

The ELLI Index Europe

2010

**ELLI**

European Lifelong Learning Indicators

Making Lifelong Learning Tangible!



# Making Lifelong Learning Tangible!

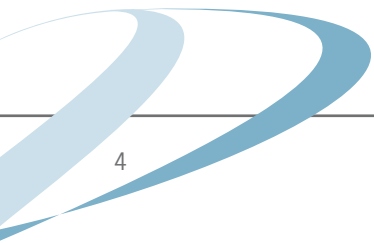
The ELLI Index Europe 2010

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# Preface

## Learning – Lifting the Treasure Within

Though lifelong learning (LLL) is widely recognized as the principal key to, and guarantor of, a country's prosperity and well-being, it has - despite a large number of declarations and political agendas - not yet become a reality in many countries of the European Union. Why not?

One reason may be a view of lifelong learning that is often reduced to formal education and the acquisition of new skills required to succeed in the labor market - a view that prevails in particular when it comes to implementation. Indeed, income has been shown to increase by up to ten percent for each additional year of education. Obviously, then, employability is one major benefit of successful learning. But what is at stake here is more than just employability. Lifelong and life-wide learning is about the whole person. It is about allowing every individual to participate in society and making our society more cohesive. Learning enables people to develop to their full potential and to play an active role in their environments. It allows them to try new things and to harness untapped talents. Along with enhancing employment opportunities and professional standing, learning lays the groundwork for fulfillment in life. Moreover, learning cannot and should not start or end in the classroom or in other educational institutions. We learn on the job, as members of associations or political organizations, in our families, during our leisure time and in our communities as well. In order to make lifelong learning a reality, it is important to embrace and connect all learning stages, types and places and to link this process with the wider spectrum of benefits that flow from it.

But another reason that can prevent us from taking action or implementing coherent LLL strategies is precisely this broader, interdisciplinary perspective. **Lifelong learning is complex and difficult to measure!** It does not affect a narrow, easily definable demographic or sphere of human activity. On the contrary, it affects - and is affected by - people from all ages and backgrounds in almost all activities. This scope has defied traditional models of measurement, leaving the impression that lifelong learning remains an abstract concept, evading any coherent description. Unfortunately, this perception leads to a lack of action. After all, what motivation is there to act when we do not know where we stand, much less where we should go?

The ELLI-Index Europe is a first step towards making lifelong and life-wide learning more tangible and measurable. We want to connect the dots between different facets of learning to produce a picture that is both understandable and reliable, and thus able to have a positive impact on the decision-making process. The goals of ELLI are not merely to describe, but to motivate. People make decisions based on what they perceive. Clearer perceptions make for better decisions. By presenting information in the form in which it is needed, ELLI provides a basis upon which to act and improve the state of lifelong learning in Europe and its regions.



**Dr. Jörg Dräger**

Member of the Executive Board, Bertelsmann Stiftung



## Preface

Lifelong learning is increasingly recognized by governments as imperative for growth and development in today's knowledge-driven societies but it is a concept that has always guided UNESCO's work. As part of its mission to promote everyone's right to education, the Organization assists Member States in strengthening their own educational systems at all levels. One landmark UNESCO document issued in 1972, *Learning to Be*, also known as the Faure Report, proposed lifelong education as the master concept for education reform. Twenty-four years later, the Delors Report presented the four pillars of education – learning to know, learning to do, learning to be and learning to live together – as the key for building peace in the 21st century.

Putting these concepts into practice is, however, a daunting challenge. While the majority of countries recognise the major contribution that education makes towards promoting and ensuring sustainable development, democratic participation and social cohesion, many of them are still far from achieving the Education for All goals adopted in 2000. Millions of children, youth and adults, most of them female, are excluded from a multitude of learning opportunities simply because they lack the most basic literacy and numeracy skills required to participate. There is an urgent need to channel more resources, both human and financial, into providing basic and continuing education to the marginalised. Member States require evidence that these investments put individuals in good stead for the future, but also promote social equality and – in keeping with UNESCO's founding philosophy – make our world a more peaceful place to live and work in.

The launching of the European Lifelong Learning Index (ELLI), spearheaded by the Bertelsmann Stiftung, thus comes at a most opportune time. Drawing on the pioneering work of the Canadian Council of Learning on the Composite Lifelong Learning Index, ELLI makes it possible to generate evidence that gives a general indication of how countries in the region are faring vis-à-vis lifelong learning. As a tool to raise awareness, ELLI could be used to draw public attention to the importance of lifelong learning issues. As a comparative measurement resource, it has the potential to showcase examples of good practice that harness the four pillars of education as a means of widening quality participation in specific contexts.

Like any new tool, ELLI needs to be tested thoroughly and honed further. As this Index is work in progress, UNESCO will follow its development with great interest, with an eye to consulting with the Bertelsmann Foundation as to how the results might be incorporated in our own work.

Ensuring lifelong learning opportunities and guaranteeing the public provision of education for the marginalized are strategies that UNESCO is advocating to make our societies more resilient and equitable. I sincerely hope that ELLI will play a constructive role in both regards.

**Irina Bokova**  
Director-General of UNESCO

# ELLI Index in Brief

## What Is the ELLI Index?

The European Lifelong Learning Index (ELLI) is an annual measure of Europe's "state of play" of learning throughout the different stages of life from "cradle to grave" and across the different learning environments of school, community, work and home life. The ELLI Index measures learning in four different domains taken from the UNESCO framework completed by Jaques Delors that include learning to know, learning to do, learning to live together and learning to be. **Please read more on page 10.**

## Why Do We Need ELLI?

As the pace of globalization increases and the economies of the world become increasingly focused on knowledge and skills, learning is becoming one of the dominant forces in deciding the success and sustainability of individuals and nations.

ELLI introduces a new perspective on monitoring learning by collecting data from a broader spectrum than any previous attempts in measuring the state of learning. The richness of the ELLI index and database highlights the role of learning not merely through education systems but in all aspects of human activity. In particular, it explicitly connects successful learning with outcomes, such as social cohesion, that characterize well-functioning societies. **Please read more on page 13.**

## How Does ELLI Work?

ELLI is a Composite Index, a measurement instrument that combines different indicators and statistics to compile an overall score for a specific subject or phenomena that is not directly measurable. Composite Indices, like the Consumer Price Index or various national stock indices, are widely used to measure, monitor and analyze trends or for regional and international comparisons.

ELLI combines 36 indicators to compile an overall index as well as four subindices. Indicators, taken from various data sources, reflect a wide range of learning activities, such as participation rates in formal education and training, literacy skills, employees participating in vocational training, internet access and usage, civic engagement and cultural activities. **Please read more on page 21.**



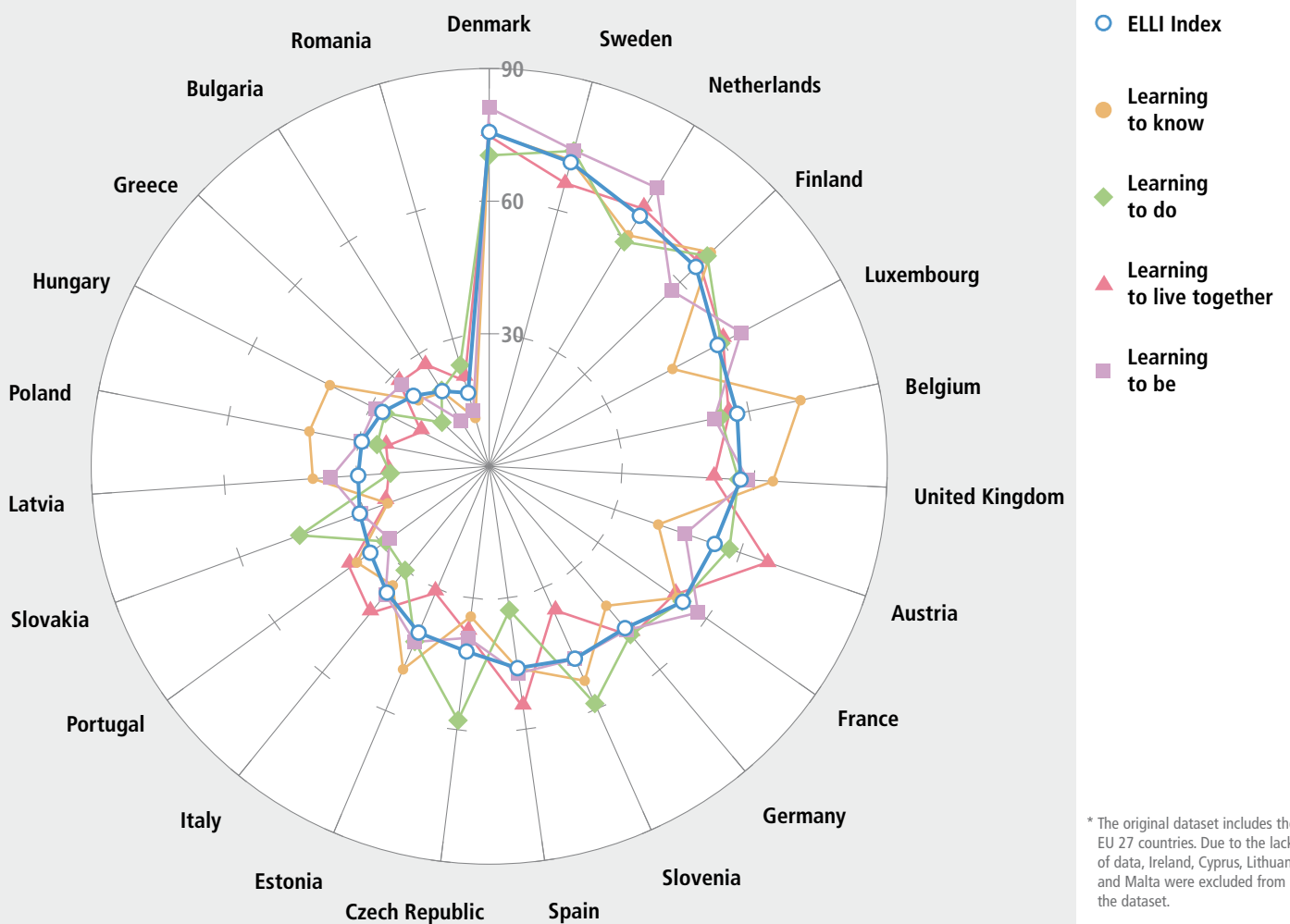
## ELLI Index Results at a Glance

The overall ELLI Index results show that the Nordic countries Denmark, Sweden and Finland and, in addition, the Netherlands rank highest. Particularly Denmark and Sweden have been the most successful countries in Europe at implementing the idea of lifelong and lifewide learning.

