Monitoring Adult Learning Policies: A Theoretical Framework and Indicators

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OECD

Unclassified

EDU/WKP(2013)3

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

21-Feb-2013

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English - Or. English

DIRECTORATE FOR EDUCATION

Cancels & replaces the same document of 19 February 2013

MONITORING ADULT LEARNING POLICIES: A THEORETICAL FRAMEWORK AND INDICATORS

EDU Working Paper 88

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JT03335053

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TABLE OF CONTENTS

SUMMARY

The main task of the Working Group on Adult Learning of the INES Labour Market, Economic and Social Outcomes network is the development of indicators on Adult Learning for publication in the annual volume "Education at a Glance" of the OECD. As part of this task, a list of 18 policy goals/issues in the domain of adult learning have been identified through broad consultations. After identifying the policy goals a theoretical framework was developed in order to be able to systematically select indicators for monitoring them. The theoretical framework is based on a systemic approach, identifying context, input, processes, output and outcome of the system of Adult Learning. The policy goals to be monitored and the theoretical framework constitute the basis for the definition and selection of a list of indicators which might be published in EAG. The third element in the development of international indicators is the existence of comparable data of good quality. The paper includes a list of 44 indicators which are practical to publish with existing data sources or with data sources likely to become available in the near future. The coverage of the policy areas is uneven, reflecting both the focus of existing data sources and the difficulties of some data gathering exercises.

RÉSUMÉ

Le Groupe de travail sur la formation des adultes du réseau de l'INES chargé d'élaborer des données relatives aux retombées de l'enseignement sur l'économie, le marché du travail et la société a pour tâche principale l'élaboration d'indicateurs relatifs à la formation des adultes pour parution dans la publication annuelle de l'OCDE *Regards sur l'éducation*. Dans le cadre de cette tâche, le Groupe a établi, au terme d'un vaste processus de consultation, une liste de 18 objectifs/questions stratégiques dans le domaine de la formation des adultes. Une fois les objectifs stratégiques définis, un cadre conceptuel a été développé afin de permettre la sélection systématique d'indicateurs de suivi. Ce cadre conceptuel se fonde sur une approche systémique, définissant le contexte, les ressources, les processus, les produits et les résultats du système de formation des adultes. Les objectifs stratégiques qui feront l'objet d'un suivi et le cadre conceptuel constituent la base de la définition et de la sélection d'une liste d'indicateurs susceptibles d'être publiés dans *Regards sur l'éducation*. Un autre élément à prendre en considération dans le développement d'indicateurs internationaux est l'existence de données comparables de bonne qualité. Le présent document inclut une liste de 44 indicateurs dont la publication est réalisable sur la base des sources de données existantes ou de sources de données susceptibles d'être disponibles dans un avenir proche. L'inégalité de la couverture des différents domaines stratégiques reflète à la fois l'orientation des sources de données existantes et les difficultés rencontrées pour la collecte de certains types de données.

MONITORING ADULT LEARNING POLICIES: A THEORETICAL FRAMEWORK AND INDICATORS

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Acknowledgements

Introduction

In today's knowledge and information society there is a broad consensus regarding the importance of human capital for the well-being of society as a whole and for the individuals that constitute this society. Moreover, it is agreed that the acquisition and updating of human capital should be conceived as a process of lifelong learning. Accordingly, indicators on education systems should not be limited to the observation and monitoring of policies from preschool to the end of university with a special focus on children and young adults. Bearing in mind the constant evolution of knowledge, as well as the aging of the population in many societies, there should be a special focus on the production of indicators for monitoring adult learning policies.

Further investment in education and training, following initial education, is essential to upgrade labour force skills and increase an economy's overall skill level. One of the goals of adult education and learning is to develop the skills for the knowledge society and economy, for today and for future labour markets. Globalisation and changes in technologies, employment, work organisation and demographics increase the level and range of skills and knowledge required in the workplace.

Globalisation: New technologies, allied with government trade policies, have broadened the international marketplace for goods and services. This has increased competition for skills among countries and their citizens, particularly in high-growth, high-technology markets.

Technological change: In addition to fostering globalisation generally, the development of new information technologies has hastened the growth of knowledge-based industries that rely on a highly skilled workforce. An ever-larger segment of the workforce (and the population) must be prepared to adapt to changing technologies in order to function effectively.

Changes in employment: Employment has shifted from agriculture and manufacturing to the services industries. Studies have shown "an increase in the application of skills within occupations" (OECD and Statistics Canada, 2000, p.8), such as communication skills, social skills and problem solving. Continuing education and training can help prepare the current workforce, particularly older workers, to adapt to the changes in their working environment. Changes in the organisation of work: In response to increased competitive pressures, firms are moving towards "flexible management" practices, which give more responsibility and autonomy to lower-level workers and thus increase their need for higher-level skills.

Demography: OECD countries have ageing populations and an ageing workforce. To maintain or increase the skill levels of the workforce, the "old" solution – to recruit ever better educated and skilled young people – will not suffice. Developing the skills of the existing workforce, including older workers, is indispensable.

Adult Learning can also contribute to non-economic goals such as personal fulfilment, improved health, civic participation, social inclusion, reduced levels of crime and environmental protection.

In the past decade, the central task of the Adult Learning Working Group of the OECD INES Network on Labour Market, Economic and Social Outcomes of Learning (LSO Network), formerly called Network B, has been the implementation of a strategy concerning the development, the selection and the

production of indicators for monitoring Adult Learning Policies in the context of the OECD education indicators program in general and the publication Education at a Glance (EAG) in particular. The implementation of this strategy has advanced considerably in the last few years. Policy goals/issues in the domain of adult learning have been identified through broad consultations. The formulation of the policy goals was developed by the Adult Learning working group of then Network B in the years 2005- 2006. It included a search of international and national sources for Adult Learning policy goals and a consultation of all member countries of the network asking for approval of the policy goals. The results have been used to formulate the present list of approved policy goals. A theoretical framework for monitoring such policies has been developed in 2008. A large set of indicators to give substance to the framework and monitor the policy goals were formulated and selected. A first data collection in OECD countries was conducted in 2009 and a selection of indicators on the basis of the EU Adult Education Surveys and similar surveys in non-European Statistical System (ESS) countries were published in «Education at a Glance» 2010 and 2011. More indicators will be published in «Education at a Glance» 2012. For Programme for the International Assessment of Adult (PIAAC), members of the Network have collaborated in the formulation of adult learning issues and questions as well as formulated proposals for indicators and analysis. Adult learning indicators based on PIAAC data are expected for EAG 2014.

Periodically, members of the adult learning working group and commissioned experts have published papers formulating the conceptual and empirical basis for the further development of adult learning indicators. The papers include Borkowsky, Van der Heiden, and Tuijnman (1995), Borkowsky (2000) and Kuwan and Larsson (2008).

The present paper draws on these papers where still relevant and on the preparatory work by members of the Adult Learning Working Group (WG), namely Krüger-Hemmer and members of the Adult Learning Working Group (2007), de Broucker and Krüger-Hemmer (2008), Krüger-Hemmer and Adult Learning Task Group (2008) and Krüger-Hemmer and Editorial Group (2010). The complete list of indicators takes on board as many of the suggestions developed by the working group in the last years as possible.

The paper aims to have three functions:

1. To list possible measurable indicators – in relation both policy goals and a theoretical framework. The list of possible indicators is rather long;[1] it is not intended for publication in one issue of EAG.

2. To serve as a basis for possible input into the future development of surveys and data collections, both at the international and the national level.

3. To provide justification for the selection of indicators to be implemented in future editions of EAG. The work of implementation of adult learning indicators in EAG includes the identification of policy areas of priority interest, the investigation of the state of international comparable data sources, the collection and compilation of the necessary data, the calculation of the indicators and the writing of analytical text. The present paper does not intend to replace these steps - its function is rather to suggest a place to start.

Adult learning policy goals and a theoretical framework for adult learning

Adult learning policy goals

With supporting policy being the overarching aim, the first element of the LSO Network Adult Learning Working Group's strategy to develop indicators for monitoring adult learning policies has been the identification of such policy goals. These goals have been derived in an iterative process of an analysis of international and national documents, country consultations and discussions in working group meetings between 2005 and 2008. The 18 goals in six different policy areas represent general goals believed to be stable the whole OECD area.[2]

Adult learning policy areas	Policy goals/issues
Updating knowledge and raising skills / Facilitate social and economic participation	1. Develop skills for the knowledge society and economy, for today's and future labour market 2. All adults should have acquired basic skills/key competencies 3. Encourage lifelong learning also for non-economic goals such as personal fulfilment, improved health, civic participation, social inclusion, reduced levels of crime and environmental protection
Reducing inequalities	4. Improve demand for, access to, and success in learning opportunities (general and workplace-based; formal, non-formal and informal) for low skilled and others who face barriers or are under-represented 5. Take proper account of adult learning needs as well as barriers to participation 6. Support learning strategies leading to active participation of older persons in employment and in society

Investment
  – *level of investment*
  – *human resources*
	7. Enhance investments in and efficiency of adult learning by both public (governments, learning institutions and communities) and private (industry and individuals) sectors
	
	8. Ensure adequate supply of adult teachers and trainers

Information and guidance/ Facilitating Access	9. Improve the information and active guidance provision and counselling systems that motivate, inspire, and raise confidence to engage in learning, at all stages in the life course, especially for information- and assistance-deprived groups
Usability/ Certification	10. Recognise competencies and skills through an appropriate certification system with integrated prior learning assessment and recognition mechanisms 11. Support environments which foster self-directed learning with appropriate recognition systems 12. Develop mechanisms to recognise knowledge and experience through prior learning assessment 13. Implement tools to assess and recognise and ensure transferability of knowledge, skills and competences

Adult learning policy areas	Policy goals/issues
Quality / Organisation of education delivery	14. Optimise ways (i.e. time, mode, modularity, venue) of delivery for each clientele in a learning system that involves all adult learning stakeholders (institutions, community-based providers, public and private employers, governments) and integrates the learning experience across sectors
	15. Encourage for-profit and non-for-profit adult education organisations to contribute with a wide and flexible supply of courses and study programmes
	16. Develop harmonised metrics and evaluation strategies to measure quality and impact of adult learning programmes as well as their outcomes in terms of economic and quality of life benefits for both individual learners and society
	17. Ensure that teachers and trainers get the relevant continuing training/professional development
	18. Achieve high completion/success rates of adult learning courses

A theoretical framework for adult learning (Input-process-output-outcomes)

After identifying the policy goals, a theoretical framework was developed in order to be able to systematically select indicators for monitoring them.

