month preceding the survey) is 6.8% among university graduates, 5.4% for those who have completed ISCED level 3A and only 0.6% for those who schooling did not go beyond ISCED level 1 (Chart 2)².

¹ Aurea Micali, ISTAT

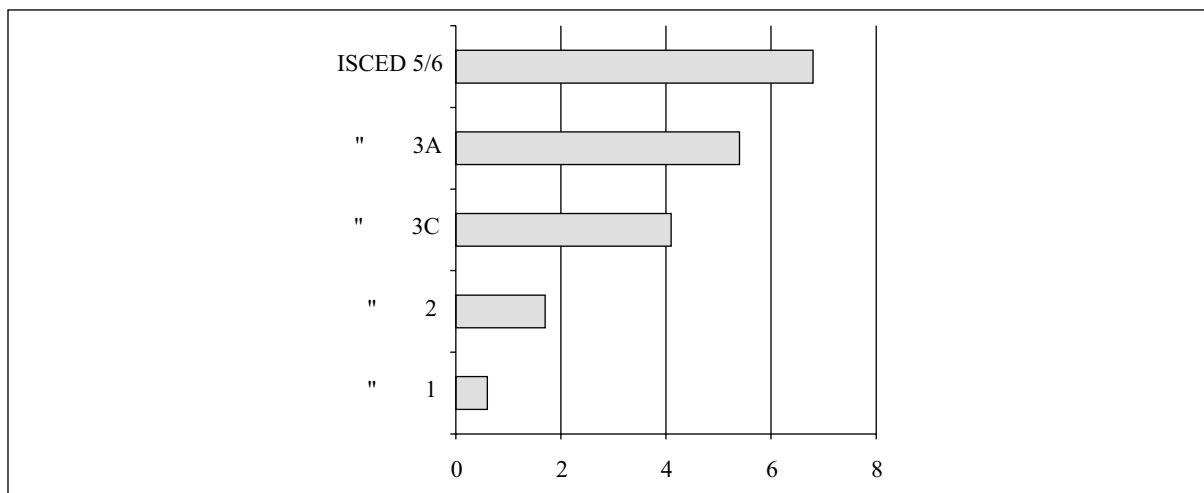
² The correlation between education and CET to some extent reflects the correlation between age and education. While CET primarily involves those whose initial level of education is higher, it also tends to involve young people (see Chart 4 below) who are better educated on average than the rest of the population.

Chart 1. Percentage of the population (25-34 years old) that has attained at least upper secondary education (1999).



Source: OECD

Chart 2. Percentage of employees in educational or vocational programmes by level of education.



Source: LFS 2000

Italy is thus one of the countries in Europe with the lowest percentage of the population in training. In 1997 the figure for those in the 35-59 age group was only 3.4%, well below the figures for other countries (see Table 1).

Table 1 - Population, 35 to 59 years, in education

	MW	M	W
Sweden	24.6	21.1	28.1
United Kingdom	18.3	15.1	21.4
Denmark	17.3	14.2	20.5
Finland	17.1	14.8	19.4
Netherlands	10.8	11.1	10.5
EU-15⁽¹⁾	6.5	5.9	7.1
Belgium	6.1	7.1	5.1
Austria ⁽²⁾	5.6	6.3	4.8
Luxembourg	4.4	5.2	3.5
Ireland ⁽²⁾	3.9	3.7	4.1
EUR-11⁽³⁾	3.6	3.7	3.6
Germany	3.4	3.4	3.4
Italy	3.4	3.7	3.1
Spain	2.3	1.8	2.7
France	1.4	1.2	1.5
Portugal	1.4	1.3	1.5
Greece ⁽⁴⁾	0.3	0.3	0.4

(1) Greece1998, Ireland1997, Austria1997

(2) 1997.

(3) Ireland1997, Austria1997

(4) 1998

Source: Eurostat

The Continuing Vocational Training Survey of undertakings in 1994 also reveals how little such training features among firms in Italy, compared with the rest of Europe³. Outlined below are only a few of the features that best differentiate Italy from its European neighbours.

Table 2 – Percentage of enterprises providing training programmes by country - 1993

Denmark	87
Germany	85
United Kingdom	82
Ireland	77
France	62
Luxembourg	60
Netherlands	56
Belgium	46
Spain	27
Greece	16
Italy	15
Portugal	13
EU 12	57

Source: Eurostat CVTS

The percentage of firms in Italy providing training is only 15%, compared with a European average of 57.4% (Table 2). Portugal is the only Member State where the percentage of firms providing training for employees is lower than in Italy. In countries such as Denmark and Germany, on the other hand, most firms - even smaller undertakings - are involved in such activities. The differences do not depend solely on differences of structure and size in the various production systems.

³ It must be remembered that the survey covered only firms with more than 10 employees and did not include the agricultural and general government sectors.

The limited “training awareness” of firms in Italy is also borne out when they are broken down by sector of activity or size of undertaking.

Source: Eurostat CUTS

If we look only at training involving courses and traineeships - i.e. excluding all initial training courses, such as those in Italy for employees who are hired with initial training specifically included in their contract - the comparison with other countries is even more alarming. The percentage of firms providing such training in Italy is 9.4%, compared with a European average of 42.7%.

Training is also provided predominantly by large undertakings. The percentage of employees involved in training increases with the size of the firm.

Another aspect is that the typical size of firms in Italy does not help the country when it comes to providing continuing vocational training. The fact is that Italy among the Member States has the largest proportion of firms in the smaller size classes (Table 3).

Table 3 – Percentage of employees by firm size - 1997

	1-9
Italy (1996)	34.8
Spain	28.6
Belgium	24.8
Germany	24.0
France (1996)	22.9
Denmark (1996)	22.6
Sweden (1996)	21.7
United Kingdom	16.9

Source: Eurostat

It is interesting to note that the most common excuse (71.3%) put forward by employers for the lack of training is that they consider their employees’ skills to be adequate for the tasks they perform. This is the reason most often cited among small undertakings (10-19 employees), while larger undertakings also mention lack of resources.

The lack of training in the Italian production system stems, partially at least, from the economic sectors in which production is concentrated⁴. Production is concentrated in traditional low-tech manufacturing sectors or in sectors with large economies of scale, and also in less developed services where there is little R&D innovation and where competition is based primarily on costs rather than on new products or processes. The relative lack of training activities is thus consistent with the poor dissemination of technological innovation in the economic system as a whole. Many Italian firms, especially small and medium-sized undertakings, are not involved in training and have no desire to be so, not for lack of funds but because their particular place in the competitive scheme - where they obviously have a niche role or operate at the lower end of the market - means that they do not see any reason to get involved in training. From other sources - survey of technological innovation - it does not appear that firms are hampered when it comes to introducing innovations by the lack of skills and qualifications offered by the labour market.

More generally, it has to be pointed out that the production system in Italy apparently finds it hard to accommodate those with better qualifications. University graduates, for example, do not always manage to find a job matching their level of education. The percentage of graduates with an ISCED 5/6 qualification who are not employed in type 1 or 2 ISCO 88 professions is about 30% among those aged 25-64, and the figure rises to 52.6% in the case of graduates with a job three years after leaving university (Table 4).

⁴ Another point to be noted is that the education level of entrepreneurs in Italy is somewhat low; this fact can in turn impinge on their ability to introduce or promote change.