The top performers are followed by a group of countries that consist of mainly Central European and Anglo-Saxon countries. The next group of countries, which are below the EU average,

are from Southern and Eastern Europe and range from the Czech Republic to Poland. The lowest performing group of countries is also comprised of Southern and Eastern European countries, including Hungary, Greece, Bulgaria and Romania. However, there are many exceptions to these general patterns. Slovenia, a former communist country and new member of the European Union, performs well, scoring above the EU average and on par with Germany. Countries also have their own areas of relative strength and weakness across the four learning dimensions (know, do, live together and be). **Please read more on page 37.**

Figure 1: ELLI Index Results 2010 – Lifelong Learning in the European Union\*



# 1. What Is the ELLI Index? - Introduction

The European Lifelong Learning Index (ELLI) is a measure of learning throughout the different stages of life ‘from cradle to grave’ and across the different learning environments of school, community, work and home life.

Learning in this context is understood as a continual process of personal and social development. Therefore it is understood to reflect not only the benefits that employability and a competitive economy offer but also the individual and social benefits of health, happiness and citizen empowerment. Towards this end, the objectives of learning need to reflect a holistic understanding of the individual and combine a variety of knowledge, skills, values and attitudes. From this perspective, the aim of learning is to enhance the qualities of self-esteem, resilience and a positive attitude towards learning and to develop critical thinking and the ability to learn new things.

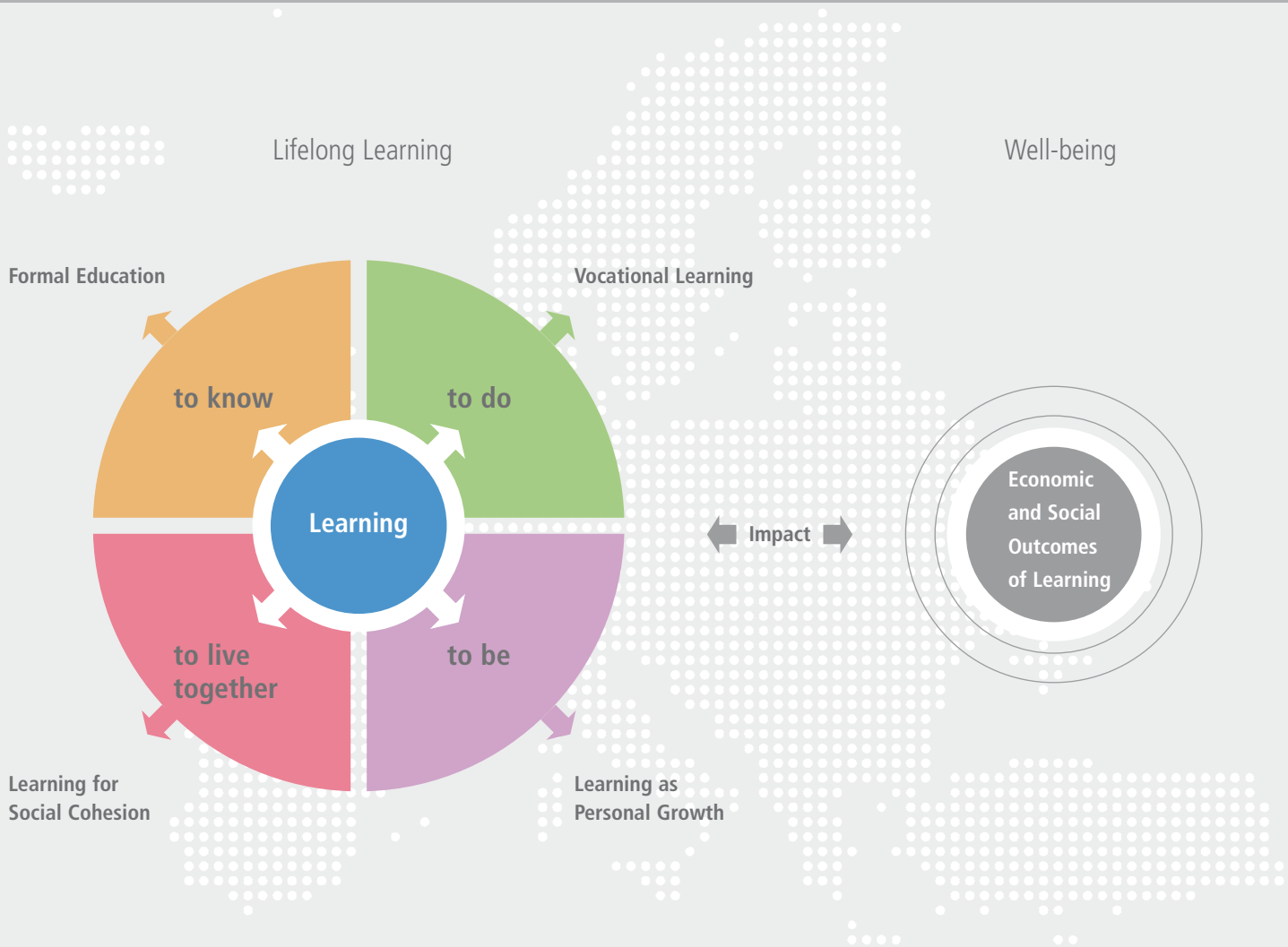
In addition, it is equally recognized that learning throughout the course of life requires opportunities to learn which are both flexible and attractive for learners. In this context, learning requires investment from a number of different actors including government, employers, civil society and individuals.

The different domains of lifelong learning are taken from the UNESCO framework completed by Jacques Delors that include the four dimensions of learning: learning to know, learning to do, learning to live together and learning to be. ELLI is an index that reflects a starting point towards being able to capture, measure and compare this concept of lifelong learning across European countries.

## What ELLI can do

The purpose of the ELLI Index is to allow readers to make international comparisons of the “state of play” of lifelong learning in countries and, where available, regional comparisons within specific countries. The measure can be used by citizens, civil society, employers and policymakers at all levels to gain a preliminary picture or indication of how their country or region is performing in regards to others. Thus it can be used as a basis

Figure 2: The ELLI Approach



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## 1. What Is the ELLI Index? - Introduction

to initiate a debate on learning in their country or region and discuss how to encourage greater participation and to assess good practice elsewhere.

### What ELLI cannot do

However, it is necessary to acknowledge some caveats of ELLI:

First, we clearly recognize the limitations of such a measure. The ELLI Index does not provide an in-depth evaluation of a country or region's policy and performance on lifelong learning. It simply gives a snapshot or an indication of the situation. It is necessary for each country or region to use the results as a starting point to perform further in-depth research and assess the situation of lifelong learning in their particular context. When the results are taken out of their specific context there is the risk that they may be oversimplified or misused to make (biased/partisan) specific policy claims (JRC/OECD 2008).

Second, ELLI itself is in the process of evolving and, as a measurement tool, is a work in progress. Indicators have been selected from existing datasets that best fit the dimensions of lifelong learning. However, using existing datasets means that the indicators selected are not necessarily ideal, and often pragmatic decisions have been made in order to create the first

results. ELLI will continue to be improved and updated as new and better data become available.

It is important to remember that the ELLI Index is part of a larger Data Liberation Initiative which provides for free online access to a variety of data analysis and graphing tools, and several hundred updated statistics related to learning. The value of the ELLI Index should be seen as a starting point for in-depth exploration of myriad learning opportunities.

### ELLI is the first European comparative lifelong learning index

In spite of these caveats, ELLI is the **first European comparative lifelong learning index** and as such provides a useful tool for gaining an overview of the situation of lifelong learning across the EU.

## 2. Why Do We Need ELLI? – Measuring Europe’s Progress in Lifelong Learning

### What is lifelong learning?

**Learning is a very normal part of everyday life and an integral part of relationships from the moment we are born through to our final days.** We start out being curious and adventurous until we meet setbacks; we then require resilience to get back up and start learning once more. We learn to interact with others – for understanding, for pleasure and, sometimes, because we are forced. Facilitating the process of learning has been one of the main endeavors of human beings. At home, parents play a crucial role in providing positive learning relationships and supporting critical curiosity. Beyond the home environment, national governments create and invest in large-scale formal education systems so that all children have the possibility to learn a national curriculum. Governments and employers also create vocational learning systems to ensure that citizens are able to fulfill the needs of workplaces. In the rapidly changing and high-technology world that we live in, the need to continue to learn has become crucial, and so employers, governments and social networks are providing opportunities to continue to learn.

In addition to increasing worker productivity, learning has a long history of promoting equality and active citizenship within a democracy. This function of lifelong learning has recently been detailed by Fryer (2010), who states in his review of the literature

on lifelong learning and citizenship that lifelong learning should enable citizens to “sustain ‘modern’, ‘civilised’, ‘humane’ and, preferably, ‘democratic’ societies.” In addition, he highlights that lifelong learning can also be for pleasure, self-fulfillment or no immediate specific purpose.