Adult ...

Formal education systems in general have as their primary target group children and young people pursuing their initial education. Adult learning systems would address a different clientele, namely the adults. Formerly, the activity of the network aimed at developing indicators of continuing education and training, thus defining the target group as persons having left initial education. Adults also has the meaning of persons of older age and more independence than children and youths. In modern societies the two dimensions, age and completion of initial education coincides less and less. "Adult" is thus a multi-faceted term.

The recommendations for Adult Learning (AL) surveys developed on the behalf of the AL WG of Network B (NWB) state: "The question of lower and upper age limits is controversial. In the EU Adult Education Survey (AES), the final recommendation was to focus on a target population from 25 to 64 years. For countries with different priorities, it is possible to widen the target population in national surveys and quite a few countries do so (see Larsson, 2006, p. 3). Since the target population is a key issue for an AL survey, this question will be discussed in detail. The focus on the population of 25 to 64 years chosen by the EU AES has advantages and disadvantages. The main advantage is that this pragmatic specification helps reduce some rather complicated problems. This age limit probably leads to a rather small number of persons who are in initial education. Because of this, the final EU AES questionnaire does not have to deal with the problem of separating initial from continuing education. Some countries, however, have included such questions in their national questionnaires. On the other hand, excluding those less than 25 years of age can have serious consequences. A considerable number of 18-24 year olds are not in initial education and it is very likely that this group often will participate in adult learning activities – sometimes the same activities as those 25 years and over. To maintain an age limit of 25 years or more will prevent a comprehensive examination of adult learning activities. […] Should there be an upper age limit?

The consequences of setting an upper age limit such as excluding those 65 years of age and over do not appear as serious as the consequences of decisions on minimum ages discussed earlier. Although it varies by country, seniors have low rates of participation in adult learning. However, with an aging population in many OECD countries, the participation of seniors in learning activities will become of greater policy interest, given the growing recognition of the benefits that all adults, and not just those who are economically active, can gain from engaging in learning. […] A pragmatic option would be to focus on the population of 25 to 64 years as suggested in the EU AES in order to reduce some problems like separating initial from continuing education."(Kuwan and Larsson, 2008, p.17)

...learning ...

Obviously, "learning" is a key concept in monitoring adult learning systems. Since the concepts should serve as a starting point in structuring indicators, the starting point will be definitions used in education statistics.

ISCED 1997 defines learning as… "any improvement in behaviour, information, knowledge, understanding, attitude, values or skills". (UNESCO and UNESCO Institute for Statistics, 1997)

The further developmental work on the European Adult Education Survey resulted in the following definitions: "The main purpose of AES is to describe participation in education and learning by adults. Learning activities are defined as ―*any activities of an individual organised with intention to improve his/her knowledge, skills and competence*. Intentional learning is defined as ―*a deliberate search for knowledge, skills, competences or attitudes of lasting value*. The learning activities are divided into formal education, non-formal education and informal learning, which are defined according to the classification of learning activities. The criteria used for distinguishing between the three categories in the classification of learning activities are ―intention to learn, ―institutionalised and ―included in the National Framework of Qualifications (NFQ) (see the figure below).

Figure 8:
Concept of formal education, non-formal education and informal learning in the European AES

Developed by Eurostat / Taskforce AES
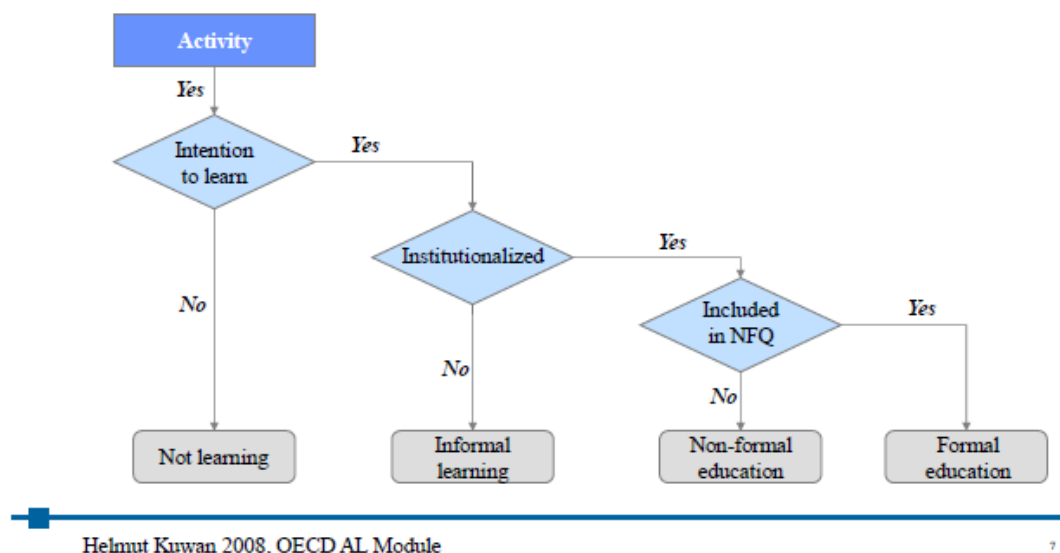
Helmut Kuwan 2008, OECD AL Module

Source: Text and figure from: (Kuwan & Larsson, 2008, p.27)

Not all improvement in the skills and competencies of individuals are the result of deliberate and intentional activities with the focus on learning. Such an improvement can also be the result of participating in an activity with other principal goals such as working, looking after one's children, attending a meeting, reading for pleasure, watching television or simply interacting with other people. It is often assumed that such random learning is important for the overall skill level.

…systems

The theoretical framework is based on a *systemic* approach distinguishing between the context of the system of adult learning, system inputs, system processes, system outputs and outcomes of the system. **"System** (from Latin *systēma*, in turn from Greek σύστημα systēma, "whole compounded of several parts or members, system", literary "composition" is a set of interacting or interdependent components forming an integrated whole. Most systems share common characteristics, including:

- Systems have structure, defined by components and their composition;
- Systems have behaviour, which involves inputs, processing and outputs of material, energy, information, or data;
- Systems have interconnectivity: the various parts of a system have functional as well as structural relationships to each other." (Wikipedia: "System")

General contextual factors are considered not being part of the adult learning system but having an important impact on different aspects of the functioning of the system. The main factors mentioned in the framework are demography, economic conditions, technology and the institutional infrastructure.

11

The **adult population** represents the potential participants in the adult learning system. To highlight the importance of this factor, it is placed in a special box in the framework. Main dimensions for describing the potential participants are age, gender, educational attainment, migrant status, and labour force status and skill level, including the skills in learning and making use of the adult learning system. These same dimensions can be used to describe participants and non-participants.

Specific contextual factors represent the factors generating demands for skills and competences in individuals such as the workplace environment, civic and social participation as well as associative & family life.

On the boundary between the context and the adult learning system potential participants are transformed into actual participants in the adult learning system; **barriers** function to keep them away, while **promotions and guidance systems** encourage them to enter the system.

Inputs represent factors shaping the system. The participants and their demands/needs for specific offers from the adult learning system can be considered as inputs. Other inputs include human resources such as teachers and trainers and investments measured directly (financial inputs) or indirectly (time invested measured through participation rates). To highlight the importance of resources, they are placed in an extra box in the graphical illustration of the framework (Figure 1).

Process stands for the process of transformation of inputs into outputs of the system. The clearer these processes are, the more efficient and effective an adult learning system can be designed. Factors mentioned are the providers, the organisation of delivery, the flexibility of the supply, evaluation strategies including Prior Learning Assessment and Recognition (PLAR) systems and teacher training.

Adult learning systems are expected to produce human capital in form of skills, competencies and expertise as its main **output**. However as data measuring the direct effects of adult learning on the increase of human capital are lacking, indirect human capital measures expected of being directly attributable to adult learning activity within the system are used such as measures on certification. Success and completion rates represent another category of outputs of the system.

Outcomes represent the impact of the system on other phenomena outside the system. It is expected that the adult learning systems has an influence on societal human capital in improving skills and competences. As such it should contribute to the positive economic and social returns of improved skills and competencies such as higher earnings or a higher employability. In order to speak with confidence of real outcomes, there should be sound empirical evidence of the existence of a causal link between the system and the phenomenon measured outside of the systems (i.e. economic growth, employment, social inclusion, etc.). In order to speak with confidence of outcomes of the adult learning system, its contributions should not be negligible (in comparison with the initial education system and random learning).

The framework developed thus far has its main focus on the systems of formal and non-formal learning for adults. **Informal learning** is part of the overall adult learning system – specific inputs include the learning-to-learn skills of the participants and "materials" with which to learn. **Process** would include the methods of learning, while the output focuses on skills and competencies.

The framework is systemic, and it also and involves feedback processes, especially the output changing the context and the potential input into the system. Given the short duration of the average adult learning cycles - compared with the initial education system - this change is fairly fast.