Table 4 - Graduates at ISCED level 5/6 by occupation (25-64 years old)

ISCO 88	MW	M	W
1-2	70.2	73.3	66.1
Others	29.8	26.7	33.9
Total	100.0	100.0	100.0

Source: LFS 1999

2. Changing situation

Although this is the basic position, many things are changing in Italy as elsewhere as a result of the impact of ICT on production, greater international competition in the labour and training market and the increased flexibility that workers now need to demonstrate. Training is thus acquiring an increasingly important role: on the supply side it is so that workers can gain, retain or re-enter employment, and on the demand side it is so that firms can maintain productivity and remain competitive.

As for the education system, after a long period of relative stability it is now undergoing rapid change, especially the formal education system. Universities have been reformed and given greater autonomy on finances and teaching, and new courses of varying levels and lengths have been introduced, whereas in the past most students took only lengthy undergraduate courses. Recent years have also seen the introduction of non-university technical vocational training courses at ISCED level 6, which have helped to widen the range of higher education.

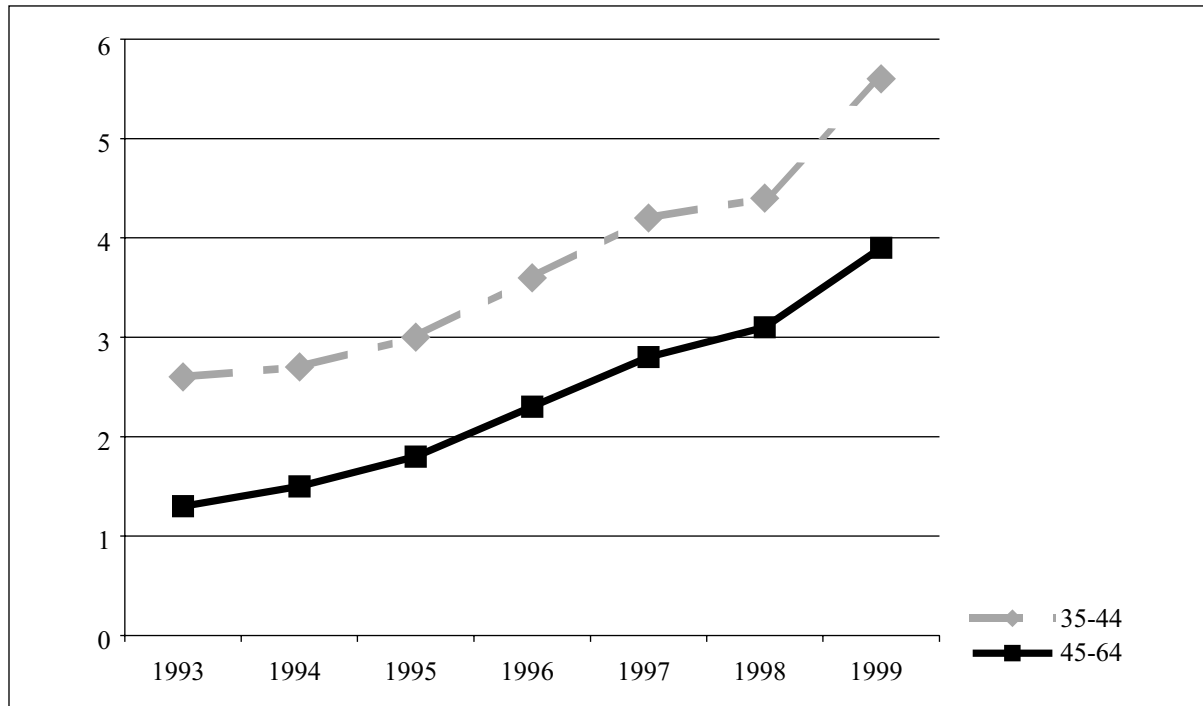
As for schools, the main innovations concern the greater autonomy on teaching matters for individual establishments, the raising of the school-leaving age from 14 to 15 and the introduction of a training requirement for 15-to-18-year-olds that can be satisfied either at school, in extracurricular vocational training or as an apprentice.

This last feature is specially significant for Italy. In the past, there was no provision for pupils to move from vocational training, even if officially organised, to the school system. In fact, the school system did not recognise qualifications acquired as a result of extracurricular training, even if officially organised. Nowadays the formal education system also takes account of skills acquired via private non-school schemes. This is a real innovation in a country that gives legal recognition to qualifications that have been gained (for example, they are required to take part in particular competitive civil service examinations).

Although the reforms affecting school and university are still very recent and have not yet produced an effect, the data reveal tremendous changes in both areas.

In the case of continuing education, it must be said that the percentage of employees involved in training has soared in recent years, one reason being new employment agreements between workers and management. The percentage of those aged 35-44 attending training courses (in both the formal and the non-formal systems) more than doubled between 1993 and 1999, rising from 2.6% to 5.6% (Chart 4).

Chart 4. Percentage of employees participating in education or vocational programmes by age group (1993-1999)



Source: LFS

Initial training will now be considered. School attendance, in spite of the rigid and somewhat demanding nature of courses in Italy (where almost all ISCED 3 courses last five years), has increased considerably in recent years, with the result that the percentage of those completing education at ISCED 3/A level is 57.8% among those aged 20-24, compared with 32% for those in the 30-34 age group (Table 5).

Table 5 - Percentage of the population that has attained ISCED level 3 by age group and gender - 1999

	MW	M	W
20-24			
ISCED 3A	57.8	54.0	61.7
ISCED 3C	7.2	7.7	6.6
30-34			
ISCED 3A	32.0	31.3	32.6
ISCED 3C	8.2	7.3	9.2

Source: LFS

3. Statistical implications

To sum up with regard to the main features of lifelong learning in Italy, the situation seems to be marked by:

- population with low levels of qualification;
- little differentiation of training on offer in the formal sector;
- little CET among both those with jobs and those without;
- manufacturing sector providing little training and apparently incapable of accommodating more advanced skills.

What are the statistical consequences of this?

When the problem of envisaging an information system for lifelong learning is considered, the theoretical and statistical problems that emerge are many. Only two general aspects are considered here, but they are particularly significant in the context of Italy.

1.

In Italy the economic system has not yet posed any special challenges to the education system, and in fact it seems simply to have taken advantage of the general raising of standards that the school and university system has gradually produced.

It could be said of Italy, therefore, that increased schooling has been a response more to the need for a general improvement in the standard of living than to the requirements of the labour market. The social rather than the economic value of education in Italy is thus very apparent. This is a very important factor in Italy, especially when you remember how rapidly the population is ageing in the country. The increasing numbers of older people simply accentuate the need to ensure that everyone, young and old alike, can play an active part in an information society that is rapidly changing.

When education is considered as an end in itself, without regard to its effects on the labour market, the notion of educational activities is bound to broaden: from formal to non-formal education and on to informal learning (see recommendations of Eurostat Task Force on measuring lifelong learning). It must be noted, however, that non-formal and informal learning still need a lot of further theoretical work before they can be included within an information system on lifelong learning.

In statistical terms, there are two problems:

- the need to devise a thorough classification of the activities to be covered in each category (where do cultural activities fit in, are they a result of investment in education or are they an actual part?);
- the conflict between the need to obtain information on a phenomenon that is increasingly important and undergoing rapid change and the difficulty of investigating a phenomenon that has not yet taken final shape in its specific cultural context.

This aspect will now be considered.

When information about lifelong learning is sought, the two most common ways of obtaining it is from the providers or the individuals.

When it comes to the firms in Italy that provide training, there are significant problems with regard to coverage and completeness of information. There are comprehensive and up-to-date records on training establishments that are part of the formal education system, but the considerable slowness with which the education system has acknowledged skills acquired in the private non-formal sector means that in Italy there is no proper record of training firms. In recent years, however, there has been a great increase in the number of non-formal courses on offer, in both the public and the private sectors. As a response to the shortcomings of the formal education system, several private centres have sprung up, especially for foreign language and computer skills, but they are not easy to identify in business registers.