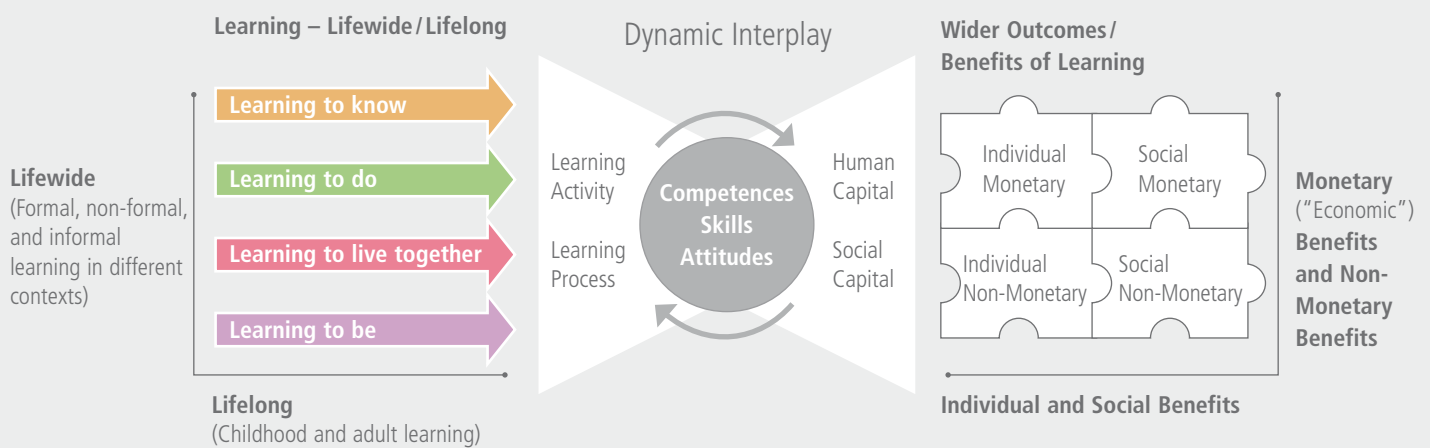
### Why we should learn? Exploring effects and benefits!

**The evidence for the benefits of learning is substantial**, but greater for some modes of learning than others. The evidence for the wider benefits of learning is extensive for formal education because data in this field have been systematically collected and a large body of research exists. In addition, there is some evidence of wider benefits from vocational education and training and adult learning. However, there is less evidence for the benefits of informal and non-formal learning opportunities, a result of the lack of systematic data collection and research carried out in these areas.

According to the review of the literature carried out for ELLI **the wider benefits of learning, include self-confidence, self-efficacy and self-esteem** (Akerman et al. 2010), and these psycho-social aspects of competence are considered key mediators of positive social outcomes. The collection of evidence

## 2. Why Do We Need ELLI? - Measuring Europe's Progress in Lifelong Learning

Figure 3: Learning – Outcomes and Benefits



Source: Graphic representation by Bertelsmann Stiftung, based on Schuller and Desjardins 2007

BertelsmannStiftung

by Akerman et al. demonstrates that **learning contributes to well-being, health, civic engagement and social cohesion and reduces crime rates and inequality**. However, the authors noted that not all opportunities for learning actually facilitate learning. For example, a positive learning opportunity

occurs when parents and teachers have high perceptions of an individual's competence. Alternatively, learning can be impaired when students become identified, and see themselves, as unsuccessful. Lack of success can take many forms, such as through "ability" setting within schools or low marks in exams.

“Lifelong learning in its various forms urgently needs a wider range of instruments for measuring its effects, if we are to understand how best to develop policy and practice. The ELLI Index is an important step in this direction. It combines a rigorous statistical approach with a recognition that lifelong learning has several different dimensions and types of outcomes. I am confident that it will help us all draw on comparative evidence to strengthen national provision.”

Tom Schuller

Director the of the UK Inquiry into the Future of Lifelong Learning, former Head of CERI at the OECD

For those students who do not “succeed,” these situations can have serious negative consequences for their psycho-social well-being and their future ability to learn (Akerman et al. 2010).

Some interesting results that Akerman et al. (2010) found regarding the benefits of participating in adult learning are that it encourages engagement in social and civic activities and is associated with increases in levels of trust, tolerance and empathy. Adults who have taken part in various forms of adult learning have reported undertaking activities that they previously lacked the confidence to do, including engaging in new and informal learning activities such as visiting art galleries, museums and libraries and traveling abroad.

### Why learning is important for Europe

**The launch of the first edition of ELLI in 2010 coincides with a period of worldwide economic crises which have had the strongest impact in Europe** (Gamble 2009). Europe's economic crises have left governments with debt levels that are increasingly hard to sustain. This situation is testing the solidarity between the rich and debt-ridden nations within the Eurozone, as the countries with already high levels of debt and poor credit ratings now require additional financial support.

The bailouts from rich countries and the International Monetary Fund require austerity measures that are affecting wages, jobs and educational programs in the receiving countries. In addition, the high-debt countries are losing political and economic sovereignty to international organizations. The obvious example is Greece; however, many Eastern European countries have also had to take this route and have been heavily impacted.

Another economic issue that the political scientist Andrew Gamble (2009) highlights is that Europe has been one of globalization's major losers. Jobs, manufacturing and political influence have been moving steadily from Europe to emerging markets such as China, India and Brazil. This situation has been exacerbated by Europe's decreasing population and the growing GDPs of the emerging economies.

The combination of these two factors has led the European Union to focus its policy efforts on education and innovation as the key drivers to remaining competitive. With fewer jobs and less money in government coffers to support the public sector, education and welfare, the European Union has launched EU 2020, a political initiative to revitalize Europe. The new initiative states the need for “smart, sustainable and inclusive growth” (European Council 2010).

## 2. Why Do We Need ELLI? - Measuring Europe's Progress in Lifelong Learning

In many EU member states, local and regional authorities are the most important players when it comes to government support for education and training.

In a rapidly changing world where private industry and the public sector, schools, universities and the research community are called upon to find new solutions, lifelong learning is essential to social and economic development. Public authorities at the local and regional levels need to coordinate their policies to help shape a positive environment with universal access to lifelong learning.

The ELLI Index and the extensive international research on which it is based are a valuable resource for policymakers. The index is a new and innovative instrument that

**Thus, the proposed EU strategy highlights the belief that education is the key to Europe's continuing success and social cohesion.** Education within the EU 2020 agenda is the central source of the creativity, innovation and new technology that is expected to drive the EU economies in years to come. The European Commission version of the text highlights the role of universities and of science and technology graduates in creating the necessary innovation for continued economic success. In addition, education is also considered to be the policy tool for social inclusion, since the skills that individuals develop allow them to participate meaningfully in economic and social discourse. EU 2020 proposes a benchmark for social inclusion in education and training, establishing that less than 10% of students should fail to complete their education and that at least 40% of the younger generation should obtain a degree or diploma.

The ELLI indicators follow these EU policy priorities as set out in EU 2020, in particular through the measurement of the dimension of learning to know. In terms of competitiveness, learning to know includes indicators of public expenditures on education and the percentage of people 30 to 34 years old with tertiary education.

Within the context of the EU 2020 policy initiative, there is also a new policy agenda for education and training, ET 2020. This policy specifies in more detail the European Union's vision of

learning, tying education and training more clearly to lifelong learning and the social-inclusion agenda.

**The new ET 2020 goals for learning focus on the personal, social and professional fulfillment of all citizens and sustainable economic prosperity and employability, whilst promoting democratic values, social cohesion, active citizenship and intercultural dialogue.**

The ELLI Index identifies and measures learning opportunities, activities and outcomes that reflect these multifaceted aspects of learning. It captures the personal (learning to be), the social (learning to live together) and the professional (formal and vocational learning).

Lifelong learning is established within ET 2020 as the fundamental principle underlying the development of the new strategy. Lifelong learning is referred to as **“learning in all contexts – whether formal, non-formal or informal – and at all levels: from early childhood education and schools through to higher education, vocational education and training and adult learning”** (Education Council 2009). The European policy definition of lifelong learning is fully coherent with the ELLI concept of lifelong learning, as they both acknowledge that learning is wide-ranging both in breadth (formal education, e.g. school; non-formal, e.g. youth training; and informal, e.g.



## 2. Why Do We Need ELLI? - Measuring Europe's Progress in Lifelong Learning

promotes cooperation between local and regional authorities together with their partners in business and society in the development of a coordinated policy, whilst it also facilitates comparisons and further improves the conditions for lifelong learning.

As the institutional representative of the cities and regions of the EU, the Committee of the Regions welcomes the creation of the ELLI Index and urges that it be applied in practice in the interest of a policy that takes into account regional and local characteristics.

Gerhard Stahl

Secretary General of the EU Committee of the Regions

learning another language by living in another country) and depth (throughout an individual's life). The indicators used for the ET 2020 benchmark on participation rates in lifelong learning form part of the ELLI Index.

The strategy states that lifelong learning should form the basis for the strategic framework for cooperation across Europe between 2010 and 2020. There are a number of key elements to the ET 2020 lifelong learning strategy, including the development of national strategies for lifelong learning.

One of the key objectives within ET 2020 is to make lifelong learning and mobility a reality. The target benchmark for lifelong learning is having an average of at least 15% of adults in Europe participating in lifelong learning by 2020, an increase from the 12.5% benchmark of the former Lisbon Strategy, which was not met in 2010. The education and training agenda highlights the need to ensure that everyone in Europe, regardless of social or economic circumstances, has the possibility of learning and returning to education.

The strategy identifies flexibility as a cornerstone of lifelong learning and calls for the establishment of a variety of learning pathways and greater fluidity in the transitions between existing systems of learning. The text highlights the need for a greater recognition of non-formal and informal learning opportunities

within this system. In addition, it calls for making learning more attractive and developing new forms of learning and new forms of teaching. ELLI includes innovative indicators which will provide better recognition of non-formal and informal learning. The ELLI framework allows for the future inclusion of indicators on the flexibility of learning pathways as new and better data become available.

The ET 2020 strategy also highlights the promotion of equality, social cohesion and active citizenship through learning. Early childhood education and efforts to ensure students complete their schooling, both of which are included as ELLI indicators, are identified as policy levers. The strategy also makes a strong connection between learning and the values of intercultural competence, human rights, democracy, concern for the environment and the ability to interact and live together with peers from diverse backgrounds. ELLI's dimension of learning to live together tries to measure many of these elements through a variety of indicators.