Figure 1: Framework for adult learning
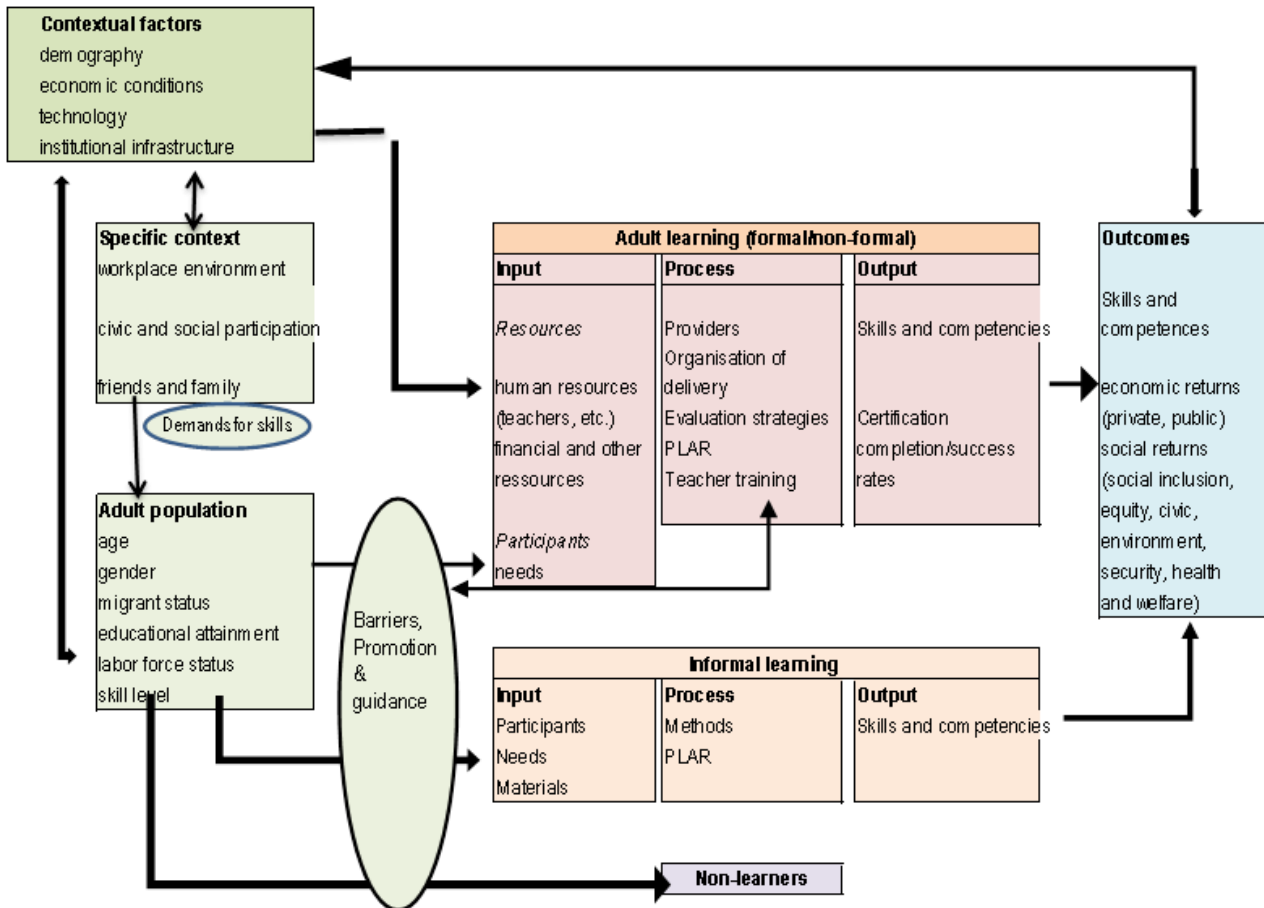
Matching the policy goals to the framework

The next step is to match the policy goals included in the list above to the theoretical framework

(Figure 2). When looking at this model we see that each goal is allocated to at least one element of the model. Some goals are allocated to 2 elements (goals 1, 2, 3, 5 and 14) and goal 4 is allocated to 3 elements.

Informal learning is covered only in the most general way, and there are no goals attached to the contextual factors, the specific context and the adult population.

Figure 2: Framework for adult learning with matching policy goals
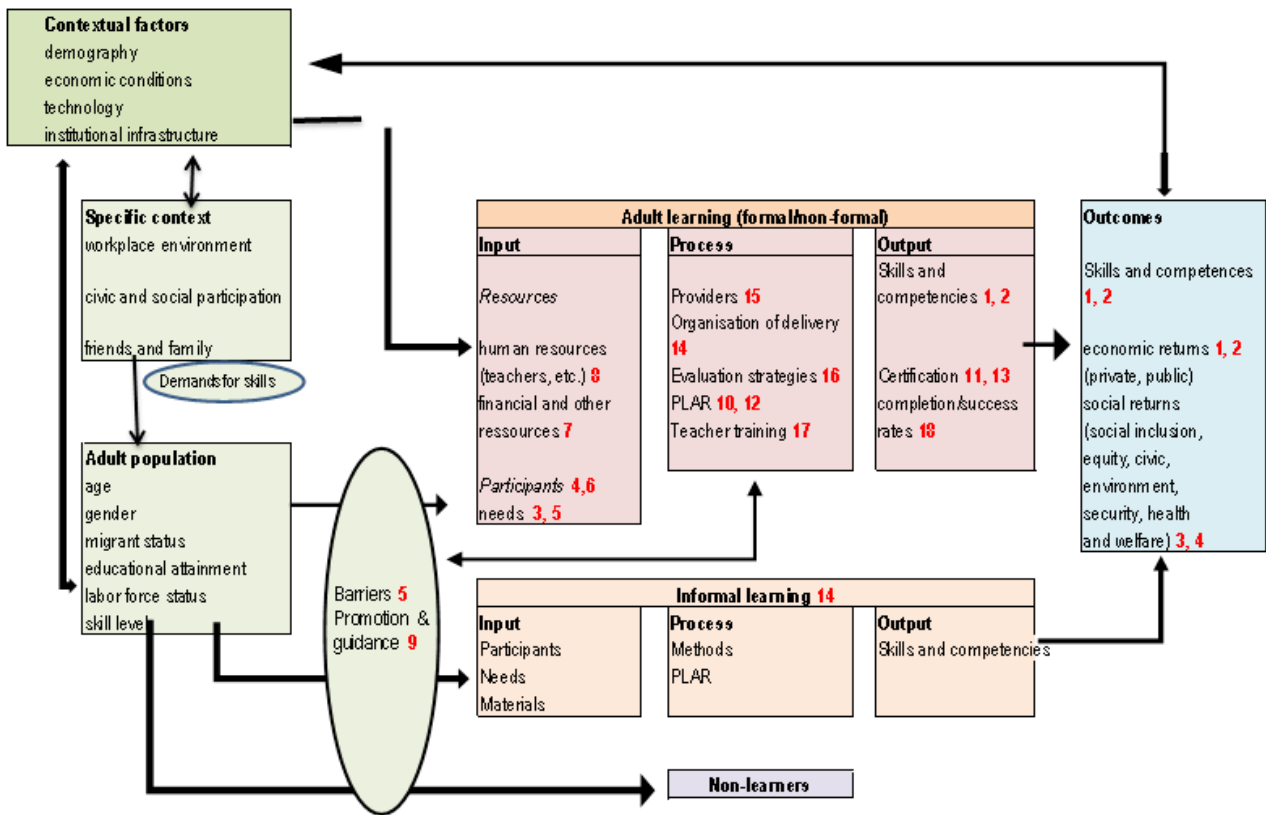
Source: Figures in red related in goals.

Indicators

The policy goals to be monitored and the theoretical framework constitute the basis for the definition and selection of a list of indicators, which might be published in EAG. The proposal of indicators is structured according to the 18 policy goals.

Sources

The LSO Adult Learning Working Group has produced a number of papers on this task. A first paper, developed in 2007, discusses the concepts and issues, gives ideas for indicators and possible data sources for all policy goals, although the different ideas are covered very unevenly. (Krüger-Hemmer and members of the Adult Learning Working Group, 2007)

Next the working group proceeded to work on indicators which could be produced by the European Adult Education Survey and similar national survey in non-ESS countries. (Krüger-Hemmer and Adult Learning Task Group, 2008) A data collection was conducted in 2009 and three sets of indicators were published in 2010, 2011 and 2012 (OECD, 2010a, 2011).

The working group has followed the developmental work for PIAAC for quite some time. 2010 indicators based on PIAAC data were proposed (Krüger-Hemmer and Editorial Group, 2010), and a first set of indicators was calculated with the field test data and presented at the meeting in Luxemburg in 2011. ("Review of tests with PIAAC field test data - list of indicators to be tested," 2011)

All these materials were used in the definition and selection of indicators.

Structure

The indicators section includes a short discussion of the policy goal, an indication of the concept in the theoretical framework, an enumeration of the measurable (in principle) dimensions and the state of definition of the dimension. For each indicator are listed:

- policy question,
- the international comparison intended,
- further breakdown dimensions,
- data sources and
- feasibility. The feasibility ranges from already published in EAG to needing new data collections.

Updating knowledge and raising skills

Goal 1: *Develop skills for the knowledge society and economy, for today's and future labour market*[3]

The relationship between knowledge and skills and the economic success of both individuals and societies has long been recognised. The role of knowledge and skills in fostering economic development has a strong theoretical foundation, supplemented by an extensive empirical base. Succinctly, knowledge and skills are the "human capital" that is used in the labour market to produce goods and services, which

increases productivity, and thus company profits. The productivity associated with skills creates a demand for human capital, which is reflected in increased earnings for those who have higher levels of human capital. Education is the primary means of building human capital, so education is often used as a proxy for human capital. A more direct measure of human capital, however, would be a measure of the skills and knowledge that are required in the workforce. It should be noted that there are two general types of skills that are useful in the workforce: general skills and job-specific skills. For example, all workers need to have basic reading, writing, mathematics, and speaking skills, but a French literature teacher must also have job-specific pedagogical skills as well as knowledge of the body of work that comprises French literature, including its history and interpretation. PIAAC and its prequels attempt to measure some general skills such as literacy, numeracy and problem-solving skills, which are presumably related to employability skills, directly.