Attempting to use training firms to determine the amount of continuing training in the country is possible at the moment. In addition, in view of the tremendous social value that is accorded to investment in training, information about the features of various programmes (content, hours, method of organisation, etc) must be accompanied by details of the recipients of such training (level of education, age, nationality, etc).

The second round of the CVTS survey that is currently being completed has revealed that firms in Italy have tremendous difficulty in supplying this kind of information, thereby making it impossible to plan action geared to those segments of the population that are most at risk of being overlooked.

In the Italian context, therefore, the most promising route to obtaining a thorough picture of adult training is definitely a sample survey of individuals⁵.

⁵ However, it is clear that other information would then be lacking: supplier firm, costs, sector of economic activity, etc. Individuals cannot always provide this kind of information.

It has to be stressed, however, that a survey of individuals would highlight even more the problem of the scope and coverage of the notion of lifelong learning, not only in theoretical terms but also in practical terms with regard to conducting the survey. Respondents (and investigators) might not always have a clear idea about what is learning-related activity and what is not. The problem is even greater in a country where - as the data show - there is little familiarity with the concept of continuing education. At this stage where the concept is poorly defined, and where the phenomenon is still small in scale, it seems a good idea to move slowly. The pointers that will emerge from the ad hoc form that Eurostat plans for 2003 will be invaluable. They will in fact help to identify specific areas of the phenomenon or specific targets on which to focus attention so that, at a subsequent stage, new surveys can be devised in conjunction with existing surveys (LFS, time use, etc) or as separate surveys.

2.

Whatever relevance is ascribed to lifelong learning, it is now an accepted fact that the ultimate aim is to improve people's ability to adapt, whether to the requirements of the labour market or to society in general. In short, the purpose of lifelong learning is "learning to learn".

At a time when the Italian education system is being reformed, this aspect is particularly significant. In re-defining the school syllabus, the shift is away from the content and towards the method of teaching to ensure that it encourages to the utmost young people's ability to learn for themselves, so that later they will be able to find their way in the information society.

With more specific reference to the interaction between the educational and economic systems, the problem that arises is rather how to balance general and specialised skills to produce, on the one hand, the flexibility - now and in the future - that the world of employment requires and to ensure, on the other, that some specific skills are acquired. The crux of the matter is that the mismatch between supply and demand in the labour market is becoming an increasingly pressing problem.

In this connection, it has to be pointed out that the statistical information that is available at international level on firms' training needs is somewhat lacking.

Of course, the objectives of lifelong learning go much farther, even in terms of encouraging learning, and it is not pointless to determine and to publicise what firms' most pressing needs are.

Italy already has a survey on the vocational needs of firms. It was carried out by Unioncamere (federation of chambers of commerce) in 1997 and 1998 with financial help from the European Social Fund. However, the survey targets firms' requirements from the angle of qualifications or occupations, and it is less thorough with regard to required skills.

The fact is that at the moment the only standardised tool that can be used at international level is the classification of occupations, but the skills and talents that are required can vary greatly among occupations that are identical in name. A classification based on the skills that are demanded (or even only IT) appears a prerequisite for analysing the interaction between education and the labour market. This work could be preceded by case studies on specific sectors to understand the changes that are affecting occupations and the organisation of work, so that proposals can follow for suitable statistical measures. The idea is to plan a survey among firms that looks at the skills that are needed rather than at the occupations that need to be filled, with coverage of certain specific areas (e.g. IT).

MEASURING LIFELONG LEARNING

WADDINGTON Susan

European Development Officer

NIACE

21 De Montfort Street

Leicester LE1 7 GE

UNITED KINGDOM

Sue.waddington@niace.org.uk

“As well as securing our economic future, learning has a wider contribution. It helps make ours a civilised society, develops the spiritual side of our lives and promotes active citizenship. Learning enables people to play a full part in their community. It strengthens the family, the neighbourhood and consequently the nation. It helps us fulfil our potential and opens doors to a love of music, art and literature. That is why we value learning for its own sake as well as for the equality of opportunity it brings.

To realise our ambition, we must all develop and sustain a regard for learning at whatever age. For many people this will mean overcoming past experiences which have put them off learning. For others it will mean taking the opportunity, perhaps for the first time, to recognise their own talent, to discover new ways of learning and to see new opportunities opening up. What was previously available only to the few can, in the century ahead, be something which is enjoyed and taken advantage of by the many”.

David Blunkett, UK Secretary of State for Education and Employment, (1997 – 2001)¹

Introduction

This statement expresses both the aspirations many of us have for lifelong learning and also the challenges. One of the challenges concerns the measurement of the extent to which needs, demands and ambitions for lifelong learning are being met.

As policies for lifelong learning develop and new legislation, structures and funding programmes are introduced, there is a need to determine how effective they are in meeting aspirations. In this short paper I intend to briefly consider some of the evidence and measurements that might be examined and upon which judgements and comparisons can be made. I will be referring to issues of participation, the quality of learning provision, the achievements of learners and the wider benefits of lifelong learning.

In doing this I will:

- provide illustrations of developing work particularly from NIACE (The National Institute for Adult and Continuing Education in the UK).
- consider the implications for in-formal and non-formal learning.
- emphasise the centrality of the learners and potential learners.

¹ Foreword to ‘The Learning Age: a renaissance for a new Britain’: presented to Parliament by the Secretary of State for Education and Employment (1998): Department for Education and Employment Publication

Levels of Participation in Lifelong Learning

Participation in post school education has been the subject of a variety of studies. NIACE, for example, commissions an annual survey in England and Wales, which has been published during Adult Learners Week each May for the past 10 years. This research, which is partly supported by ESF, is very valuable in measuring the changes that occur from year to year, amongst different social groups, different age groups, in different regions, and compares the participation rates of men and women. It also measures the correlation between participation and internet access and future intentions to participate in learning.

The NIACE Survey² on Adult Participation in Learning 2001 has demonstrated that increased investment in learning opportunities and a full-employment economy has resulted, for the first time in a marked increase in participation. However, the learning divide still exists. The distribution of expansion in opportunity is heavily weighted to the educationally privileged, to the young and to people with jobs. Those who have access to the internet are twice as likely to be learning as people without. Over 30% of adults have done no learning since they left school and 86% of this group said they were unlikely to take up learning.

Two examples of the tables, which illustrate the changes that have occurred between 1996 and 2001.

Table 6: PARTICIPATION IN LEARNING, 1996-2001, men and women compared

	total		men		women	
	1996	2001	1996	2001	1996	2001
base – all respondents = 100%	4,551	6,310	2,208	2,825	2,343	3,485
current learning	23	29	25	32	21	27
recent learning (in the last 3 years)	17	17	18	17	17	17
all current/recent learning	40	46	43	49	38	44
past learning (more than 3 years ago)	23	20	25	21	21	19
none since leaving full time education	36	33	31	29	41	37

Table 12: FUTURE INTENTIONS TO TAKE UP LEARNING, by social class, 1996 and 2001 compared

	Total	AB	C1	C2	DE
total likely					
1996	38	46	45	34	28
2001	49	66	59	45	34
percentage change	+11	+20	+14	+11	+6
total unlikely					
1996	55	48	49	59	63
2001	49	32	39	53	64
percentage change	-6	-16	-10	-6	+1

The value of this annual survey is that it raises awareness of the barriers to participation that a knowledge society needs to address and draws attention to the non-participation rates and the characteristics, location and intentions of many non-participants. It illustrates when progress is being made, and where further efforts are required.