## 2. Why Do We Need ELLI? - Measuring Europe's Progress in Lifelong Learning

After more than ten years, during which every policymaker in Europe has underscored the importance of lifelong learning, we now have with the ELLI Index a tool that can help translate intentions and declarations - and occasionally wishful thinking - into reality.

The ELLI Index provides the first full-fledged tool for policymakers and others in the field of education that makes it possible to make decisions and develop strategies promoting lifelong learning based on the most relevant and up-to-date information. National and local organizations in the field must now make key decisions and provide ongoing support if the ELLI initiative is to result in genuine improvement of lifelong learning opportunities for individuals throughout society. Monitoring of this process, especially initially in the years to come, will be critical for ensuring that, if needed, corrective measures can be taken early on.

Anders J. Hingel

Former Head of Unit of the European Commission

In 2006, the Council and European Parliament defined and recommended several key competences according to the European Commission evaluation of the Lisbon Strategy, which have since become critical components of the EU education and training agenda (European Council and European Commission 2010). These key competences are described as the qualities needed for lifelong learning and include:

- Learning to learn
- Civic and social competences
- Sense of initiative and entrepreneurship
- Communication in the mother tongue
- Communication in foreign languages
- Mathematical competence and basic competences in science and technology
- Digital competence
- Cultural awareness and expression

These competences are considered necessary for all young people to learn; in addition, adults should have the opportunity to update them throughout their lifetime (Education Council 2009). The turn towards competences rather than simply certifications has highlighted the transition from understanding education purely as knowledge to be transferred, on the one hand, to an understanding that knowledge is co-constructed and that learning is a holistic combination of knowledge, skills, values, attitudes and dispositions, on the other. An example of this shift

within European Commission policy is the expectation that education institutions will facilitate positive attitudes towards learning, while connecting learning with intercultural dialogue and active citizenship (Education Council 2009). ELLI reflects this broader approach to the role of learning by measuring attitudes, values and disposition within the dimensions of learning to live together and learning to be. Specific examples of non-traditional measures include trust, volunteering and participation in cultural activities.

In summary, there is a coherence between the conceptual basis and competences defined by the European policy on lifelong learning and the framework of indicators included in ELLI. Moreover, ELLI provides a measurement instrument which will measure many of the dimensions included within the European Union education and training strategy for 2020.

### Learning for Social Cohesion

**Maintaining social cohesion has increasingly dominated the political debate internally in EU member states, as has maintaining solidarity between countries across Europe.** Enlargement of the European Union has increased internal mobility and migration from Eastern Europe to Western Europe, in particular from Romania, Bulgaria and Poland (Eurostat 2009).

Adding to this internal migration there has been extensive migration from countries beyond the European Union. Migrants have either entered through previous policies on work and migration (e.g. Turkish communities) or as a result of suffering conflict and poverty within their countries of birth. Migration has introduced or increased the visibility of different cultures, religions, values and traditions. The increased diversity has challenged the concept of national identity and what it means to be European. In this context, there has been a struggle within communities to ensure tolerance, which often requires efforts to reduce violence or indifference to groups of people who are visibly different.

**The issue of migration has been exacerbated with the economic crises as jobs and resources have become scarce.**

As a result, economic inequalities within and between countries have been rising. The differences between the rich and the poor within wealthy nations have been rising, to the cost and detriment of everybody's health, well-being and social cohesion (Wilkinson and Pickett 2009). This reality has led for calls at the highest level within the OECD and EU to compliment measures of wealth (GDP) with new social and environmental indicators for measuring societal progress, a call echoed by French President Nicolas Sarkozy and German Chancellor Angela Merkel in February 2010. Borrowing the words directly from the OECD, the "well-being of nations" can not be judged by wealth alone.

**Social cohesion is one of the fundamental principles of the UNESCO framework for lifelong learning (Delors et al. 1996).**

This framework was developed as part of the International Commission on Education for the 21st Century led by Jacques Delors and is used as a basis for the development of the ELLI conceptual framework. The UNESCO framework includes the four dimensions of learning to live together, learning to be, learning to do and learning to know. The context of this framework is understanding learning as the way to develop a "harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war" (Delors et al. 1996). Building from this position, the commission placed the dimension of learning to live together at the forefront of their conceptual map of lifelong learning, and Delors, the author of this text, strives to demonstrate that learning in all its forms helps people in their everyday lives to cope with "inevitable conflicts in intelligent and peaceful ways." The recent investigation of lifelong learning in the UK (Schuller and Watson 2009) takes this idea one step further and states that lifelong learning is a human right and forms the basis for "personal growth, emancipation, prosperity, solidarity and global responsibility." The focus of the UNESCO model on developing a model of learning based on a holistic understanding of the individual – situated within learning relationships with others within and across communities and on the local and global level – makes it particularly relevant to the increased diversity of recent years.

## 2. Why Do We Need ELLI? - Measuring Europe's Progress in Lifelong Learning

“Attempting to measure a concept as complex and multifaceted as lifelong learning is no easy task. Indeed, it was a distinct challenge when the Canadian Council on Learning (CCL) first began work on its Composite Learning Index (CLI) more than five years ago. This is why we answered the call so readily when the Bertelsmann Stiftung invited us to lend our time and expertise in the development of the ELLI Index, Europe's first comprehensive measure of lifelong learning. As we have witnessed in the years since the CLI's initial release in 2006, such tools have a singular power to vault the issue of lifelong learning into the political and public spheres in a unique and compelling way.

It is for this reason that we welcome the release of the ELLI Index with such great pleasure - and anticipation. As the first measure of European lifelong learning the ELLI Index holds the same promise to change public opinion and shift political and economic debate. On behalf of CCL, I congratulate the Bertelsmann Stiftung on its commitment to such a noble initiative, and I look forward to witnessing how it will transform the way European communities view learning in all stages of life, as it has here in Canada.”

Paul Cappon

President and CEO, Canadian Council on Learning

The first composite lifelong learning index based on the UNESCO model of learning was developed in Canada in 2005 and has been measured each year for five years for each of the different economic regions within Canada. The purpose of this index is to “help Canadians understand the state of lifelong learning in their communities and to encourage them to think of concrete ways that they can improve on these conditions.” The success of the Canadian index has provided inspiration for Europe to create its own learning index. The European Lifelong Learning Index, ELLI, has been adapted to fit the European context and the concepts and understanding of lifelong learning present there.

## 3. How Does ELLI Work? - Concept and Methodology

### 3.1 What does ELLI measure? -

#### The components of ELLI

The conceptual framework of ELLI is a revised version of the UNESCO learning dimensions of learning to live together, learning to be, learning to know and learning to do. The revisions are based on changes that reflect the European context and European policy environment and have been pragmatically adapted according to existing data.

#### **The four dimensions of ELLI**

This section explains the measurement model of the four dimensions of the European Lifelong Learning Index. For each dimension it provides a clear guide as to what is being measured and then explains how the dimension could be improved in the future with new data.

Learning within the formal education system (pre-school, school, university ...)

Vocational, job related-learning

to know

to do

Learning

to live together

to be

Learning for social cohesion

Learning as personal growth

# Learning in Four Dimensions

## Learning to know

- Participation in early childhood/pre-school education
- Output of secondary education
- Participation in post-secondary education
- Supply of formal education infrastructure

- Percentage of children aged 4 to compulsory school age attending formal education institutions
- Student performance in reading (PISA)
- Student performance in math (PISA)
- Student performance in science (PISA)
- Share of 30 to 34 years old with tertiary education
- Adult participation rates in formal education and training
- Total public expenditure on education as % of gross national income

## Learning to do

- Output of formal vocational education and training
- Participation in non-formal vocational education and training
- Supply of non-formal vocational education and training
- Integration of learning in the work environment

- Graduate quota in upper secondary education (vocational programs)
- Participation in job-related non-formal education and training
- Participation of employees in CVT courses
- Expenditure in training as part of labor market policies
- Numbers of hours of CVT courses
- Enterprises providing CVT courses
- Relative costs of CVT courses
- Enterprises providing any other form of training (non-CVT)
- Learning new things at work
- Doing monotonous tasks at work
- Doing complex tasks at work
- Employees using internet for work

## Learning to live together

- Participation in active citizenship
- Tolerance, trust and openness
- Inclusion in social networks

- Involvement in work for voluntary or charitable organizations
- Membership in any political party
- Working in a political party or action group
- Opinion that the country's cultural life is either enriched or undermined by immigrants
- Opinion that gays and lesbians should be free to live their own lives as they wish
- Trust in other people
- Meetings with friends, relatives or colleagues
- Anyone to discuss personal matters with

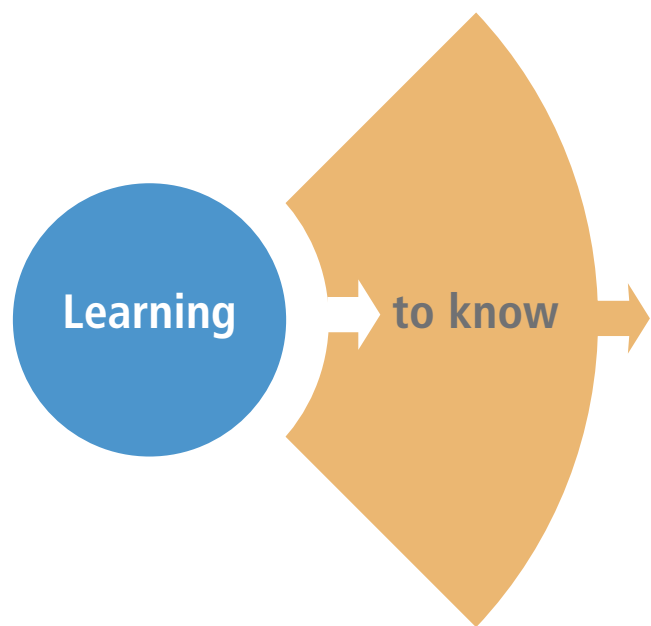
## Learning to be

- Participation in sports and leisure activities
- Participation in learning through culture
- Participation in continuing/further education and training
- Self-directed learning through media
- Supply of media for self-directed learning
- Work-life balance

- Participation in sports
- Attendance at ballet, dance, opera
- Attendance at cinema
- Attendance at concerts
- Visiting museums/galleries
- Participation in lifelong learning
- Personal use of internet
- Internet access in households
- Accordance of working hours with family commitments

## 1. Learning to know – the formal education system

The dimension of learning to know predominantly assesses the learning of young people within the formal education system. By including data on the formal system, ELLI measures the input and outcomes of the area in which most ministries of education allocate the vast majority of their budget (Schuller and Watson 2009) and on which policy decision making and policy directions currently place their emphasis. In terms of investment, this dimension contains indicators on total expenditure on education and training. The range of learning opportunities for formal education which are currently being examined are pre-school, school, higher education and adult education institutions. This dimension also measures learning outcomes from traditional core disciplines such as math, science and reading in secondary schools, as well as completion and attainment rates for post-secondary education. The learning to know dimension in particular covers the political priorities as stated by European Union member states (EU 2020, ET 2020).