Goal 1 focuses on the uprising of skills and competences of the labour force. Adult learning contributes to the necessary acquisition of new skills and competences and prevents loss of skills. In the context of monitoring adult learning systems, the focus lies on the learning activities adults undertake. Among the outcomes of the learning activities are the economic benefits from a better-educated workforce, both at the individual level as at the general level. However, it is not really possible to distinguish the benefits due to the skills and competencies acquired by the learning activities of the last year, which are captured in the indicators on adult learning systems, from the benefits due to skills and competencies acquired in initial education and by further learning activities all along one's life course. In fact, the skills and competencies learned in the last year are an ever-diminishing part of the total of an individual's skills and are apt to be a small part, at least for adults.

Much of adult learning for workplace skills is in response to changing skill demands from work. Technological change changes the work to be done and with it, the skills required. Workplaces differ in the speed with which change occurs and in which new skills have to be learned.

In the *theoretical framework*, improvement of skills of the labor force is considered an output and an outcome of the adult learning system. Skill demands coming from job requirements are placed in a mediating box between the workplace conditions and the adult population.

The *measureable dimensions* are:
- participation in learning activities for job-related purposes
- time spent in learning activities for job-related purposes
- educational attainment and skill levels
- workplace factors likely to influence skill demands (full-time, part-time status, occupation, industry, firm size)
- perceived need for further training to cope with work duties

Indicator 1: Participation rate in job related non-formal education by educational attainment

Policy question	What is the participation in a job-related perspective in the adult learning system by individuals with different educational attainment?
International comparison	Compare the participation rates between countries
Further breakdowns	Characteristics of participants: age group, gender, labour force status
Data sources	EU Adult Education Survey, other national surveys[4]
Feasibility	Indicator published in EAG 2010

Indicator 2: Participation in job-related non-formal education by skills levels

Policy question	What is the participation in a job-related perspective in the adult learning system by individuals with different skill levels?
International comparison	Compare the participation rates between countries
Further breakdowns	Characteristics of participants: age group, gender, labour force status
Data sources	PIAAC
Feasibility	Indicator proposed for EAG 2014

Indicator 3: Participation in formal/non-formal education by workplace aspects

Policy question	What is the participation in the adult learning system by persons, whose workplace has different characteristics? (full-time/part-time, occupation, industry)
International comparison	Compare the participation rates between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment level
Data sources	EU Adult Education Survey, other national surveys
Feasibility	Indicator published in EAG 2010

Indicator 4: Percentage of employed persons with self-reported need for further training to meet work duties by skill level and skill requirement of the job

Policy question	What is the rate of persons who need a skills upgrade for their present job? How is the need for training related to the skill level of the person, and how is it related to the skill level of the job? The policy questions refer to the problem of skills mismatch
International comparison	Compare the participation rates between countries
Further breakdowns	Characteristics of employed persons: age group, gender
Data sources	PIAAC
Feasibility	Indicator proposed for EAG 2014

Further indicators for this policy goal – these further indicators would be presented and analysed with an emphasis on job-related adult learning:

Indicator 18: Mean hours per participant in non-formal education (NFE)

Indicator 19: Mean hours per adult in non-formal education

Indicator 20: Expected hours over the working life in all and in job-related non-formal education

Indicator 34: Informal learning by type of activity and purpose of the learning

Goal 2*: All adults should have acquired basic skills/key competencies*

This is a rather sweeping aim, although it is liable to be monitored by indicators. Whatever the definition of basic skills, there is a certain number of persons who will not reach this level. The number of such adults should be reduced to zero. The contribution of the adult learning system to reaching the goal would of course best be monitored by long panel studies, which could show the influence of adult learning on the acquisition of basic skills. When young people after initial education do not meet the threshold for basic skills, the lack would have to be taken up by the adult learning system.

In the *theoretical framework*, improvement of skills of the adult population is considered an output and an outcome of the adult learning system.

The measureable dimensions are:

- basic skills/competencies

Indicator 5: Rate of individuals who do not have basic skills, overall and for young people

Policy question	What is the rate of persons who do not have a sufficient level of skills? Is the rate high among young people who have left initial education?
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of persons: gender, age
Data sources	PIAAC
Feasibility	Indicator proposed for EAG 2014

Further indicators for this policy goal – these further indicators would be presented and analysed with a special focus on groups with low skills / low educational attainment:

Indicator 2: Participation in job-related non-formal education by skill levels

Indicator 4: Percentage of employed persons with self-reported need for further training to meet work duties by skill level and skill requirement of the job

Indicator 6: Participation rate in all NFE and in NFE for personal reasons

Indicator 33: Participation rate on formal and/or non-formal education

Indicator 34: Informal learning by type of activity and purpose of the learning

Goal 3: Encourage lifelong learning also for non-economic goals such as personal fulfillment, improved health, civic participation, social inclusion, reduced levels of crime and environmental protection

The skills and knowledge obtained through education are not important just at work, however, but also in daily life outside of work; this is particularly true for general skills. While there is less empirical evidence on how skills affect one's nonworking life, it is obvious that a lack of skills, such as illiteracy, limits how well one can function in life. Social integration requires that individuals have the basic skills and knowledge needed to exercise their rights and responsibilities as citizens, and to enjoy the benefits of community life. Moreover, social integration is fostered by the "common view" transmitted to society's youth through education.

It must be admitted, however, that the empirical evidence on the role of education (beyond basic education) in facilitating social integration is weak. There is no question that education and various measures of social cohesion are related, but how they are related (the causal mechanism) is not clear. Nonetheless, the implementation of compulsory education systems around the world has been motivated by recognition of the importance of human capital development for both the social and economic success of individuals and societies.

Goal 3 focuses on the uprising of skills and competences of the population in general. Adult learning contributes to the necessary acquisition of new skills and competences and prevents loss of skills. In the context of monitoring adult learning systems, the focus lies on the learning activities adults undertake. Among the outcomes of the learning activities are the life benefits mentioned in the goal, both at the individual level as at the general level. However, it is not really possible to distinguish the benefits due to the skills and competencies acquired by the learning activities of the last year, which are captured in the indicators on adult learning systems, from the benefits due to skills and competencies acquired in initial education and by further learning activities all along one's life course. In fact, the skills and competencies learned in the last year are an ever-diminishing part of the total of an individual's skills and are apt to be a small part, at least for adults.

In the *theoretical framework*, non job-related skills and outcomes not related to the labour market are placed in the output, resp. the outcomes box.

The measureable dimensions are:

- participation in all non-formal education and in non-formal education for personal reasons

Indicator 6: Participation rate in all NFE and in NFE for personal reasons

Policy question	How many individuals participate in NFE and in NFE for personal reasons?
International comparison	Compare the rates across countries
Further breakdowns	Characteristics of participants: age, gender, educational attainment, skill level, labour force status
Data sources	EU AES, other national surveys; PIAAC
Feasibility	Published in EAG 2011

Further indicators for this policy goal – these further indicators would be presented and analysed with a focus on learning for personal reasons:

Indicator 18: Mean hours per participant in non-formal education

Indicator 20: Expected hours over the working life in all and in job-related non-formal education

Indicator 34: Informal learning by type of activity and purpose of the learning

Reducing inequalities

***Goal 4**: Improve demand for, access to, and success in learning opportunities (general and workplace-based; formal, non-formal and informal) for low skilled and others who face barriers or are under-represented*

The goal is to achieve equity in all phases of adult learning, for all groups who might not be represented well in the adult learning system. Policy makers are called upon to include older people (goal 6), the low skilled and other groups who face barriers. Among the latter might figure migrants, disabled persons, persons speaking a different language from the mainstream in the country and inhabitants of rural areas. The indicators should permit the identification of the groups, which are under-represented in Adult Learning, permit the analysis of possible differences between countries and preferably allow the establishment of time series in order to monitor the development over time. Data for low skilled and older persons are already available, while data on the other groups might be added at some future point – always depending on the availability of comparable data. Internationally comparable surveys such as PIAAC could be used to identify further underrepresented groups.

In the *theoretical framework*, equity figures among the non-economic outcomes.

We do not propose a separate list of equity indicators. Charts and comments, highlighting the distance of the groups at a disadvantage from the average / the most privileged group, can address equity issues. These special analyses can be based on:

Indicator 4: Percentage of employed persons with self-reported need for further training to meet work duties by skill level and skill requirement of the job

Indicator 6: Participation rate in all NFE and in NFE for personal reasons

Indicator 7: Rate of unmet non-formal education needs by participation in non-formal education

Indicator 8: Obstacles to further participation in NFE for NFE participants

Indicator 9: Obstacles to participation in NFE for non-participants in NFE

Indicator 18: Mean hours per participant in non-formal education

Indicator 19: Mean hours per adult in non-formal education

Indicator 20: Expected hours over the working life in all and in job-related non-formal education

Indicator 25: Rate of persons who have looked for and found information

Indicator 26: Participation in formal/non-formal education, according to whether individuals have looked for and found information about learning activities

Indicator 31: Participation rate in non-formal education by way of delivery

Indicator 33: Participation rate on formal and/or non-formal education

Indicator 34: Informal learning by type of activity and purpose of the learning

Indicator 39: Benefits to participants in non-formal education

Indicator 43: Usefulness of the skills and competences acquired during the course

Goal 5*: Take proper account of adult learning needs as well as barriers to participation*

This goal is assigned to the policy area "reducing inequalities"; the focus is thus on bringing all groups into the adult learning system. The design of adult learning systems should be such that the needs of all (potential) participants are taken into account. If this were the case, all persons wanting to undertake learning activities would find an appropriate offer and presumably undertake the activity.[5] The design of the adult learning system should be such as to minimise the barriers or obstacles to participation. "Obstacles in adult learning are influencing factors reducing the probability of adults to participate in adult learning activities. […] When looking at obstacles it is also important to differentiate between participants and non-participants. The EU AES concept (see AES manual 2005, p. 28) tries to focus on four groups:

- Respondents who already participated and did not want to participate more;

- Respondents who already participated but wanted to participate more;

- Respondents who did not participate but wanted to participate;

- Respondents who did not participate and did not want to participate" (Kuwan and Larsson, 2008 p.58).