When developing future measurement systems relating to participation, consideration should be given to examining the reasons for non-participation. The reasons for non-participation include issues of supply and access as well as issues of demand and motivation. Amongst the former are lack of suitable provision, lack of

² Winners and losers in an expanding system – The NIACE Survey on Adult Participation in Learning 2001 Aldridge, F and Tuckett, A (2001) NIACE

knowledge and information, lack of time due to work and family responsibilities and the high cost of learning. Amongst the latter are cultural differences, negative previous experiences of education, peer group and family attitudes. The precise nature, extent and location of these barriers requires further study and measurement.

Consideration should also be given to the measurement of participation of groups whose involvement has not previously been recorded. These include migrants, refugees and asylum seekers. NIACE has recently undertaken a pilot study auditing the skills and qualifications of asylum seekers who are living in the UK³. This revealed high levels of previous achievements and a pool of untapped talent. 85% of those surveyed had qualifications ranging from school leaving certificates to higher degrees and included vocational and professional qualifications. The majority of the asylum seekers have the opportunity to attend English language courses but few are able to participate in courses designed to qualify them to use and develop their learning and skills in the relevant professions and occupations in the UK. The lack of learning opportunities adds to the problems of integration faced by asylum seekers and refugees.

Migration from third countries into the EU is increasing, and with an ageing population, the skills and contribution of refugees and asylum seekers will be needed. This is a growth area where issues relating to the demand for and supply of learning opportunities could be considered as suitable subjects for measurement.

I am therefore proposing that measurements relating to participation in learning should be developed to allow issues of non-participation to be addressed. Who does not participate in post school learning and why not? Such measurements will provide a clearer picture of both the demand for and the supply of appropriate learning opportunities and a comparison of national and regional differences. It should also provide sets of measurements which examine the equity of provision for and participation of groups previously excluded from full consideration such as migrants and refugees, but also older people, those with disabilities, ethnic minorities, unemployed people and others who are vulnerable to exclusion.

Quality of provision and the achievement of learners

The measurement of quality and achievement presents particular challenges when non-formal, informal and non-accredited learning is under examination. The recording, measurement and comparison of courses leading to externally validated qualifications is relatively simple by comparison. However as the European Commission Memorandum for Lifelong Learning indicates, informal and non-formal learning is increasingly being recognised as vital part of a European lifelong learning strategy, and issues of quality and outcomes require attention.

Informal and non-formal learning is by its very nature non-standard. The kinds of learning involved, relate to the particular interests, needs and experiences of the learners; to a variety of roles and aspirations; to particular neighbourhoods, civil societies, associations and groups.

The location and organisation of such learning is equally diverse. It may be managed by a local learning centre, college or folk high school; in the work place; by distance learning providers, non-governmental organisations or individual learners themselves.

The purposes of in-formal and non-formal learning are too extensive to be covered in this paper. They include increasing knowledge, skills, creativity, employability and adaptability; integration into the labour market; combating social exclusion; capacity building; creating artistic and cultural products; overcoming particular problems; developing physical and sporting expertise; community and team building; and the ability to progress onto more formal learning.

It is difficult to envisage standard forms of measurement of such diversity which would fit all. Nonetheless, if the value of informal learning is to be recognised and provision is to be increased, encouraged and funded, it is necessary to consider the kinds of evidence that might be recorded to demonstrate the quality of provision and the achievements of the learners.

Consideration of the forms of quantitative and qualitative evidence that could be produced is creating lively debate amongst adult educators and policy makers.⁴

³ Asylum Seekers' Skills and Qualifications Audit Pilot Project – Aldridge, F and Waddington, S (2001) NIACE

⁴ See for example 'Outcomes of adult learning – taking the debate forward' – Hayes, A; Lavender, P; Reisenberger, A and Vorhaus, J (2000) Further Education and Development Agency (FEDA)

One form of measurement that can be applied to both formal and informal adult learning is that of retention rates. Adult learners have some choice over whether they complete the learning activities that they begin. Learners may leave or continue their learning for reasons that are external to the quality of the provision, and therefore a factor needs to be built in to take account external incentives and problems. Nonetheless, if adults are enjoying, benefiting and gaining from a learning experience they will try to stay with it and good learning providers will develop support systems and flexible approaches to allow and encourage learners, who are under pressure, to complete their learning.⁵

It is appropriate that retention rates are measured and that learning providers set benchmarks which are sufficiently challenging to encourage them to develop strategies to reduce drop out. However, while retention rates are relatively easy to measure and compare, they do not in themselves provide evidence that learning has taken place or information about the quality of learning experiences. In addition, if retention measurements were the only or main form of evidence used, learning providers may be reluctant to enrol learners whose circumstances were such that they were in danger of dropping out, such as learners who might gain new employment, become parents, move to another district or suffer from ill health.

New forms of evidence of the quality and achievements of non-formal and informal learning are being explored. One example is that of “distance travelled”, when learners are tested at the pre and post learning stages and the increases in abilities measured. This system is possible for some, but by no means all, informal and non-formal learning activities and presents further problems. The tests themselves require acceptance and validation by a wide range of stakeholders if they are to be considered appropriate for use by the diversity of learners and providers. Even if this was achieved, the prospect of being tested before gaining entry to a new learning opportunity may deter the prospective learner who lacks confidence in his or her abilities.

A second initiative is to ask the new learners, individually or in a learning group to identify the gains that they would like to have made by the end of the learning activity, and to measure and give a numerical score to the success of the learning in meeting these targets. This system is being tested by a small number of learning providers in the UK.

NIACE’s contribution to the debate about the measurement of the quality of lifelong learning starts with the centrality of the learner. Both the learning process and the means of validating it should acknowledge the interests and perceptions of the learner. NIACE is contributing to research by working with diverse groups of learners and individual learners engaged in informal and non accredited learning to discover how they believe such learning can and should be measured and its quality and outcomes assessed. The research is currently ongoing,⁶ but the range of responses illustrate the wide variety of reasons that people engage in learning, their different expectations and aspirations and the methodological and conceptual challenges that measurement of quality and achievements present.

At the heart of the debate are the different opinions of adult educators and policy makers. The former want the value of informal and non-formal learning to be recognised and resources for provision to increase, but are concerned that methods of measurement will fail to acknowledge and encourage the diversity and creativity which enables a wide range of learners, including the hardest to reach groups to participate and benefit. The latter want evidence that informal learning is of high quality, is contributing towards local and national targets and is worth increased investment.

It is clear that further research using international experience is required on:

- how non-accredited and informal learning can be measured
- how account is taken of “soft”⁷ outcomes, such as the greater confidence and self esteem of the learners
- how benchmarks can be devised to allow for reliable comparisons between providers and different kinds of learning opportunities
- how learners perceive attempts to record and validate their learning

⁵ See ‘Staff development for student retention in further and adult education’ – Martinez, P; Houghton, J and Krupska, M (1998) FEDA

⁶ Forthcoming publication – Recognising and validating outcomes of non-accredited learning; a practical approach, ed; Greenwood, M; Hayes, A; Turner, C and Vorhaus, J (2001) Learning and Skills Development Agency

⁷ See ‘Measuring soft outcomes and distances travelled’, research report 219, Dawson, S, et al (2000) Department for Employment and Education

The Wider Benefits of Learning

Engaging in learning can increase knowledge, skills and competences. However, wider claims about the benefits of learning are frequently expressed. These include the following benefits:

— **for the individual, such as:**

- raised self-confidence and esteem
- greater earning potential
- better health
- increased longevity
- improved parenting
- wider social contacts

— **for organisations, such as:**

- less absenteeism
- improved productivity
- flexibility of the workforce

— **for the wider society, such as:**

- a reduction in crime
- higher levels of participation in civil society
- less poverty
- greater environmental awareness and concern
- higher levels of independence amongst older people
- the reduction in social exclusion
- greater equity

In short, lifelong learning is seen as contributing to the human, social and intellectual capital.