## Learning to know – formal education

Measures	Indicators
Percentage of children aged 4 to compulsory school age attending formal education institutions	Participation in early childhood/ pre-school education
Student performance in reading (PISA)	Output of secondary education
Student performance in math (PISA)	
Student performance in science (PISA)	
Share of 30 to 34 years old with tertiary education	Output of post-secondary education
Adult participation rates in formal education and training	Participation in post-secondary education
Total public expenditure on education as % of gross national income	Supply of formal education infrastructure

Source: Bertelsmann Stiftung

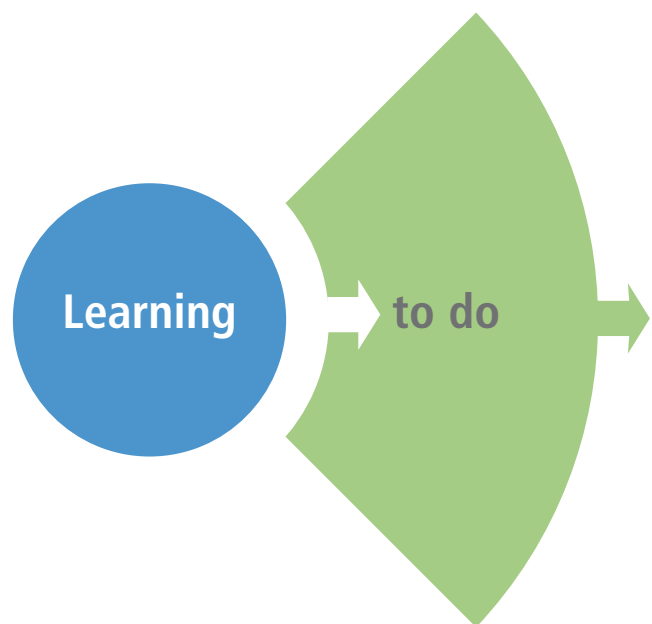
| BertelsmannStiftung

## Future directions for learning to know

Due to the limitations of current data, the measure of learning to know is based on traditional understandings of knowledge and schooling. In the future, this dimension would seek to measure learning in terms of competences which encompass a holistic understanding of the individual and which combine knowledge, skills, attitudes and values towards learning. Psycho-social aspects of the outcomes of learning, such as the development of resilience and self-confidence, are considered the key to future learning, health, civic engagement and work. It is particularly important to monitor these outcomes for individuals who have previously experienced failure within the formal education system. In the future, this dimension will tap the European framework of key competences including learning to learn, a framework that measures aspects such as resilience and self-confidence along with an interest in learning, critical curiosity and problem solving.

## 2. Learning to do – vocational learning

This dimension captures the participation rates, learning opportunities and investment (by employers, government and individuals) in job-related skills. The expectation is that these skills can improve economic performance and social inclusion by increasing job prospects and career opportunities for the individual and can improve competitiveness for an enterprise, region or country. This dimension predominantly measures adults' continual professional development at their place of work through formal, non-formal and informal learning opportunities. In addition, it captures students' participation in the vocational track of the formal education system which, depending on the country or region, can also include young people within compulsory education. It reflects investment in learning by employers, government and the individual. This dimension is limited as the data available only measure input, output and process indicators, and there is no assessment of outcomes.



## Learning to do – vocational learning

Measures	Indicators
Graduate quota in upper secondary education (vocational programs)	Output of formal vocational education and training
Participation in job-related non-formal education and training	Participation in non-formal vocational education and training
Participation of employees in CVT courses	
Numbers of hours of CVT courses	
Enterprises providing CVT courses	Supply of non-formal vocational education and training
Relative costs of CVT courses	
Enterprises providing any other form of training (non-CVT)	
Expenditure in training as part of labor market policies	
Learning new things at work	Integration of learning in the work environment
Doing monotonous tasks at work	
Doing complex tasks at work	
Employees using internet for work	

Source: Bertelsmann Stiftung

| BertelsmannStiftung

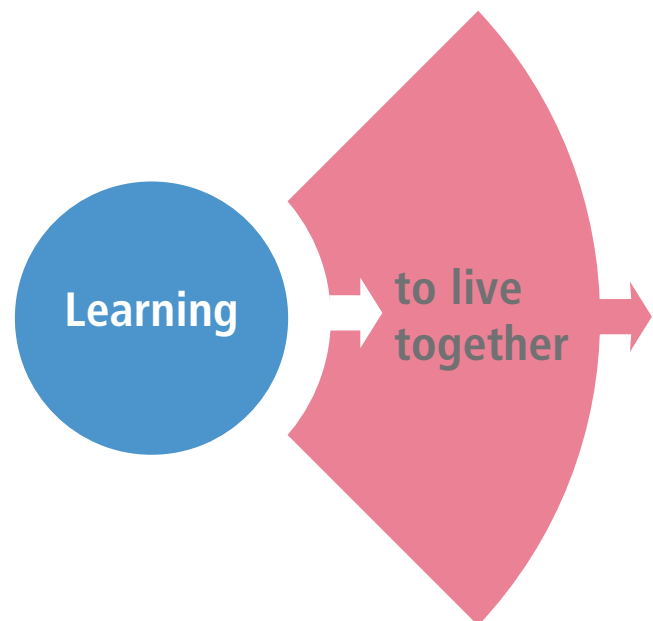
## Future directions for learning to do

In the future, this dimension would contain measures of the learning outcomes from VET and CVET. This would include job-related skills such as the learning outcomes described in the OECD Programme for International Assessment of Adult Competences (PIAAC), including dimensions such as ability to learn new skills and use ICT or those described within large-scale assessment of vocational education and training which are more specific to certain professions (VET-LSA) (Baethge and Arends 2009). In addition, future indicators would include “soft skills” such as how to work in teams and making presentations.

### 3. Learning to live together – learning for social cohesion

This dimension measures individual-level attitudes and dispositions that promote social cohesion such as trust, intercultural competence and political and community engagement (Putnam 2000). Learning and education has been considered from the outset to be much more than an issue of creating skills for employability and has been part of a social policy tool to sustain democracy, create social mobility and increase levels of health and social inclusion (Dewey 1916). This dimension tries to capture the learning of the values of democracy, tolerance and trust, as well as skills for engaging with other people and the interest to do so. These competences are learned throughout life. Learning to live together starts at home with learning from parents and siblings and continues through interactions at school and work and through involvement in civil society organizations. In schools in most European countries there is a specific curriculum subject on citizenship through which many of these competences are developed; however, research has indicated that it is the level of democracy at school that is the key driver for developing these competences (Benton et al. 2008). The investment of individuals, families, communities and countries is often much more hidden for the learning to live together dimension as there are fewer exams and qualifications in this field compared to traditional subject-based disciplines

such as math and science. However, the negative consequences for society in terms of social cohesion and democracy can be high if there is an absence of social competences.



Learning to live together – learning for social cohesion

Measures	Indicators
Involvement in work for voluntary or charitable organizations	Participation in active citizenship
Membership in any political party	
Working in a political party or action group	
Opinion that the country's cultural life is either enriched or undermined by immigrants	Tolerance, trust and openness
Opinion that gays and lesbians should be free to live their own lives as they wish	
Trust in other people	
Meetings with friends, relatives or colleagues	Inclusion in social networks
Anyone to discuss personal matters with	



Source: Bertelsmann Stiftung

BertelsmannStiftung

Future directions for learning to live together

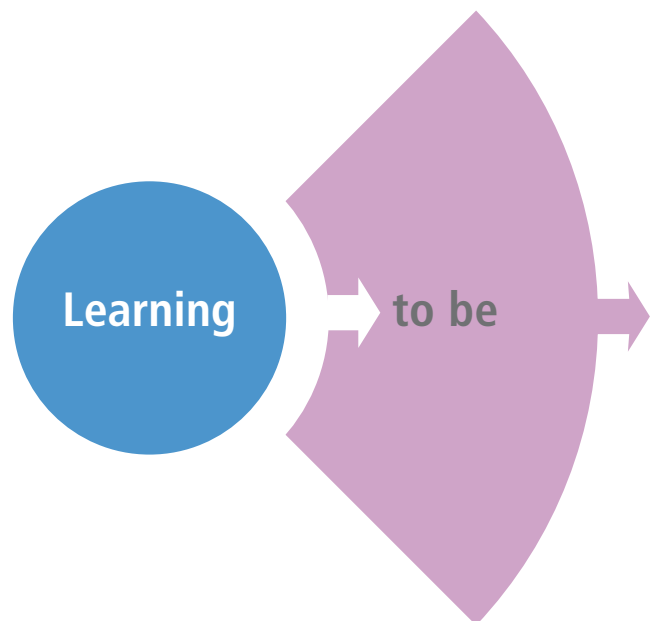
In the future, this dimension would also measure civic competences which would include knowledge and skills on democracy as well as values and behavior. In terms of school pedagogy, there will be indicators on the democratic ethos of the school. This data will be available from the new IEA International Civic and Citizenship Study, which took place in 2009.