In the *theoretical framework*, learning needs are placed among the inputs and associated with participants in the adult learning system. The barriers are placed on the boundary of the adult learning system and intervene between potential participants and actual participants. Barriers or obstacles are closely related to the process, namely the organisation of delivery (see goal 14). Given the position of the factor barriers in the framework, replacing the concept of barriers with "obstacles and incentives" in a further version of the framework might be profitable. See also the discussion and suggestion in (Kuwan and Larsson, 2008).[6]

The *measureable dimensions* are:

- Self-reported desire to participate (more) in non-formal learning activities; self-report on obstacles to participation in non-formal learning activities; all obstacles, the most important obstacle.

Indicator 7: Rate of unmet non-formal and/or formal education needs by participation in non-formal and/or formal education

Policy question	What is the distribution of the 4 groups? (a: respondents who already *participated* and *did not want to participate more*; b: respondents who already *participated* and *wanted* to participate more; c: respondents who did *not participate* and but *wanted* to participate; d: respondents who did *not participate* and *did not want* to participate)
International comparison	Compare the distributions between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment level, labour force status, migrant status
Data sources	EU Adult Education Survey, other national surveys ?; PIAAC
Feasibility	Tables can be calculated by EUROSTAT, other national surveys ?; PIAAC

Indicator 8: Obstacles to further participation in NFE for NFE participants

Policy question	What prevents participants in NFE from further participation? • by obstacles that made it difficult to participate • by the most important obstacle that made it difficult to participate
International comparison	Compare the importance of obstacles between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment level, labour force status, migrant status? Further NFE needs (wanted to participate in NFE or not)
Data sources	EU Adult Education Survey, other national surveys?; PIAAC
Feasibility	Table can be calculated by EUROSTAT for ESS, other national surveys ?; PIAAC

Indicator 9: Obstacles to participation in NFE for non-participants in NFE

Policy question	What prevents participants in NFE from further participation? • by obstacles that made it difficult to participate • by the most important obstacle that made it difficult to participate
International comparison	Compare the importance of obstacles between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment level, labour force status, migrant status? Further NFE needs (wanted to participate in NFE or not)
Data sources	EU Adult Education Survey, other national surveys?; PIAAC
Feasibility	Table can be calculated by EUROSTAT for ESS, other national surveys ?; PIAAC

Goal 6*: Support learning strategies leading to active participation of older persons in employment and in society*

The policy goal implies that older persons could pursue learning strategies that lead to their active participation in employment and society and that policy makers could support these learning strategies. The causal relations would be difficult to prove. Some correlations could be shown. To monitor the policy goal information is needed on the participation of older people in employment, society and all types of learning activities.

The measureable dimensions are:

- "older people" is a vague term. In principle, it could mean senior citizens of retirement age for whom the element of social participation is important. Since also employment is mentioned as a goal, it will be interpreted as referring to the 55-64 year olds[7]

- participation in employment = labour force status

- participation in society = civic and social participation – some limited data are available in PIAAC (participation in voluntary work, attitudinal data about active citizenship)

- learning strategies: participation in all types of learning activities – formal, non-formal and informal = active learners

Indicator 10: Rate of participation in all types of learning activities by age group

Policy question	What is the rate of active learners among older persons?
International comparison	Compare the rates of older persons between countries or compare the rates of age groups within countries with an international comparison of the relative differences between age groups
Further breakdowns	Characteristics of older people: gender, educational attainment level, labour force status, migrant status?
Data sources	EU Adult Education Survey, other national surveys AL 2009 data collection for formal and non-formal learning activities
Feasibility	Tables published for participation in formal and non-formal education

Indicator 11: Employment rate of active older learners

Policy question	Is the employment rate of active learners higher than the employment rate of non-learners among older people?
International comparison	Compare the rates of older persons between countries or compare the rates of age groups within countries with an international comparison of the relative differences between age groups
Further breakdowns	Characteristics of older people: gender, educational attainment level, labour force status, migrant status?
Data sources	Adult Education Survey, PIAAC
Feasibility	Good with PIAAC data

Indicator 12: Social participation rate of active learners among older people

Policy question	Is the social participation rate of active learners higher than the social participation rate of non-learners among older people?
International comparison	Compare the rates of older persons between countries or compare the rates of age groups within countries with an international comparison of the relative differences between age groups
Further breakdowns	Characteristics of older people: gender, educational attainment level, labour force status, migrant status?
Data sources	PIAAC
Feasibility	Good for the limited participation measures available in PIAAC

Investment

Goal 7: Enhance investments in and efficiency of adult learning by both public (governments, learning institutions and communities) and private (industry and individuals) sectors

To monitor the goal of enhancing total (both by public and by private sectors) investments in adult learning calls for establishing time series on different aspects of investment. The investments discussed are financial investments and the more indirect measure of time invested by the participants in adult learning.

Financial investments in adult learning include a) *direct expenditures* on and b) *opportunity costs* of adult learning.

Direct expenditures: Previous work by OECD has shown that measuring the direct expenditures of adult learning is very difficult. The direct expenditures include

- the spending of formal educational institutions for adults,
- spending for non-formal education and,
- the expenditures for informal learning.

24

One could estimate the direct expenditures for adults in formal education (as the proportion of all expenditures corresponding to the proportion of "adult" students for example). An estimation of funds spent on educational goods for adults by private households might be possible. Comparable data on direct expenditures for non-formal education in enterprises are collected via the EU Continuing Vocational Training Survey (CVTS). Depending on the country, the resulting lack of coverage is considerable. There are no comparable data on expenditures for non-formal education by other providers. These expenditures would be the subject of provider surveys.

Opportunity costs: The main opportunity costs are

- the costs of working time devoted to learning instead of productive work and

- the foregone earnings of persons who devote time to learning instead of working for pay.

The opportunity costs due to the lost productive time of the workers can be estimated by using a measure of *labour cost,* such as it is presented in indicator A10 (OECD, 2010a). These opportunity costs could be reported directly or expressed as a percentage of annual costs for full-time work. An estimate of the total amount of the opportunity costs can be expressed as a percentage of GDP.

The policy goal calls for enhancing investment by both the public and the private sector. Indicators should show *who* invests and be broken down by the dimension public vs. private sector investment, with subdivisions within each category:

- Public government, public learning institutions, public communities

- Private industry, private individuals

There are different ways of looking at direct education expenditures: one can examine the sources of the funds or the location where the spending occurs (see "Classification of educational expenditure" in EAG).

The first dimension - *Sources of investment in adult learning* with the categories: public (central or local government), public or private employers[8], and private individuals. Direct expenditures are allocated to the sources of funding directly. Opportunity costs for learning during paid working hours are borne by the (public or private) employers, while the foregone earnings are by definition borne by the private individuals.

The breakdown dimension 2 - *Location of spending on adult learning* with the categories: public learning institutions, private learning institutions, other organisations offering formal or non-formal education, communities. The funding sources of these might be public funds from government (central or local) and other funds such as tuition fees paid for by both employers (public or private) and individuals.

In adult education, the participants spend very different amounts of time in learning activities. The participants' investment of time in learning activities is an accessible part of information. Relating the time invested to the adult population gives a more precise measure of the societal investment in a given part of the population.

In the *theoretical framework*, financial and other investments are placed among the inputs of the system.

The measurable dimensions are:

- direct expenditures for non-formal education by source of funding and location of spending

- cost of working time devoted to non-formal job-related education

- expenditures of private households for learning goods for the adults in the household

- time for non-formal education per participant broken down for job-related education and education for personal reasons

Indicator 13: Direct expenditures for non-formal education by sources of funding and type of provider (location of spending)

Policy question	How much do enterprises spend on the training of their employees? (source of funding = location of spending) What is the source of funding for other providers? What is the amount spent by other providers to finance the non-formal education organised by them?
International comparison	Compare the amounts between countries Compare the distribution of the funds between the categories
Further breakdowns	Characteristics of enterprises: industry, size Type of provider Source of funds
Data sources	CVTS, other national surveys; provider surveys
Feasibility	Depending on the availability of other national surveys and provider surveys

Indicator 14: Expenditure of private households for educational goods for adults

Policy question	How much do private households spend on educational goods for the adults in the household?
International comparison	Compare the amounts between countries
Further breakdowns	
Data sources	Surveys on household expenditures
Feasibility	Depending on the possibility to distinguish educational goods for adults in a comparable way

Indicator 15: Annual costs of working time devoted to non-formal job-related education per participant

Policy question	What are the opportunity costs of non-formal job-related education for employers?
International comparison	Compare the amounts, the ratios of annual labour costs and the ratio of GDP between countries

Further breakdowns	Characteristics of the participants: age, gender, educational attainment
Data sources	EU Adult Education Survey, other national surveys; LSO data collections (Adult Learning working group and economic working group)
Feasibility	Published in EAG 2012

Indicator 16: Expected costs of working time devoted to non-formal job-related education over the working life of an employee

Policy question	What are the expected opportunity costs of non-formal job-related education for employers over the working life of an employee?
International comparison	Compare the amounts between countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment
Data sources	EU Adult Education Survey, other national surveys; LSO data collections (Adult Learning working group and economic working group)
Feasibility	Published in EAG 2012