If individuals, organisations and governments are to increase investment in lifelong learning, evidence of the benefits and the relationship between lifelong learning interventions and relevant outcomes needs to be collected, measured and disseminated.

NIACE has undertaken some research⁸ into the wider and unanticipated benefits of learning by conducting a survey of 2000 individual learners and 750 groups. The results indicated that the major unanticipated benefits for these particular learners were improved physical and mental health.

Two tables illustrate these findings:

Physically better?

87% of learners reported benefits to physical health – including:-

- felt less ill, managed pain better, felt less tired
- physical health benefits leading to more confidence/enjoyment
- managing better in spite of poor health
- improved family health
- better health behaviours
- psychological well being

⁸ The impact of learning on health – Aldridge, F and Lavender, P (1999) National Institute for Adult Continuing Education (NIACE)

Mentally or emotionally better?

89% of learners reported noticeable improvement/well-being - including:-

- no time to dwell on my worries
- forget my chronic pain/makes pain bearable
- relaxation and well being
- ‘mentally better and happier’
- reason to get up in the morning
- less depression

These findings have resulted in a pilot project being developed with family doctors, where patients are referred to expert education advice and guidance workers who discuss their individual learning interests and help with the introduction to learning opportunities. The guidance workers support the learners as they embark on their new courses. This project is relatively new, but is already providing further evidence of the improvements in health that results from learning.

The UK Department for Education and Employment has commissioned research to examine the wider benefits of learning, which will be focussing both on the immediate outcomes of learning and the longer term benefits. It will look at the contribution of community-based adult learning and the wider impacts learning can have on social cohesion, crime reduction, active citizenship, active ageing and improved health. The research centre, based at the Institute of Education has published a framework for evaluation,⁹ which explores methods of measurement and evaluation; the use of longitudinal studies; and cost-benefit analysis to explore the wider benefits of learning, such as reduction in crime, tax and welfare benefit savings, increases in income and social capital.

This is a developing field of quantitative and qualitative research which will examine the wider benefits of learning and will enable policy makers, organisations, practitioners and learners to understand the impact that learning can have upon individuals, families, the economy and wider society. It should also assist in the planning, development, comparison and benchmarking of learning opportunities.

Conclusion

This paper has briefly examined the future needs for measuring participation, retention, quality, outcomes and the wider benefits of lifelong learning. It has not explored how such measurement systems should be developed and implemented. Such endeavours will be assisted by the contribution of a wide range of stakeholders, including the European Community, national governments, research centres and researchers from a variety of disciplines, practitioners and non-governmental organisations such as NIACE who are the advocates for the learners themselves.

It should be recognised that everything that we want to know about lifelong learning cannot be measured. The improvement to individuals' quality of life; the arousal of curiosity; the excitement and pleasure of learning; the enthusiasm for shared experiences and new discoveries cannot be counted. However, a commitment to the pursuit of evidence of the benefits of learning will contribute to the development of a learning society in which all can participate and develop their potential for creativity, enterprise, scholarship and social relationships.

⁹ Lifelong learning and its wider benefits: A framework for evaluation – Plewis, I and Preston, J (December 2000) Centre for Research on the Wider Benefits of Learning, Institute of Education/Birbeck College

PARMA SEMINAR

REPLY BY EUROSTAT

JENSEN Lothar

European Commission
Eurostat
BECH D4/733
Jean Monnet Building
L-2920 Luxembourg
Lothar.jensen@cec.eu.int

I believe that a combination of two phrases mentioned by speakers of this seminar could be used to summarise the present situation and the future steps that we need to take. Using the words of Antoine de Saint-Exupéry on the development of technology in the sense that was mentioned by Mr Hoerner, I would say that we are indeed between the primitive and complicated phases of the process of developing statistics for measuring lifelong learning. If we want to go on to the phase of simple solutions we will have to stop looking at the forest and start looking at the different trees (which could be called the trees of knowledge?) as Mr Paparella put it and this means that we should talk less and do more (as Ms Andre put it).

Here are the conclusions that Eurostat has drawn on the basis of the presentations and the discussions during this seminar.

Issues for policy

It is not up to Eurostat or to the statisticians in general to identify the policy needs that determine which are the data needed on lifelong learning. We consider that the Memorandum on LLL together with the employment guidelines and the social agenda of the Commission define broadly the needs, as we have also heard from different speakers. We are looking forward to the **Action plan** that will come as a result of the consultation on the Memorandum which we expect will clarify things, bringing further even more into the discussion, the opinion of the different actors at national, regional and even local level.

We agree that in first priority we need conventions and not necessarily definitions. But all should contribute to achieving sufficient conceptual clarity.

Statistics

First of all we will make **best use of existing sources**. We have a lot of information and we should look at it from different perspectives to see what we can learn more out of it on LLL.

Then existing data on formal education and non-formal education should be supplemented by some **KEY data on informal learning**. We need to define what KEY means, which brings us back to the discussion on the need for the formulation of a clear policy request.

And we should **improve the information we collect on the individual**. Eurostat will include the development of an EU Adult Education Survey in the 2003-2007 Statistical Programme. The survey design though, as well as the final form such a survey could take, have still to be decided.

Issues like attitudes, motivation, obstacles, demand, personal benefits, civic participation etc are coming into play and need to be covered if possible.

Although the CEDEFOP project on the development of a harmonised list of learning activities is a good and necessary first step, it is clear that a **new exhaustive classification of LLL** (some kind of „ISCED-LLL“ as Mr Hoerner put it) is necessary for collecting data on LLL comparable at the international level. This may be a much longer process but it is necessary nevertheless.

We also need to have a **detailed map of LLL** (which will include and try to match the basic policy concepts and the proposed statistical approach). This will help us plan our work on the basis of priority areas on the map and share work with other partners at international and national levels.

We will also have to broaden our scope and look further than education and training statistics and try to look at the **economic aspects of education and learning**. Money spent on education and learning should not be considered only as public expenditure or enterprise/ household expenditure –consumption but mainly as an **investment to the future** both in the economic and in the social sense for all stakeholders (i.e. state, community, social, economy actors, enterprise, individuals). This means that we should focus on measuring different kinds of returns, not always of an economic nature.

Investment in time should also be taken into account.

We should also try to **broaden the geographical coverage** not only to candidate countries, something that is already done to some extent, but also going further down at sub-national level. Data are needed even at the regional and local level, but of course the cost for getting this information may be prohibitive, except if we do not want to establish European aggregates.

Effectiveness and **quality** of education and learning are two aspects that should not be forgotten in our work. Nevertheless, we still have a long way to go before getting some concrete results on the statistical side.

On **e-learning** and its several facets (that is use of ICT for learning, general capacity to use ICT, shortage of specific skills on ICT etc) we are going to build on the e-learning action plan and develop our action within the broader area of Information Society Statistics in Eurostat.

We will also intensify co-operation with CEDEFOP and Eurydice so as to better combine the **quantitative and qualitative aspects** of information on education and learning that add depth to the statistical information that countries provide to us.

The possibility to use other approaches such as school level surveys, youth cohort surveys etc could also be explored but this requires much broader co-operation efforts with many different actors, so we can say that this can be proposed for inclusion in our plans for the time being.