#### 4. Learning to be – learning as personal growth

This dimension predominantly measures self-directed learning and individuals' efforts and investment in learning. This learning is facilitated by government provision and information provided on learning opportunities, but as Schuller and Watson (2009) note in their inquiry into the future of lifelong learning, these provisions are considerably less than the provisions for compulsory formal education. This dimension captures informal and implicit learning that happens through engagement and participation in the home and through community and cultural activities. The implicit learning measures include activities undertaken in which the individual does not set out with a learning objective in mind and for which there is no certification of learning achievements from participation. Nevertheless, learning is often highly successful through this style of learning due to the fact that participation is usually motivated by personal interest. Learning in the home often makes use of the internet, incidental access to information, virtual communities and virtual relationships.

In addition to implicit learning, there is one indicator in this dimension on explicit participation in lifelong learning. This indicator, which could potentially fit in all dimensions, is placed here due to the fact that individuals participate in learning for

many reasons. Ultimately, participation in lifelong learning is largely voluntary, which means that those who choose to engage in it are more likely to be motivated by the interests of personal growth and development, which is the focus of this dimension.



Learning to be – learning as personal growth

Measures	Indicators
Participation in sports	Participation in sports and leisure activities
Attendance at ballet, dance, opera	Participation in learning through culture
Attendance at cinema	
Attendance at concerts	
Visiting museums/galleries	
Participation in lifelong learning	Participation in continuing/ further education and training
Personal use of internet	Self-directed learning through media
Internet access in households	Supply of media for self-directed learning
Accordance of working hours with family commitments	Work-life balance



Source: Bertelsmann Stiftung

| BertelsmannStiftung

Future directions for learning to be

Existing indicators are heavily weighted towards “high” culture as this is the focus of international surveys. Ideal indicators would include a more diverse set of indicators including hobbies such as DIY, painting, cooking, repairing old cars, knitting and flower arranging. Therefore, future surveys would be required to include these items.

## 3.2 How does ELLI measure learning? Concept and Methodology

Measuring a complex process or phenomena like lifelong and lifewide learning in a single index brings with it many empirical challenges, including data quality as well as the selection of indicators and their weighting.

In order to address these challenges, the appropriate methodological approach is vital. **The ELLI Index follows the methodological approach and the statistical model of the Composite Learning Index (CLI), developed by the Canadian Council of Learning.** The conceptual framework is based on the four UNESCO pillars of learning.

### Data quality

There are two factors that influence the usefulness of a data source for measuring a particular indicator. The first factor is the degree to which the measures adequately represent the indicator. The second factor is the degree to which the values of each measure are influenced by random error.

Measures differ in how well they represent their respective indicators. **Unlike industrial output or even other social welfare outcomes, there are no natural metrics describing learning.** Direct measures of skill may describe the presence or absence of skills in individuals, but they are expensive and infrequent. More often, inferences about learning are made by observing the necessary conditions or expected consequences of learning. These indirect measures include accessibility of learning opportunities and the types of behavior and beliefs that are directly dependent on learning.

The methods used to collect and process data can affect the susceptibility of measures to random error. Highly standardized methods tend to result in less random error. Data describing educational or learning phenomena are difficult to coordinate and reconcile across international borders, particularly in such a diverse region as Europe. International surveys must be translated into several languages, which might subtly change the



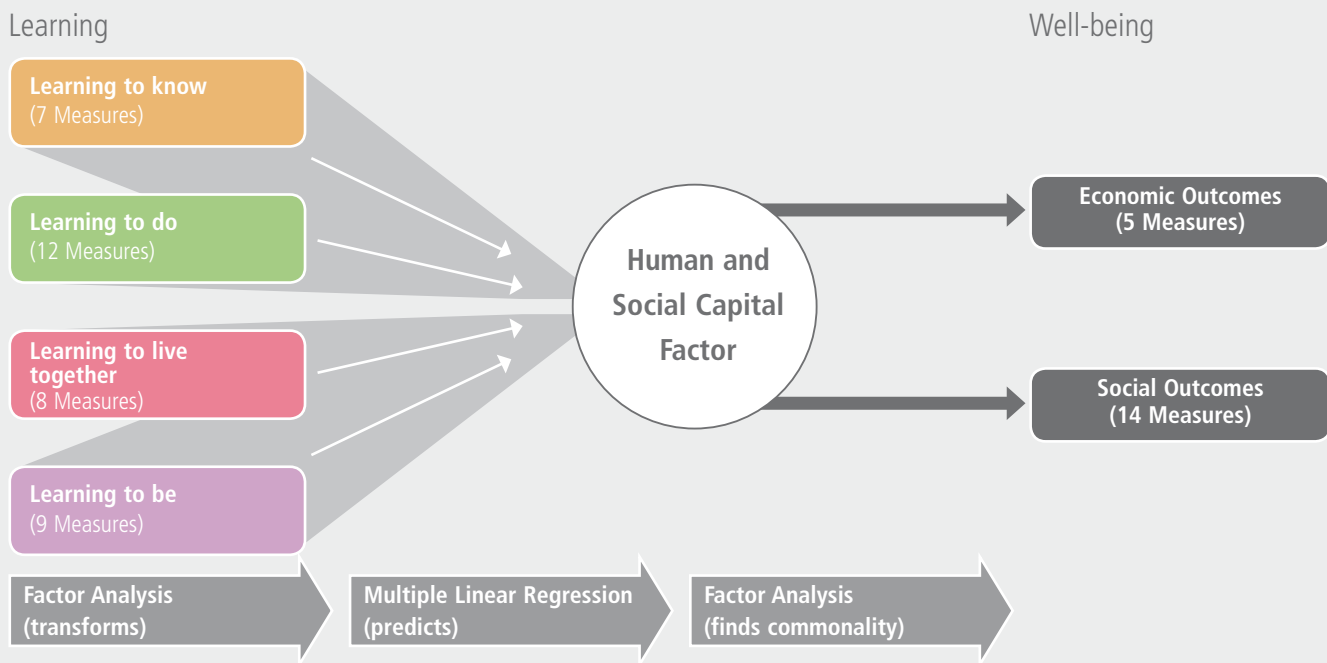
Economic and social outcomes of learning  
(Measures and indicators)

Measures	Indicators
Mean equivalized net income	Earnings/Income
GDP per head	
Labor productivity per person employed	Productivity
Employment rate	Employment
Unemployment rate	
Self-perceived health	Health
Self-reported conditions or health habits	
Life expectancy at birth	
Life satisfaction	Life satisfaction/Happiness
Happiness	
Satisfaction with job	
Satisfaction with home	
Long-term unemployment rate	Social cohesion and democracy
Gini coefficient	
Material deprivation rate by poverty status in the EU	
How satisfied with the way democracy works in country	
Voted last European election	
Trust in political institutions	
Environmental Performance Index (EPI)	Sustainability



Source: Bertelsmann Stiftung

Figure 4: ELLI Index – Statistical Model



Source: Adapted from Canadian Council on Learning (2010)

| BertelsmannStiftung

interpretations of questions across regions. Political structures differ between countries; for example, educational policy may be centralized in some countries and decentralized in others. The methods and standards of collecting data also differ from region to region. Each of these issues introduces additional random error into the variability between countries.

As a result of these factors, **the usefulness of a measure is usually different from the conceptual importance of its respective indicator.** For example, one of the most important factors affecting the quality of education is the pedagogical expertise of teachers. However, there are no useful measures available because of a lack of standard definition and data collection methods. In contrast, expenditures in education are not perfect representations of educational quality because they do not consider efficiency of education systems, although they are highly standardized and accurate and remain very useful measures of the adequacy of conditions required for learning.

### Statistical model

There are two main approaches to combining different measures to produce a composite index: arbitrary and judicious. Arbitrary combinations, such as equal weighting, have no justification or rationale, and tend to produce index scores with greater susceptibility to error. Judicious combination usually weights each measure according to its relative importance. Although generally more defensible, there are three drawbacks to the traditional judicial approach, which uses a panel of experts to determine the weights. First, there is often no agreement between panelists on the criteria used to determine the importance of a measure. Second, the panelists tend to assign their judgments based on the importance of indicators, rather than measures. As described above, the usefulness of a measure may be very different from the importance of the indicator it is supposed to represent. Third, the weights are highly sensitive to the individual panel members, reducing the transparency and replicability of the procedure.

To avoid these weaknesses, the approach used by ELLI is the same as that used by the Canadian CLI. A statistical model replicates the judicious approach by explicitly defining the criteria used to determine the importance of each measure. Once these criteria are established, the procedure weights the learning measures according to their usefulness in explaining the criteria. This method is scientific, replicable, and transparent.

**The ELLI Index relies on the fundamental assumption that all learning occurs with the implicit or explicit purpose of improving the well-being of individuals or nations.**

Although there are many factors that affect well-being, including “accidental” factors such as natural resources and historical or geographic advantage, the basis of all social and economic well-being are the skills, attitudes and behaviors of people. The mathematical basis of computing ELLI involves first isolating and estimating the component of the well-being of nations that depends on human contributions, or human capital. This human component of well-being is the direct outcome of learning.

In order to isolate the human component of well-being from other accidental factors, a wide variety of social and economic outcomes are used (page 33). The rationale for taking a broad selection of outcomes is that, while some outcomes might also have a common dependence on specific factors such as natural resources, many outcomes are unlikely to have much in common besides human

capital. For example, economic outcomes such as average income and unemployment tend to be related to the economic cycle in addition to human capital, but three diverse outcomes, such as average income, unemployment and self-perceived health, will most likely only share human capital as a common factor. ELLI ensures that the human capital component of well-being is properly estimated by using 19 separate social and economic outcome measures (page 33). The estimate of the human capital component is produced using factor analysis, which combines the separate measures according to how much they depend on the common factor underlying the complete set of measures.