Indicator 17: Expenditure for adult learning activities as percentage of GDP

Policy question	What is the part of GDP invested in non-formal education? Which is the distribution according to the sources of funding (direct expenditures funded by private firms, private households and public sector)?
International comparison	Compare the rates and the distributions between countries
Further breakdowns	
Data sources	See Indicator 13, Indicator 14 and Indicator 15
Feasibility	Cost of working time published in EAG 2012

Indicator 18: Mean hours per participant in non-formal education

Policy question	How much time does the average participant devote to non-formal education in a year? Is the time invested in job-related education or in non-formal education for personal reasons?
International comparison	Compare the amounts between countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment, labour force status
Data sources	EU AES and other national surveys
Feasibility	Published in EAG 2010 and 2011

Indicator 19: Mean hours per adult in non-formal education

Policy question	How much time in non-formal education is invested in an adult per year? Is the time invested in job-related education or in non-formal education for personal reasons?
International comparison	Compare the amounts between countries
Further breakdowns	Characteristics of the adults: age, gender, educational attainment, labour force status
Data sources	EU AES and other national surveys
Feasibility	Published in EAG 2010 and 2011

Indicator 20: Expected hours over the working life in all and in job-related non-formal education

Policy question	How much time will an average individual devote to non-formal education over his or her working life? What proportion of a full-time working year does this represent?
International comparison	Compare the amounts between countries
Further breakdowns	Characteristics of the participants: gender, educational attainment
Data sources	EU AES and other national surveys
Feasibility	Published in EAG 2011

Goal 8: Ensure adequate supply of adult teachers and trainers

Teachers and trainers are an important resource in any education system, including the adult learning system. The policy should be to ensure an adequate supply of them. An adequate supply could refer to the quantitative aspect of having enough teachers and trainers or it could involve the additional aspect of having good teachers and trainers with the appropriate content qualifications and appropriate skills in the teaching and training of adults (andragogical competences). In any way, a first step in monitoring the policy goal is to describe the population of teachers and trainers in the adult learning system. This is a most difficult task, since a good description of the teachers and trainers would have to pass through the providers[9], which are a heterogeneous group. Additionally, what is meant by trainer would have to be defined. In PIAAC there is a question about whether the respondent teaches or supervises other people at work. The number of people who give training and who become trainers, in a very large sense of the term, could be calculated and their characteristics be shown. Enterprises organising intrafirm training constitute one type of provider for which some comparable data on trainers in a much more narrow sense of the term are available from CVTS and possibly similar enterprise surveys. It might be of interest to establish whether educational programmes for the training of teachers and trainers for adults exist within the formal education system.

In the *theoretical framework*, teachers and trainers are placed among the inputs of the system.

The *measureable dimensions* are:

- number of trainers in training enterprises (persons /full-time equivalents)

- number of teachers in other non-formal education providers

- number of persons with teaching or supervising components in their work

- existence of programmes for training teachers or trainers of adults, number of graduates of such programmes

Indicator 21: Number of trainers in enterprise training

Policy question	How many trainers are there – in both absolute numbers and full-time equivalents? As a percentage of the employees
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of trainers: age, gender
Data sources	CVTS, other national surveys; provider surveys[10]
Feasibility	Depending on the availability of the information in CVTS and in other national surveys

Indicator 22: Teachers for adults employed by other providers

Policy question	How many teachers are there – in both absolute numbers and full-time equivalents? As a percentage of the labor force
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of teachers: age, gender
Data sources	provider surveys
Feasibility	provider surveys

Indicator 23: Graduates from programs for training teachers and trainers of adults, numbers and percentage of all graduates by level of education

Policy question	Are there specialised programs for training teachers and trainers of adults and what proportion of graduates of a given level of a level of education do they represent?
International comparison	Compare the rates between countries
Further breakdowns	
Data sources	UOE data collection?
Feasibility	

Information and guidance

Goal 9: *Improve the information and active guidance provision and counselling systems that motivate, inspire, and raise confidence to engage in learning, at all stages in the life course, especially for information- and assistance-deprived groups*

To increase participation in adult learning, effective information, guidance and counseling services can help create accessible learning environments, support learning at all ages and in a range of settings, and empower citizens to manage their learning and work. A special goal is to reach out to information- and assistance-deprived groups. Direct systematic and comparable data on the information and guidance systems of countries do not seem to be available (Krüger-Hemmer and members of the Adult Learning Working Group, 2007), let alone data on information and guidance systems for adults.[11] The available data consist of the reports of persons on their use of different information sources in the process of searching for learning activities to pursue, as well as whether they were successful in finding information. Combining these data with the information on participation in learning activities, we get a very indirect and tentative indication of the success of the information and guidance system. The term "information and guidance system" has been used fairly loosely in this paragraph, we are fully aware that only very few of the usual sources of information on learning activities used by individuals could in any sense be regarded as part of the information and guidance system. An indicator showing the role of this system is proposed.

In the *theoretical framework*, the information and guidance system is placed on the boundary of the adult learning system and intervenes between potential participants and actual participants.

The measureable dimensions are:

- information on looking for information on learning activities
- information on finding information on non-formal education activities
- information on the sources (services/media) used for looking for information

Indicator 24: Persons who have not participated in formal/non-formal education and have not looked for information

Policy question	How many persons are outside of both the adult education system and the information and guidance system?
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment level, labour force status, migrant status?
Data sources	EU Adult Education Survey, other national surveys
Feasibility	Published in EAG 2010

Indicator 25: Rate of persons who have looked for and found information

Policy question	How many persons have had access to the information and guidance systems, and how successful was the information and guidance system in furnishing such

	information?
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment level, labour force status, migrant status?
Data sources	EU Adult Education Survey, other national surveys
Feasibility	Published in EAG 2011

Indicator 26: Participation in formal/non-formal education, according to whether individuals have looked for and found information about learning activities

Policy question	How does the participation in learning activities differ by the use of the information and guidance system and by the success of such consultation?
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment level, labour force status, migrant status?
Data sources	EU Adult Education Survey, other national surveys
Feasibility	Published in EAG 2010

Indicator 27: Adults finding information concerning learning activities by sources of information and by participation in formal/non-formal education

Policy question	How important is the "formal" information and guidance system for adults looking for information on learning activities? Are the participation rates different according to the sources of information?
International comparison	Compare the distribution of sources between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment level, labour force status, migrant status?
Data sources	EU Adult Education Survey, other national surveys
Feasibility	Published in EAG 2010

Usability / Certification

Goal 10: Recognise competencies and skills through an appropriate certification system with integrated prior learning assessment and recognition mechanisms

Goal 12: Develop mechanisms to recognise knowledge and experience through prior learning assessment

[I will discuss the two goals together, because it seems to me that an "appropriate certification system" with integrated PLAR (goal 10) would of necessity imply the development of "mechanisms to recognise knowledge and experience" (goal 12).]

The OECD activity on the recognition of non-formal and informal learning has identified some steps or phases involved in the recognition of competences and skills. "Although learning often takes place within formal settings and learning environments, a great deal of valuable learning also takes place either deliberately or informally in everyday life. Policy makers in OECD countries have become increasingly aware that this represents a rich source of human capital. In many cases, this is fully recognised through the wage premiums paid to those with experience. However, there are some people who are not fully aware of their own stock of human capital or its potential value. There are also some individuals who are unable to put all the learning they have acquired to full use because they are cannot easily prove their capabilities to others. Recognition of non- formal and informal learning outcomes does not, in itself, create human capital. Nevertheless, recognition makes the stock of human capital more visible and more valuable to society at large. […] Recognition of non-formal and informal learning outcomes involves a succession of steps. The first step is identification and documentation – identifying what someone knows or can do, and typically recording it. This is a personal stage, possibly with guidance. The second step is establishing what someone knows or can do. This may be a personal stage of self-evaluation (with or without feedback) or, where there is significant formalisation, it could involve reliance on an external evaluator. The third step is validation – establishing that what someone knows or can do satisfies certain requirements, points of reference or standards. In this stage, a level of performance is set and requires the involvement of a third party. The fourth step is certification – stating that what someone knows or can do satisfies certain requirements, and awarding a document testifying to this. This necessitates the involvement of an accredited authority to certify performance and possibly its level. The last step is social recognition – acceptance by society of the signs of what someone knows or can do. Ultimately, it would be possible for a recognition process to deliver fully equivalent qualifications to those obtained through formal learning." (OECD, 2010b)

Qualitative indicators on the existence of certifications systems and the type they take could be gleamed from the OECD activity on recognition of informal learning outcomes. Quantitative data on the number of formal recognitions awarded seem to be lacking (Werquin, 2008). However, all evidence points to the fact that these systems at present are still marginal indeed.

In the *theoretical framework*, the prior learning assessment and recognition is placed among the process factors.

The *measurable dimensions* are:

- existence and form of a system of recognition of skills and competences acquired through non-formal and informal learning

- number of formal recognitions awarded per year

Indicator 28: Existence and type of recognition system

Policy question	Does a system of recognition of the outcomes of non-formal and informal learning exist and what is the type of this system?
International comparison	Compare the countries
Further breakdowns	

Data sources	OECD activity on recognition of non-formal and informal learning
Feasibility	Good for countries participating in the OECD exercise

Indicator 29: Number of awards of recognition per year

Policy question	How many recognition awards are delivered per year and of what types are these awards? as a percentage of the young population (25 – 45 years of age)
International comparison	Compare countries
Further breakdowns	
Data sources	OECD activity on recognition of non-formal and informal learning
Feasibility	Poor

Goal 11: Support environments which foster self-directed learning with appropriate recognition systems

The implementation of a recognition system presumably fosters the participation of adults in all types of learning activities. This assumption could be monitored.

In the *theoretical framework*, the goal 11 refers to the out factor certification and could also be placed in the box informal learning.