However, we have the intention to explore the area of **direct skills assessment** especially for adults. For the development of our activity in this field, a lot will depend on the capacity of the European Statistical System to make use of the experience that its members have at national level, as well as to the possibility of using existing international experience.

Issues for research

There are some issues that are still so unclear that more research is needed before we can deal with them in the area of statistics.

We may need to **define Knowledge as a production factor**.

We definitely need to decide what **digital literacy** means.

The different **basic skills** as well as the **knowledge/skills threshold** that is considered sine qua non for success in professional, personal and civic life have to be explored and if possible, defined as well (for example it is not clear what “entrepreneurship” means and “how much” entrepreneurship we need).

All of these should build on research which exists, but has not yet yielded concrete results. There is a need though to build European expertise in these fields, both among researchers and within the European Statistical System.

Final remark

It is evident that we have a heavy work programme in front of us in the area of education and learning with more questions than answers, as well as more and more tasks and less and less resources. I think that we all agree that it is not possible to have the IDEAL SYSTEM that would allow us to cover EVERYTHING, but there are some paths, streets or even avenues to explore and we intend to do so, since when we are discussing education and learning, we are discussing people and people ARE the main asset of Europe in the present rapidly changing and competitive world.

For the workload in front of us we clearly need a work division on all levels and above all between other international organisations and Eurostat in view of the scarce resources available .

SUMMING-UP

FREY Luigi

University of Rome
Via Castro Laurenziano 9
Roma
ITALY
FREY@dep.eco.uniroma1.it

1. Introduction

This international seminar has been a particular success. Alongside academics, experts and operators from Italy, there have also been highly qualified representatives from the four leading world bodies that deal with lifelong learning (the European Commission's DG EAC, Eurostat, the OECD and UNESCO) and from Canada (a country at the forefront when it comes to statistics on learning), together with producers and users of statistics (prompted by the spirit that inspires the work of the CEIES) from no fewer than 21 countries, including three that have applied to join the European Union.

The importance of the subject matter covered by the seminar is considerable in both economic and social terms, as was clearly emphasised in the opening addresses by the Rector of Parma University, Professor Ferretti, the Vice-Chairman of the CEIES, Mr Lamel, the Director of ISTAT, Mr Egidi, and the Director of Social Statistics at Eurostat, Mr Jensen. Furthermore, the background paper that provided the guidelines for the seminar emphasised the fact that there is an increasing need for adequate and properly updated information, both from the economic angle with a view to understanding and managing the constantly changing processes in relation to the qualifications and skills demanded by a labour market with its developing high-tech systems, and from the social angle in order to foster in an effective manner active involvement in the economic and social set-up, a sharing of different values and cultures and a gradually expanding degree of social cohesion. It is not by chance that the need for information on lifelong learning has been gradually emerging since - and this dates from the second half of the 1990s (OECD, 1996) - the OECD called for a more thorough and wide-ranging discussion on lifelong learning strategies that provided a better response in working towards the knowledge society than those tried for continual training, right up to the most recent positions adopted by UNESCO on the right to education for all throughout life (UNESCO, 2000) and by the European Union in recent documents on employment and labour policies as well as in its Memorandum on Lifelong Learning in November 2000 (Commission of the European Communities, 2000).

Interest in Europe for quantitative information on lifelong learning grew to such an extent that Eurostat was prompted to set up a task force - comprising members not only from Eurostat but also from the Commission DGs for education and culture, employment and social affairs and research, from the CEIES and from the European CEDEFOP and EURYDICE agencies, as well as from the OECD and UNESCO - whose report of February 2001 (European Commission, 2001) provided the starting point for the meeting between producers and users of statistics at the Parma seminar.

This meeting has dwelt on: 1) problems of definition and classification and other basic methodological aspects; 2) problems of matching the supply of information to the demand from various users, as revealed by recent experience; 3) future needs and the possibilities for producers of statistical information to provide an adequate response.

Here is a brief summary of the discussion on the three groups of problems tackled at the seminar, followed by some of the resulting suggestions that were formally proposed to Eurostat by the Subcommittee on Social Statistics and the CEIES General Assembly in November 2001, so that the European statistical institute can provide directly and coordinate (with regard to any activities that might be referred to the various national statistical institutes in Europe) suitable answers, in connection with the 2001/2002 and 2003/2007 programme, to the growing need for information on individual lifelong learning.

2. Definitions and classifications

The definition of lifelong learning contained in the previously mentioned report by the Eurostat task force, and which was more or less explicitly used in the opening contributions to the seminar by Mr Marchetti (DG EAC), Mr Pilos (Eurostat), Mr Heller (OECD) and Mr Chu (UNESCO), covers *all learning activities, formal and informal, that are intended to improve individual knowledge, skills and abilities and that are conducted on the (ongoing) basis of duration and continuity (with no lower limit on duration) as well as by any method of financing (private or public) and by any means (traditional or modern).*

It is a definition which, as is clearly shown by the two-axis diagram used in the opening contributions, has a time dimension (along the vertical axis) which refers to learning activities throughout life from childhood to old age, and a dimension referring to the location/arrangements, etc, of the various methods (shown from left to right on the horizontal axis, ranging from “less formal” to “more formal” instruction) by which learning activities can in fact be undertaken.

The horizontal dimension is also important - as Mr Turunen pointed out - because learning can occur in a variety of environments, that are equally relevant and interlinked.

This dimension is traditionally based on the distinction between *formal education* (which meets all the criteria laid down in the UNESCO manual of 1996), *non-formal education* (meeting only the first three criteria, i.e. referring to learning activities intentionally organised in specific institutional settings and locations, without showing in any significant way any of the other characteristics) and *informal learning* which is apparently in line with the criterion of being intended (individually, or by means of families, firms or other social institutions) to improve individual knowledge, skills and abilities in a way that is much less organised/structured than other learning methods.

As Mr Chu pointed out in his contribution to the seminar, learning may cover activities such as those involving mass means of communication, not actually intended to improve individual knowledge, skills and abilities. These “casual” activities are traditionally excluded (on account of the extreme difficulty of measuring them) from definitions of learning deemed relevant for measuring lifelong learning.

In addition, distinguishing among the other three types of activity is not easy, also because there are some non-formal and formal education/learning situations where criteria typical of formal education can occur to a limited but not insignificant extent.

This appears important when it comes to making classifications for each type of education/learning that are useful for compiling as part of an approach based on the *learner* - which many contributions to the seminar have indicated as necessary - quantitative information on access to and participation in the learning opportunities that are available, on the features of learning processes and on the results and effects of these processes.

A classification that is widely used and was mentioned during the seminar is ISCED97 (OECD, 1999), which was compiled in order to offer an integrated and consistent statistical framework for the collection and presentation of statistics on supply and demand in education that are taken from national sources but are internationally comparable.

ISCED97 is widely used to measure learning experiences and related skills in successive levels and programmes, with reference (in broad terms) to the differing degree of complexity of the content of planned learning processes. In principle, this classification can be used for all structured learning processes, apart from the institutions involved, in such a way that it allows - given the variety of indications stemming from a flexible and multidimensional taxonomy - the inclusion of the relevant programmes in one of the defined levels for the learning/acquisition of skills.

Formal education can fairly easily come under the classification, although necessary attention must be paid to the particular features of each institutional context on the basis of four fundamental aspects (the next type of education or the goal that follows completion of the learning programme to be classified; the type of learning process = general, pre-vocational, vocational; the length of the specific learning programme; its position in the structure of the levels of academic qualifications in the individual countries).