Once the outcome is mathematically defined, the estimation proceeds with each of the four learning dimensions separately. The score for each learning dimension is produced from a two-stage process. First, a factor analysis is used to convert the set of measures included in the dimension to a set of factor scores that represent the original variables. The factor scores are mathematically more convenient for the second stage, which uses the scores to predict the outcome factor using multiple linear regression. The weights that are produced as a result of this two-stage procedure are used to combine the measures into the learning dimension. There are several benefits to this technique. First, **the composite produced has the strongest relationship to the human capital outcome of all possible linear combinations.** Second, the composite has an intuitive

### 3. How Does ELLI Work?

“Until today Jacques Delors’ model linking learning, doing, living together and being had been implemented only outside Europe, in Canada. Thanks to the Bertelsmann Stiftung and its international team, the index is now available for European countries, with regional indexes in development. A newly born index needs nurturing to conquer a place in the policy arena, and a significant effort will be needed to show that the index is indeed telling an important story about Europe’s future. The econometric team of the Joint Research Centre has tested the index for statistical robustness using a thorough sensitivity analysis. Our conclusion is that ELLI has been created using a sound statistical methodology and its underlying structures are well balanced. In a word: it flies.”

Andrea Saltelli

Head of Unit, Econometrics and Applied Statistics

Institute for the Protection and Security of the Citizen (IPSC), The European Commission, Joint Research Centre

interpretation, in that each of the measures can be seen to have a positive contribution to social and economic well-being. A third benefit is that each model also produces a summary of how well the outcome factor is explained by the set of predictors, referred to as the coefficient of determination. The complete model relating the learning measures to the social and economic outcome measures through these computational stages is illustrated in Figure 4.

Once all the dimension scores have been produced, the final composite ELLI score is computed by combining the four dimension scores. The contribution of the separate scores is determined by how well each model was able to predict the outcome. The purpose of this weighting is to ensure that, just as with the independent dimension scores, the overall ELLI index has the best ability to predict the human contribution to social and economic well-being. Another advantage of this method is the transparency of computing both the separate dimension scores and the overall composite; the relative contribution of a single measure is consistent between the dimension score and the ELLI index score.

Further and more detailed information on the methodology of the ELLI Index can be found in the “ELLI Indicators in Depth” paper as well as in the document “Methodological Basis of the ELLI Index,” which can be downloaded at [elli.org](http://elli.org).

Moreover, in August 2010 the European Commission’s Joint Research Centre (JRC) has evaluated the robustness of the ELLI Index in a separate validation report, which can also be downloaded at [elli.org](http://elli.org).

[www.elli.org](http://www.elli.org)

# 4. ELLI Index Results and Findings

## - The Learning Climate in EU Member States

### 4.1 European Lifelong Learning Index

The overall results for the European Lifelong Learning Index show that the Nordic countries Denmark, Sweden and Finland and, in addition, the Netherlands rank highest. They are followed by a group of countries that consist of mainly Central European and Anglo-Saxon countries. The next group of countries, which are below the EU average, are from Southern and Eastern Europe and range from the Czech Republic to Poland. The lowest performing group of countries is also comprised of Southern and Eastern European countries, including Hungary, Greece, Bulgaria and Romania. It should be noted, however, that Slovenia, a former communist country and new member of the European Union, performs well, scoring above the EU average and on par with Germany.

Exactly why specific countries perform well is difficult to say, and country performances may differ for a variety of reasons. However, we can examine the countries that perform well in terms of their general characteristics and education systems to identify possible “best practices.” This information is provided below for the top performing countries, namely, the Nordic countries and the Netherlands.

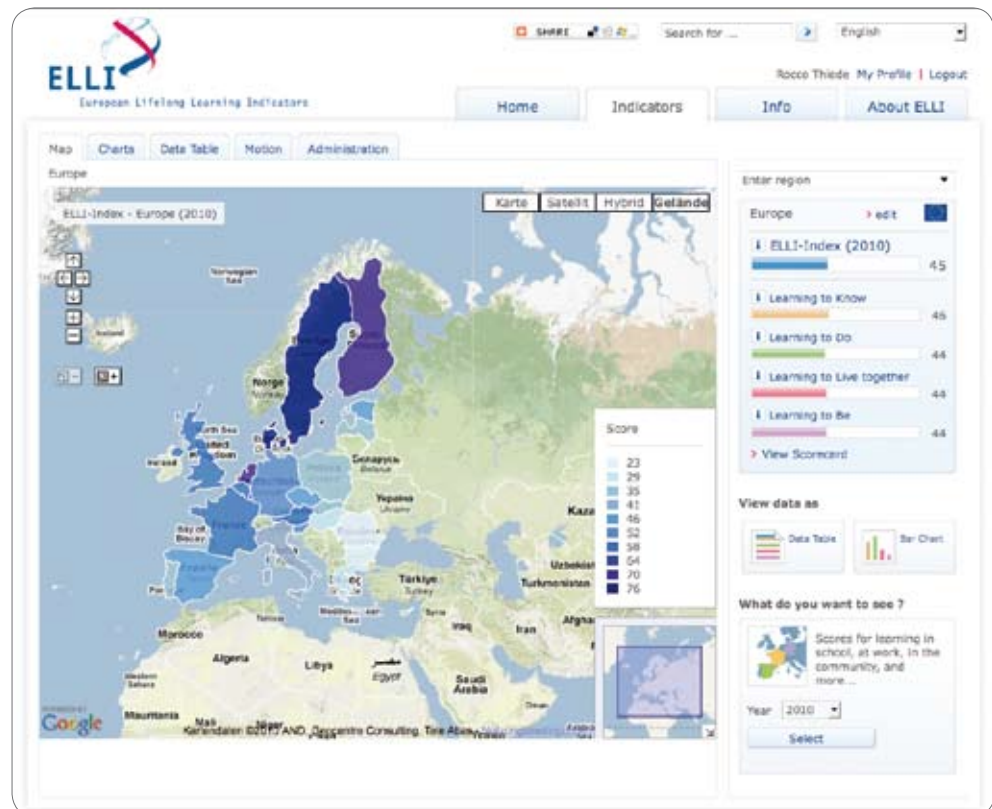
**The Nordic countries of Sweden, Denmark and Finland are social democracies that are wealthy and at the same time egalitarian in terms of the distribution of wealth and education levels (Mostafa 2009).** Education systems in the Nordic countries are characterized by the following:

- Comprehensive education (no school selection or setting)
- High levels of school autonomy
- Long tradition of lifelong, non-formal and democratic education (Boli 1989)
- Free university education

The Netherlands is a reasonably wealthy country; however, wealth there is less equally distributed than in the Nordic countries, but more equally distributed than in France and the UK. Its education system is characterized by:

- Selection at the age of 12 into academic and more vocationally orientated schools, something that is balanced by pathways between the different school types that make it possible for all children to attend university, regardless of the school they started at.
- High levels of school autonomy
- University education has fees

#### 4. ELLI Index Results and Findings - The Learning Climate in EU Member States

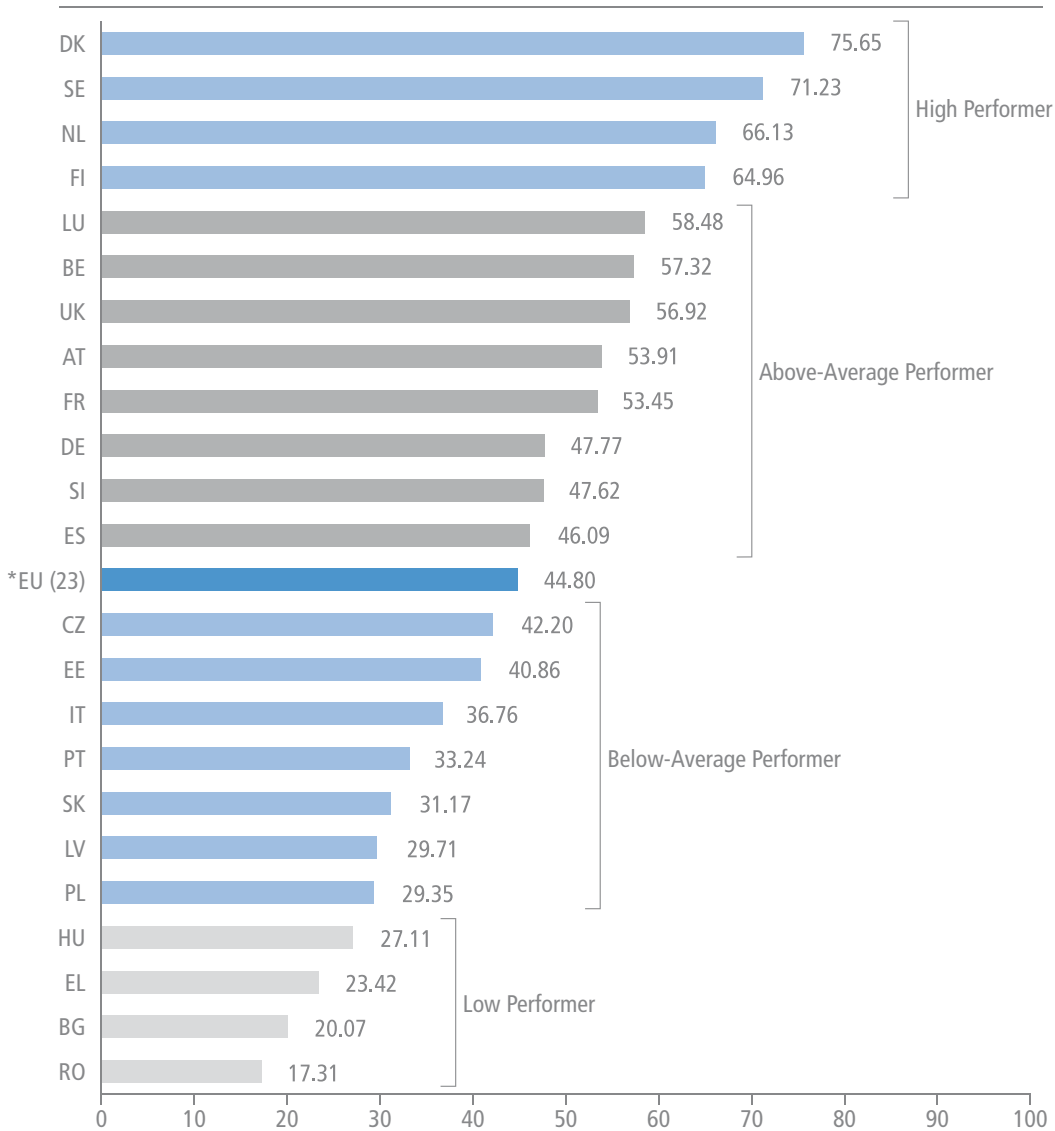


The countries that perform less well tend to be poorer, with many of them having higher levels of inequality, such as Greece and Romania. Most of the countries in the bottom half of the index are former communist countries which have only recently undergone the transition to democracy and a market economy. Greece and Portugal, which have only become democracies within the last 40 years, are also found in the bottom half of the table.