The measurable dimensions are:

- existence and form of a system of recognition of skills and competences acquired through non-formal and informal learning
- participation in non-formal education and informal learning

Indicator 30: Participation in non-formal education and informal learning by the existence and type of recognition system

Policy question	Does a system of recognition of the outcomes of non-formal and informal learning enhance the number of adult learners?
International comparison	Compare participation rate between countries with differing recognition systems
Further breakdowns	
Data sources	EU AES and other national surveys; OECD activity on recognition of non-formal and informal learning
Feasibility	Good for countries participating in the OECD activity on recognition of non-formal and informal learning

Goal 13: Implement tools to assess and recognise and ensure transferability of knowledge, skills and competences

Monitoring the implementation of tools to assess and recognise and presumably thus to assure (if the interpretation of the concept "recognise" is socially recognised, the transferability is a given) the transferability of knowledge, skills and competences implies first to identify such tools. One example of such a tool is the European language portfolio, which establishes standards against which one can measure one's language competences. Results of these self-assessments may be quoted in job-applications (at least in Switzerland).

Formal recognition systems seem marginal. However, individuals in all societies manage to signal their skills and competencies when they are looking for a new job, for instance. Social recognition of skills and competencies could take the form of wage premiums or attestations of skills from former employers. Individuals would presumably include such indications in job applications. A study of such applications would probably yield useful information on how individuals manage to signal their skills and competences and how potential employers manage to evaluate these claims.

In the *theoretical framework*, the assessment and recognition tools are placed among the process factors.

There are no *measurable dimensions*.

Quality / organisation of education delivery

Goal 14: Optimise ways (i.e. time, mode, modularity, venue) of delivery for each clientele in a learning system that involves all adult learning stakeholders (institutions, community-based providers, public and private employers, governments) and integrates the learning experience across sectors

Ways of delivery has already been defined in the goal itself by mentioning time, mode, modularity and venue in the brackets. The financial arrangements could be added. The issue of "*time*" can have different dimensions, such as duration of the course, full-time vs. part-time, number of "sessions", time during the day (evening classes, weekends, during working hours etc.). *Mode* will be understood as

physical presence in a course vs. distance learning. *Modularity* means that there are several courses for a certain topic that build on each other. *Financial arrangements* are an important aspect of delivery, but what matters from an individual's perspective is whether and how much they have to pay for a course (fees, materials etc.). A frequently used distinction is whether a learning activity is sponsored by the person's employer or not.

Clientele in general could be defined as the total population in the relevant age broken down by age, gender, labour force status etc. But different clienteles could be defined in a more specific way. Clienteles could be different target groups depending on the type of course. For example, clientele could be defined in terms of "learning/ skill needs" (for example migrants), organisational arrangements of the course (for example employees only able to attend courses in the evening or during weekends), age of participants (for example specific courses for older persons) etc.

Learning system that involves all adult learning stakeholders: A list of stakeholders has been mentioned in the brackets. However, from the list mentioned in brackets it is not clear what is meant by institutions and why only community-based providers are included. A list of stakeholders could include the following: all types of providers, learners (potential and actual participants), teachers and trainers in non-formal education, employers, government administration, trade unions, associations etc.

Concerning the goal on "Optimising ways of delivery for each clientele", facilitating access respective reducing inequalities are probably the main issues. The participation of different groups of the population could indicate if ways of delivery are optimal for these groups.

One issue that is probably interesting in international comparisons is to identify if systems for "regular" education are also used/available for adults or if there are other means for a "second-chance" to attain "regular" educational qualifications. However, the interpretation of high participation rates in "regular" education for adults is not trivial. High participation probably indicated existence of facilities, but it may also indicate weaknesses in the corresponding education for youth. A country should not be ranked high on such an index if regular education for adults is used mainly by those who recently failed to pass the corresponding regular education for youth. Another issue is access to universities and the possible existence of "open" universities, TV-universities, etc. New technology in this area improves access to learning. Web-based solutions facilitate distance learning and lectures can be downloaded from the web and "attended" whenever wanted. The existence of such facilities may be a general system indicator, while the use of them will have to be included in surveys of individuals/households.

Informal learning is not mentioned explicitly in goal 14, but it would fit in well here. Informal learning is a further way in which individuals can meet their learning needs. In surveys it is usually captured by lists of learning activities both for job-related learning and learning for personal interests. Including informal learning in the scope of monitoring adult learning systems is important in international comparisons as well as for monitoring developments over time, since shifts in the learning behaviour might else be falsely interpreted as increases or decreases in the skills acquisition by individuals.

Obstacles mentioned could also indicate that ways of delivery are not optimal for some groups of the population. For example, if time or venue is stated as obstacles ways of delivery might not be optimal regarding this particular aspect. Questions about obstacles have been tried in a number of surveys, mainly to respondents who had wanted/planned to take training but not participated. A general problem in the

analysis of such questions is that reported "obstacles" are very subjective measurements. What some respondents would classify as obstacles may not be mentioned by others in the same situation. Nevertheless, we would like to propose to use respondents' judgments for an indicator. Since the optimal way of delivery is to a large extent a subjective assessment of individuals, it makes sense to ask for subjective assessments of obstacles or missing offers of courses.

One measurable dimension would be the existence of public financing/subsidies of education providers and/or participants. This may differ from country to country depending on whether systems for public subsidies exist or not.

In the *theoretical framework*, the organisation of delivery is placed among the process factors, while obstacles are placed on the boundary between potential participants and the adult learning system.

The *measurable dimensions* are:

- delivery of non-formal education (time, mode, sponsorship of employer, expenses paid by participant)
- participation of adults in formal education
- informal learning by adults by type of activity
- aspects of delivery acting as obstacles (see goal 5)

Indicator 31: Participation rate in non-formal education by way of delivery

Policy question	What is the distribution of participation by way of delivery? Do different ways of delivery cater to different clienteles?
International comparison	Compare the rate across the countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment, labour force status, full-time/part-time employment
	Job-related NFE vs. NFE for personal interest
Data sources	Adult education surveys, partially in AES, other national surveys?
Feasibility	Depending on other national surveys

Indicator 32: Time spent in non-formal education by way of delivery

Policy question	What is the time spent in non-formal education by way of delivery? Do different ways of delivery lead to different amounts of time spent by different clienteles?
International comparison	Compare the times across countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment, labour force status, full-time/part-time employment
	Job-related NFE vs. NFE for personal interest
Data sources	Adult education surveys, partially in AES, other national surveys?
Feasibility	Depending on other national surveys

Indicator 33: Participation rate in formal and/or non-formal education

Policy question	How many adults use the formal education system to acquire skills and competencies? How many participate in both formal and non-formal education?
International comparison	Compare the rates across countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment, labour force status
Data sources	EU AES, other national surveys
Feasibility	Published in EAG 2011

Indicator 34: Informal learning by type of activity and purpose of the learning

Policy question	How many adults learn informally to acquire skills? What types of activities do they prefer for which purpose?
International comparison	Compare the rates and distributions across countries
Further breakdowns	Characteristics of the learners: age, gender, educational attainment, labour force status, participant in formal and/or non-formal education
Data sources	EU AES, other national surveys
Feasibility	Depending on other national surveys

Further indicators relevant for goal 14, if obstacles refer to aspects of organisation and delivery:

Indicator 8: Obstacles to further participation in NFE for NFE participants

Indicator 9: Obstacles to participation in NFE for non-participants in NFE

Goal 15: Encourage for-profit and not-for-profit adult education organisations to contribute with a wide and flexible supply of courses and study programmes

Wide and flexible supply of courses and study programmes means that courses are available in all possible fields with offers adapted to the demand. Could this also be understood in terms of certain aspects of delivery mentioned in the goal 14? Flexible supply could not only be understood as an adaptation to demand, but also more generally as a quick reaction to new developments (for example offering courses on the latest software developments etc.). It would be interesting not only to look at the supply of courses in different fields as such, but also at the extent to which the offer of courses changes over time. Data are available through participant surveys on the realised demand. For the realised demand indicators relating providers, field, duration and whether the course was sponsored by the employer or not will provider rich additional information for an analysis of the supply of non-formal education.

The *adult education organisations* would be the providers of non-formal education. Several lists exist, of which the EU AES has:

- Formal education institution

- Non formal education and training institutions

- Commercial institution where Education and Training (ET) is not the main activity (e.g. equipment suppliers)

- Employer

- Employers' organisations, chambers of commerce

- Trade unions

- Non-profit associations, e.g. cultural society, political party

- Individuals (e.g. students giving private lessons)

An interesting modification is given in Kuwan and Larsson (2008 p.57)

An important part of adult learning provision is workplace training provided by employers. From enterprise surveys such as CVTS indications as to the proportion of enterprises offering different types of training to their employees and the proportion of employees participating in such training could be calculated.

In the *theoretical framework*, supply by providers is placed among the process factors.

The *measurable dimensions* are:

- the realised demand for courses and study programs

- the providers of the courses in the realised demand

- offer of courses and study programmes by providers

- training firms

- proportion of employees given training by their employer

Indicator 35: Participation and hours in non-formal education by provider, field and employer sponsorship

Policy question	What providers supply the courses attended by the participants and in what field? How many hours do these courses represent? What part of the total realised demand is supplied by each provider type and in each field? What proportion of participants and what proportion of the time spent in no-formal education is sponsored by the employer?
International comparison	Compare the rates and distributions across countries
Further breakdowns	Characteristics of the participants: age, gender, educational attainment, labor force status Characteristics of the course: employer sponsored or not
Data sources	EU AES, other national surveys?
Feasibility	Depending on other national surveys

Indicator 36: Offered course hours by provider and field

Policy question	How many course hours do providers offer in what field? What part of the total offer is supplied by each provider type and in each field?
International comparison	Compare the amounts and distributions across countries
Further breakdowns	
Data sources	Provider survey
Feasibility	Depending on provider survey

Indicator 37: Proportion of training firms and trained employees

Policy question	What is the proportion of enterprises providing training for their employees, and what is the proportion of the employees taking part in the training?
International comparison	Compare the proportions across countries
Further breakdowns	By enterprise characteristics: size, industry
Data sources	CVTS, other national enterprise surveys
Feasibility	Depending on availability of other national enterprise surveys

Goal 16: Develop harmonised metrics and evaluation strategies to measure quality and impact of adult learning programmes as well as their outcomes in terms of economic and quality of life benefits for both individual learners and society.