However, there are some considerable difficulties, mentioned by various speakers during the seminar, in connection with the adoption of such a classification for formal education in countries with educational systems that are marked by tremendous historical and institutional differences, especially when the type of education is not restricted - as Mr Heller pointed out - to "initial training" given to young people but also includes training/learning programmes designed for adults.

In any case, during the seminar producers and users of statistics highlighted the major difficulties in applying the classification with regard to informal training programmes (with many examples being given in the case of adult literacy, vocational training/conversion of adults even at an elderly age at various levels and in various fields of production, acquisition of linguistic, religious, cultural ability/skills and so on, as well as ability/skills to make use of leisure time and improve the quality of life in general), and to an even greater extent with regard to the constantly expanding number and variety of types of informal learning.

The attempts - which Mr Marchetti mentioned - as part of the Community Leonardo da Vinci programme in 1995-1999 to arrive at suitable classifications for compiling and exchanging comparable quantitative information on formal and non-formal vocational training, and the inclusion in the related 2000-2006 programme of two priority statistical areas concerning the use of structural business statistics for purposes related to lifelong learning as well as the extension of the definitions and classifications of skills to informal learning, suggest that there have been plenty of efforts, still continuing, to arrive at classifications of learning activities that allow international comparisons of quantitative information even in the case of non-formal and, if possible, informal activities.

Furthermore, the seminar revealed the usefulness of specific classifications for such learning activities, so that basic quantitative information could be collected - using time use surveys and household budget surveys as well - with a view to measuring the amount of time individually devoted to and the cost involved in investment in learning.

3. Problems of matching the supply of information on lifelong learning to the demand from users

The lack of suitable classifications - suitable in the sense of being statistically useful, as pointed out by Mr Hörner - for non-formal and formal learning activities, which are compatible with ISCED97 but which take account of the central role of the learner rather than the institutions involved, is a significant drawback when it comes to dealing with the growing demand from various types of user for information that is needed to understand/analyse changing economic and social systems, as well as to devise effective strategies at the individual and collective levels in various territorial areas.

This has been spotlighted during the seminar, both from those - such as Mr Marchetti, for instance - who emphasised the role that suitable information on formal and non-formal activities can play in devising training strategies at the international and national levels, and from social and economic operators who highlighted the importance, in today's changing world influenced by technological and organisational advances, of information about learning on-the-job and elsewhere for company strategies (see contributions by Mr Pückler and Mr Callieri) and for a more decisive active involvement by the social partners in recognising the value of the work environment as a place of learning and as an essential source for surveying and measuring lifelong learning (Mr André and Mr Paparella). And again by those (Mr Longworth) who pointed out that lifelong learning is the development of human potential by means of learning communities that offer and encourage a variety of learning opportunities for every citizen.

However, the producers of statistics have endeavoured to provide quantitative information from various sources, both institutional (only for formal and non-formal education) and individual (also for non-formal education).

Various data have been collected and processed for national purposes. Particular experiences were presented and discussed at the seminar: the first National Adult Learning Survey in the United Kingdom (Mr Leman), which is very interesting also because of its regional breakdown; five different French sources (Mr Zamora); the Adult Education Survey in Finland (Mr Blomqvist); the Italian involvement in international projects (Mr Micali), pending specific projects for the future that are at the moment - as Mr Egidi mentioned - held up because of the concentration of ISTAT's resources on the 2001 censuses.

The experiences in various countries prompted ideas and suggestions on how to organise an information framework that is comparable at international level and deals with the problems - also dwelt on by Mr Hörner - not only of definition and classification but of sufficient coverage of all the individual fields involved, of invaluable linking of information on lifelong learning processes with other information taken from the same sources, and of efficiency, compatibility and actual comparability at international level.

Among comparable information that already exists at international level, mention was made (especially by Mr Jensen and Mr Pilos) during the seminar of the following:

- a) information collected every year from administrative sources (persons enrolled and attending, teaching staff and expenditure per training) by means of the joint UNESCO-OECD-Eurostat (UOE) questionnaire;
- b) information collected every year from administrative sources (with regard to participants, access requirements, opportunities for further study, links with job during training, teaching staff) on vocational education and training (VET);
- c) information collected (on undertakings, with or without relevant programmes, and on participants, hours of training and costs) by means of the regular ad hoc sample survey at Community level on continual vocational training (CVTS) and carried out with substantial organisational effort on the part of Eurostat (the first survey was in 1994 and the most recent in 2000, with results to be available at the end of 2001, although Mr Ni Chellaigh of CEDEFOP fears that they will not be ready until 2003);
- d) information (quarterly since 1999) taken from the labour force sample survey (LFS) in participation in training schemes, level of training achieved by the population (broken down by particular main characteristics relating to work and with reference to the level of education attained by parents);
- e) limited information obtained each year from the European Community Household Panel (ECHP) sample survey on learning and training results.

There is an increasing tendency for this quantitative information to be supplemented by information, particularly useful for other aspects of formal and non-formal learning, collected from the International Adult Literacy Survey that Mr Reef mentioned and spoke about, or more generally from statistical programmes like the one - very interesting and instructive - organised by Statistics Canada and fully outlined by Mr Murray.

However, this is information that is not properly linked, at either national or international level, with other information on formal and non-formal education. It is not by chance that mention was made of the fact that in Canada there is still a lot to be done to attain the goal of an integrated system of statistics on lifelong and lifewide skills and learning. In addition, it was pointed out that we are still lagging behind when it comes to international comparisons in this field, one reason being that it is not clear whether the approach followed by the IEA, Statistics Canada and the OECD is the best in terms of conception, management and dissemination of information on learning.

Furthermore, the need for systematic merging of information about the various kinds of learning systems - as Mr Vegliante, Mr Koryfidis and Mr Waddington pointed out - stems from the need to measure the participation, quality, results and general benefits of lifelong learning.

Meeting these needs for an integrated approach emerged as one of the most important demands for the future.

4. Needs and demands for the future

Apart from the need for systematic integration, the seminar also revealed the need to improve and focus specific surveys that are especially useful for compiling suitable quantitative information on lifelong learning.

Above all, it was suggested that the type of information collected from administrative sources, such as in connection with the UOE and Eurostat VET questionnaire, should be updated.

In addition, it was stressed that in future the learner must be the focus of information on lifelong learning. This calls for a proper link between administrative information, often subject to concerns in relation to the institutional agents involved, and information collected via household sample surveys.

During the seminar there was repeated mention - and especially by Mr Zamora - of the information potential of the labour force sample surveys, which are increasingly becoming one of the keystones of the European social statistics system.

It was mentioned that it would be useful to improve that source, by adding to the survey's core questions some questions on vocational education and training. There was also a favourable response to the proposal of including an ad hoc module on lifelong learning in the 2003 survey.

It emerged that there was a possibility that the revision of the ECHP - which is to be known henceforth as the EU-SILC (EU Statistics on Income and Living Conditions) and will be completed in 2002 and lead to a new annual survey starting in 2003 - could provide regular information on self-reported skills, with the further possibility of detailed information on vocational training by means of ad hoc modules every three years, or at any rate at regular intervals.

There would still be some tricky methodological problems further up the system, including a classification suitable for the growing and prevalent existence of non-formal and informal learning activities. In order to solve problems of this kind, at least in part, mention was made of the possibility of using the time use surveys (TUS) to improve classifications of such activities. A better classification would also improve the information potential concerning the funding and cost of individual learning in the household budget surveys (HBS).

Better classifications suitably combined with a revised version of ISCED97, covering a range of educational and cultural activities (such as remote learning using electronic media, educational trips, various cultural activities), would also be invaluable for developing the information potential of further Continuing Vocational Training Surveys (after the 2000 survey) in firms. These are unfortunately costly for firms and should therefore be improved, in the view of experts in the business world, with the inclusion of information useful for assessing the effectiveness of company investment to improve workers' knowledge/skills.

5. Some final recommendations

One of the basic shortcomings that respondents of surveys such as the CVTS complain about is the considerable delay in getting the results. This takes us back to a problem that has frequently been mentioned at seminars organised by the CEIES. The recommendation that follows from this is that, in addition to making the fullest possible use of the opportunities stemming from new data processing technologies to speed up the collection and processing of information, an effort should be made to give researchers access to the microdata - even in provisional format - as quickly as possible, on the basis of clear agreements that guarantee compliance with the rules on the confidentiality of individual data, so that they can interact to ensure speedier publication of the most important information.

This has also been mentioned elsewhere in connection with the labour force survey (LFS) and the European Community Household Panel (ECHP), which is to become the EU Statistics on Income and Living Conditions (EU-SILC).

With regard to the LFS, the revision of the questionnaire's core questions on basic education and vocational training, as well as the preparation in 2002 of a suitable questionnaire for the 2003 ad hoc module, will be of tremendous importance. In the light of the discussions at the seminar and of the experience acquired by the Task Force on lifelong learning, it seems useful to suggest that the planned working party on education in the labour force should include suitable participation by experts from the users' viewpoint.

As for the future EU-SILC, experience with the ECHP so far suggests that a careful assessment should be made of the problems that arose with the questions on basic and vocational training that were contained in the questionnaires that were used, and that there should also be a suitable link between the questions in the new survey and those in the LFS, with particular regard to those in the 2003 ad hoc module.

From the users' point of view, information from administrative sources continues to be important. Careful revision of the UOE and the VET would seem a good idea, with a view to collecting information on non-formal forms of education and combining such information in a better way with information from sample surveys of individuals and undertakings.

The problem of merging information from administrative sources with information from sample surveys, *in a setting that places the individual at the centre of an integrated information system*, needs to be considered vital.

From the viewpoint of both producers and users of quantitative information on lifelong learning, the availability of a harmonised and thus internationally comparable system for such information is very important for knowing and analysing the resulting economic and social problems and for devising/implementing the most suitable strategies for the well-being of all.

In light of this, there is on the one hand an opportunity to move gradually towards an increasingly integrated information system for social statistics in the countries of Europe, under the guidance and coordination of Eurostat, and with the active involvement of various European agencies (such as CEDEFOP and EURYDICE, in this instance), as well as of the producers of national statistics and users at various territorial levels. On the other hand, there is an opportunity to make a decisive move towards arrangements for closer and closer collaboration between what is being done with the European system and what is emerging in the wider international context as a result of initiatives like those launched by the OECD or UNESCO.

The cross-cutting theme of lifelong learning seems to provide considerable opportunity for moving in these two directions. The topic chosen by the Subcommittee on Social Statistics for a seminar that will be suggested to the Bureau of the CEIES for The Hague (Netherlands) in May 2002 - Active Ageing - will certainly provide another opportunity to make progress.

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ATTENDANCE LIST

Eurostat	JENSEN Lothar PILOS Spyridon KÜHL Karsten NOLLEN Josee LAUWERIJS Nicole
CEIES	LAMEL Joachim, Wirtschaftskammer Österreich SIUNE Karen, Analyseinstitut for Forskning EPLER Margit, Chamber of Labour FREY Luigi, University of Rome (La Sapienza) TRIVELLATO Ugo, University of Padova MARQUES Fernando, CGTP-IN STOOP Ineke, Social and Cultural Planning Office DEGROOTE Kris, Conseil Central de l'Economie PÜCKLER Botho, BDA
European Commission	DRYMOUSSIS Ioannis, Employment and Social Affairs Directorate General LENARDUZZI, Mr D., Honorary Director General MARCHETTI Ettore, Education and Culture Directorate General NABAVI Ginette, Education and Culture Directorate General VEGLIANTE Angela, Education and Culture Directorate General VERLI Angeliki, Education and Culture Directorate General
Belgium	ANDRE Maria-Helena, ETUC VAN DE PERRE Liselotte, Ministry of the Flemish Community
Canada	MURRAY Scott, Statistics Canada
Cyprus	IOANNOU-COSTA, Demetra, Statistical Service of Cyprus
Denmark	BORCHSENIUS Lars, Statistics Denmark THOMASSEN Ken, Ministry of Education
Finland	BLOMQVIST Irja, Statistics Finland NIEMI Helena, Statistics Finland TIISANOJA Mirja, Statistics Finland TURUNEN Jorma, EAEA
France	CHU Shiu-Kee, UNESCO FOURCADE Bernard, University of Toulouse HELLER Jean-Luc, OECD LONGWORTH Norman, European Learning Cities Network SANDOVAL Véronique, Ministry of National Education ZAMORA Philippe, INSEE

Germany	HÖRNER Walter, Statistisches Bundesamt IOANNIDOU Alexandra, Deutsches Institut für Erwachsenenbildung WILHELM Rainer, Federal Statistical Office of Germany
Greece	CHARARI Anastasia, National Employment Observatory KAMINIOTI Olympia, National Employment Observatory MOSSOUX Anne France, CEDEFOP NI CHEALLAIGH Martina, CEDEFOP ZACHARIOU Stelios, National Statistical Service of Greece
Hungary	JANAK Katalin, Hungarian Central Statistical Office
Italy	AIBINO Alberto, CDL CALLIERI Carlo, Iniziativa Piemonte Spa CONTESTABILI Francesca, ADSU FERRETTI, Mr G., Università degli Studi di Parma FONTANA Roberta, ISTAT FREDDOLINI Roberto, OML Provincia Di Milano LO MORO Caterina, University of Parma LUDOVISI Fiorina, CONFINDUSTRIA MAZZA Andrea, IFOA MAZZA Simona, University of Parma MICALI Aurea, ISTAT MOLINA Enzo, University of Parma NEGRI ZAMAGNI Vera, Regione Emilia Romagna PAPARELLA Mr D., CESOS RONCHINI Chiara, University of Parma
The Netherlands	DOETS Cees, CINOP MAES Martine, CINOP TEKKENBERG Dick, Statistics Netherlands VAN RIJN Jacob, Ministry of Education, Culture & Science VRANCKEN Peter, Ministry of Education, Culture & Science
Northern Ireland	BRADLEY Linda, Dept. of Higher Further Education, Training & Employment
Norway	HORNELAND Ellen, The Norwegian Confederation of Trade Unions PEDERSON Elin Foss, Ministry of Education, Research and Church Affairs WILLOCH Ingrid, Statistics Norway
Portugal	FELIX NEVES Ana Luisa, INE Lisboa
Slovenia	BELTRAM Peter, Slovenian Institute for Adult Education BRENK Erika, Slovenian Institute for Adult Education TUS Jadranka, Statistical Office of the Republic of Slovenia
Spain	IBANEZ Jesus, Ministerio De Education Cultura Y Deporte MUNOZ Isabel, Ministerio De Education Cultura Y Deporte SARABIA Bernabe, Ministry of Education

Sweden	LARSSON Ann-Charlott, Statistics Sweden NÄSVALL Annika, Statistics Sweden UTTERSTROM Stina, National Agency for Education
Switzerland	LISCHER Rolf, Swiss Federal Statistical Office
United Kingdom	FLETCHER John, Department for Education and Employment LEMAN Steve, Department for Education and Employment BATES Peter, PJB Associates CAREY Siobhan, Office for National Statistics WADDINGTON Susan, NIACE