Firstly, strategies should be developed to measure the quality of adult learning programs. Providers of non-formal education are organisations and enterprises. Their delivery of education could be subject to official recognition or other quality assurance procedures. Monitoring evaluation strategies could involve a) to ascertain whether a recognition and evaluation system for providers of non-formal education exists in a country, and b) what form it takes (country wide recognition, quality assurance procedures for individual

providers, no such procedures). Provider surveys could furnish the information on the evaluation strategies used by each provider and the data to estimate the percentage of courses evaluated under each scheme.

In the *theoretical framework*, evaluation strategies are placed among the process factors.

The *measurable dimensions* are:

- existence and form of evaluation systems for providers of non-formal education
- evaluation strategy used by the individual provider

Indicator 38: Existence and type of evaluation system for providers of non-formal education

Policy question	Does an evaluation system for providers of non-formal education exist and what is the type of this system?
International comparison	Compare the countries
Further breakdowns	
Data sources	Country questionnaire
Feasibility	

Indicator 39: Percentage of non-formal education coursed delivered under each type of evaluation strategy for providers

Policy question	What is the quantitative importance of each type of evaluation strategy for providers?
International comparison	Compare the distribution between countries
Further breakdowns	Type of provider
Data sources	Country questionnaire; provider survey
Feasibility	

Secondly, strategies should be developed to measure the impact of adult learning programmes as well as their impact and outcomes in terms of economic and quality of life benefits for individual learners and society[12]. For individuals the focus could be very narrowly on the benefits attributed to the attendance in a particular learning activity, or it could be interpreted to refer to general benefits from the improvement of skills. "Benefits of adult learning are tangible outcomes or perceived personal advantages resulting from participation in adult learning activities". (Kuwan and Larsson, 2008) A list of short term benefits could be developed and included in an Adult Education Survey.

In the *theoretical framework*, the economic and other benefits are placed among the outcome factors.

The *measurable dimensions* are:

- report on perceived benefits from attendance in a non-formal or formal education activity; all relevant benefits, the most important benefit

Indicator 40: Benefits to participants in non-formal and/or formal education

Policy question	What are the immediate benefits for participants in non-formal or formal education?
International comparison	Compare the distributions between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment, labor force status
	Characteristics of education activity: duration, type (job-related or other), field
Data sources	Adult education surveys
Feasibility	Depending on implementation of question(s)

Goal 17: Ensure that teachers and trainers get the relevant continuing training/professional development

All teachers and trainers need further continuing training and/or professional development, including the teachers and trainers in the adult learning system. It is important to see continuing training in relation to the initial qualification of teachers and trainers, particularly in the area of adult education. An addition to the policy goal as stated could be "Ensure that teachers and trainers of adults have relevant initial qualifications and get...". Data specific for teachers and trainers in the adult education system are not available. Some indication on the quality of the teaching and training in adult education could be based on gathering questions aimed at an evaluation by participants. Such questions have been asked in the German Berichtssytem Weiterbildung (BWS) 2003. Respondents were asked to judge

- the expert knowledge of the teacher/trainer
- the capability of the teacher/trainer to explain something

In the *theoretical framework*, the initial and continuing education of the teachers and trainers in the adult education system are placed among the process factors.

The *measurable dimensions* are:

- initial and continuing education of teachers and trainers in adult education
- subjective evaluation of the quality of teaching and training in non-formal education by the participants

Indicator 41: Teachers and trainers by initial qualification level and continuing training

Policy question	What are the formal qualifications of the teachers and trainers? Are these formal qualifications adequate? Do teachers and trainers have a level of continuing training and experience adequate for their position?
International comparison	Compare the distributions between countries
Further breakdowns	Characteristics of persons: age group, gender
	Type of provider
Data sources	Provider surveys

Feasibility	Depending on provider surveys

Indicator 42: Evaluation of the teaching quality by participants

Policy question	How do the participants evaluate the quality of the teaching and training?
International comparison	Compare evaluations between countries
Further breakdowns	Characteristics of participants: age group, gender, educational attainment level Provider, type of learning activity
Data sources	Enlarged surveys of participants
Feasibility	Depending on the surveys

Goal 18: Achieve high completion/success rates of adult learning courses

The policy goal is about the effectiveness of the adult education system, i.e. the fact that the system achieves its aim of bringing about learning. Completion shall be interpreted to mean that participants stay until the end of the course, and success that they have acquired the skills and competences the course was supposed to provide. Success could be most effectively measured for those courses for which a final exam or some other form of certification of the skills acquired exist. This is in most countries a small minority of all the learning activities within the adult education system. However, some form of certification such as a provider specific diploma is more common. Respondents in surveys could be asked whether they had received such a certification and what form of certification they had received. A form of success of adult learning is when the skills and competences learned were actually put to use by the respondents.

In the *theoretical framework*, completion/success as well as certification are placed among the output factors.

The *measurable dimensions* are:

- type of certification received at the end of the education activity
- report on using the skills and competencies acquired in the education activity

Indicator 43: Types of certification received at the end of the education activity

Policy question	What proportion of participants receive a certification at the end of the education activity? What type of certification have the respondents received, and what is the usefulness of the certification on the labor market or in society?
International comparison	Compare the rates and distributions between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment, labor force status Type of provider, type of education (non-formal, formal)
Data sources	Adult education surveys
Feasibility	Depending on the implementation of relevant questions

Indicator 44: Usefulness of the skills and competences acquired during the education activity

Policy question	What proportion of participants judge the acquired skills and competences to be very useful?
International comparison	Compare the rates between countries
Further breakdowns	Characteristics of persons: age group, gender, educational attainment, labor force status Type of provider, type of education (non-formal, formal)
Data sources	Adult education surveys
Feasibility	Depending on the implementation of relevant questions

Conclusions

   The paper summarises the developmental work in presenting policy goals/issues for the area of Adult Learning, the theoretical framework as well as a long list of indicators. Its main function will be to provide justification for the selection of indicators to be implemented in future editions of EAG. The work of implementation of adult learning indicators in EAG includes the identification of policy areas of priority interest, the investigation of the state of international comparable data sources, the collection and compilation of the necessary data, the calculation of the indicators and the writing of analytical text. The present paper does not intend to replace these steps - its function is rather to suggest a place to start.

   Hopefully, it will also serve as a basis for possible input into the future development of surveys and data collections, both on the international and the national level. The list of indicators shows that the possible coverage of the policy goals/issues is very uneven. The policy domains "updating knowledge and raising skills" and „reducing inequalities" are fairly well covered, although also for these domains work-related issues are better covered. Some indicators can be calculated and published in the area of "investment" in adult learning, all involving the volume of adult learning. For the issue of teacher/trainer supply, some ideas for indicators can be formulated, but none have been published. In the domain of "information and guidance" basic indicators have been published. The domain of „usability / certification" is still in need of a lot of developmental work. The last domain "quality / organization of education delivery" has a fair coverage with basic indicators, but developmental work on the more qualitative aspects is still needed.

NOTES

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[1] Although only half the indicators suggested by the members of the WG over the years have been taken on board.

[2] The formulation used here is from (de Broucker & Krüger-Hemmer, 2008).

[3] The working group paper from 2007 includes a list of 38 indicators for this goal. Many of them measure the skill level of the labour force and the relationship between the economy of a country and the skill level of its workers. In this paper, the focus will be on indicators with a direct link to the adult learning system of the country. This also means the most of the "PIAAC indicators" will not be listed.

[4] Since the ESS (European Statistical System) countries have in 2003 first implemented an Adult Learning module in the LFS and then the full Adult Education Survey in 2007 these have been used for OECD indicators on Adult Learning. The AES has been implemented in 23 OECD member countries (the 20 EU countries which are also members of OECD plus Norway, Switzerland and Turkey which are members of the ESS). The "other national surveys" refer to adult education surveys in non-ESS countries used as basis for data delivery in data collections such as the Adult Learning data collections of the LSO network in 2005 and 2009. The data providers are asked to supply data comparable to those furnished by EUROSTAT for the ESS countries. The national data providers essentially judge which of their data fulfill the requirements. The Adult Learning working group has collected metadata information on these surveys including questionnaires. A very short version of the information is included in Annex 3 of EAG 2011.

[5] This is an oversimplification of a very complex situation. We cannot be sure that all people are aware of a learning need, not all learning needs are translated into a desire to take part in a learning activity, not all desires to take part in a learning activity meet the appropriate offer, and not all such failures to meet an offer would be reported in a survey.

[6] The present formulation seems strongly influenced by the EU AES.

[7] Purely for pragmatic reasons, since many of the known data sources such as EU AES and PIAAC have an upper age limit of 64 or 65 years of age. In principle the indicators could be defined for older age groups also.

[8] Whether public employers financing learning of their employees are to be considered as "public" or "private" is still to be discussed. Human capital theory distinguishes between training in general-usage and firm-specific skills. (Becker, 1964) Becker (1964) argues that employers will only invest in specific training, not general training, when labour markets are competitive. Individuals or the public will invest in general training. My personal preference would be to include public employers in the category "private industry". Public employers investing in the development of firm-specific skills follow the same logic as private employers. Governments investing in general skills of the general population play a different role.

[9] See Borkowsky (2000) for arguments on the best data sources on teachers and trainers.

[10] Hypothetical provider surveys.

[11] A proposal for the development of 11 indicators from different data sources is included in the 2007 indicators paper. We concentrate here on the indicators based on the reports of respondents.

[12] The economic and quality of life benefits on the level of society are treated under goal 3.

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