For in-depth information on the ELLI Index results in a particular country or learning dimension, please refer to our list of publications on [www.elli.org](http://www.elli.org).

[www.elli.org](http://www.elli.org)

**Figure 5: ELLI Index**



\*The original dataset includes the EU 27 countries. Due to the lack of data, Ireland, Cyprus, Lithuania and Malta were excluded from the dataset.

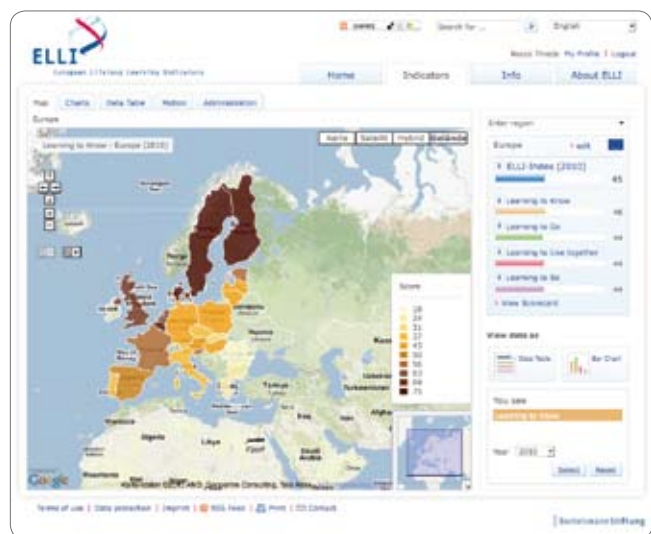
Source: Bertelsmann Stiftung

BertelsmannStiftung

## 4.2 Learning to know

For the dimension learning to know, again it is the Nordic countries that are the top performers, with Denmark performing the highest. In addition, Belgium, the Netherlands and the UK join the Nordic countries as high performers. The next set of countries, which are above-average performers, is a mixed group that includes Slovenia, France, Estonia, Luxembourg and Spain. For this dimension Central European countries perform below the EU average, including Germany and Austria; they are joined by Southern and Eastern European countries, ranging from Lithuania to the Czech Republic. The lowest performers are Slovakia, Greece, Bulgaria and Romania.

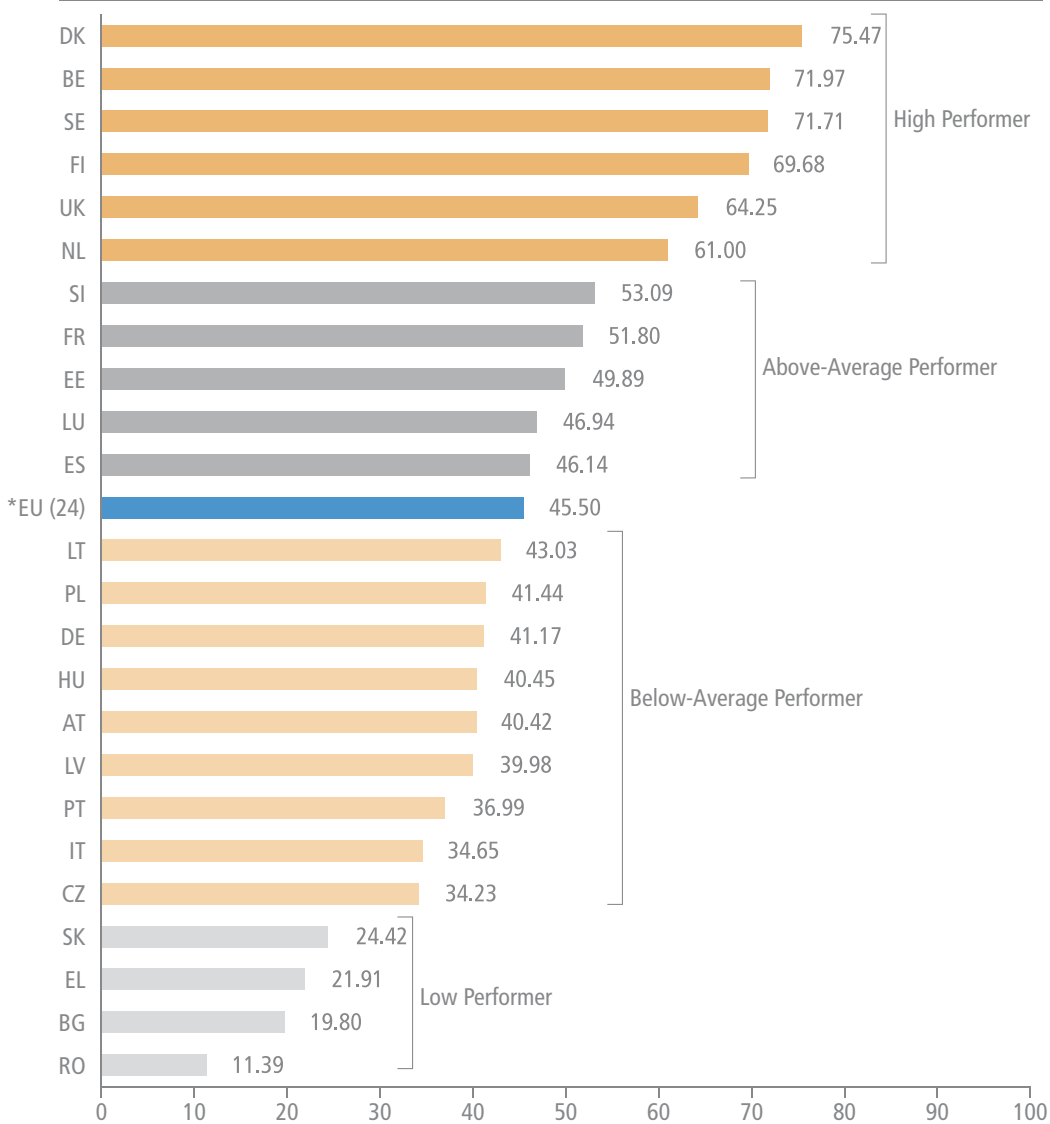
**The comprehensive education system in the Nordic countries supports their high performances, with the PISA results showing that less able students perform much better in these countries (OECD 2003).** In addition, the Nordic countries score well on their participation in tertiary education (which is free), have generous public spending on education as a whole and have widespread participation of adults in formal education (from their long tradition of adult education). Early childhood/pre-school education is the only area in which Nordic countries do not do quite as well, and this is largely due to the fact that the system of childcare is both generous and equally distributed to men and women, allowing both parents to look after their children at home.



Belgium joins the Nordic countries at the top of this dimension, with the Flemish part of Belgium posting scores as high as Finland's in terms of PISA results. However, unlike the Nordic countries, the Flemish system does have school selection at the age of 12. Belgium also has high scores for early childhood education, in particular within the French-speaking region.



**Figure 6: Learning to Know**

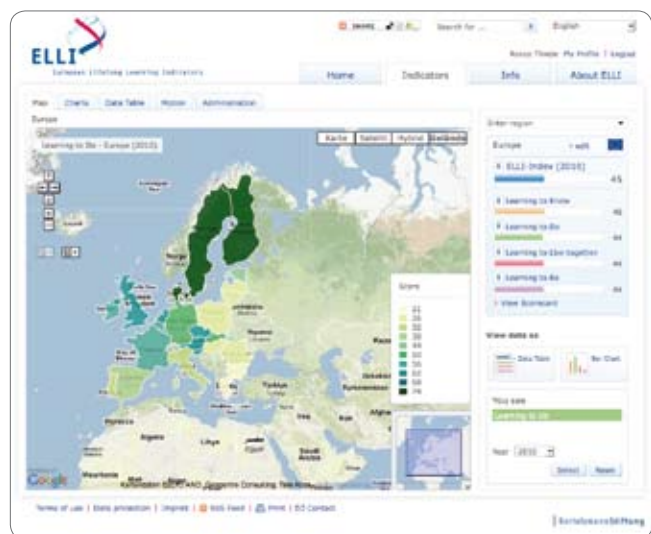


\*The original dataset includes the EU 27 countries. Due to the lack of data, Ireland, Cyprus and Malta were excluded from the dataset.

### 4.3 Learning to do

It is the Nordic countries, again, that top the learning to do rankings, this time with considerable ease. Sweden and Denmark take first and second positions, respectively. Above-average performances are achieved by mostly Western and Central European countries, with strong performances exhibited by Slovenia, the Czech Republic and Slovakia. People in these countries are highly likely to participate in in-company professional development (courses and seminars). Below-average performances are exhibited by mainly Southern and Eastern European countries, including Estonia, Malta, Cyprus, Spain, Italy and Portugal. The weakest performers were East European countries and Greece.

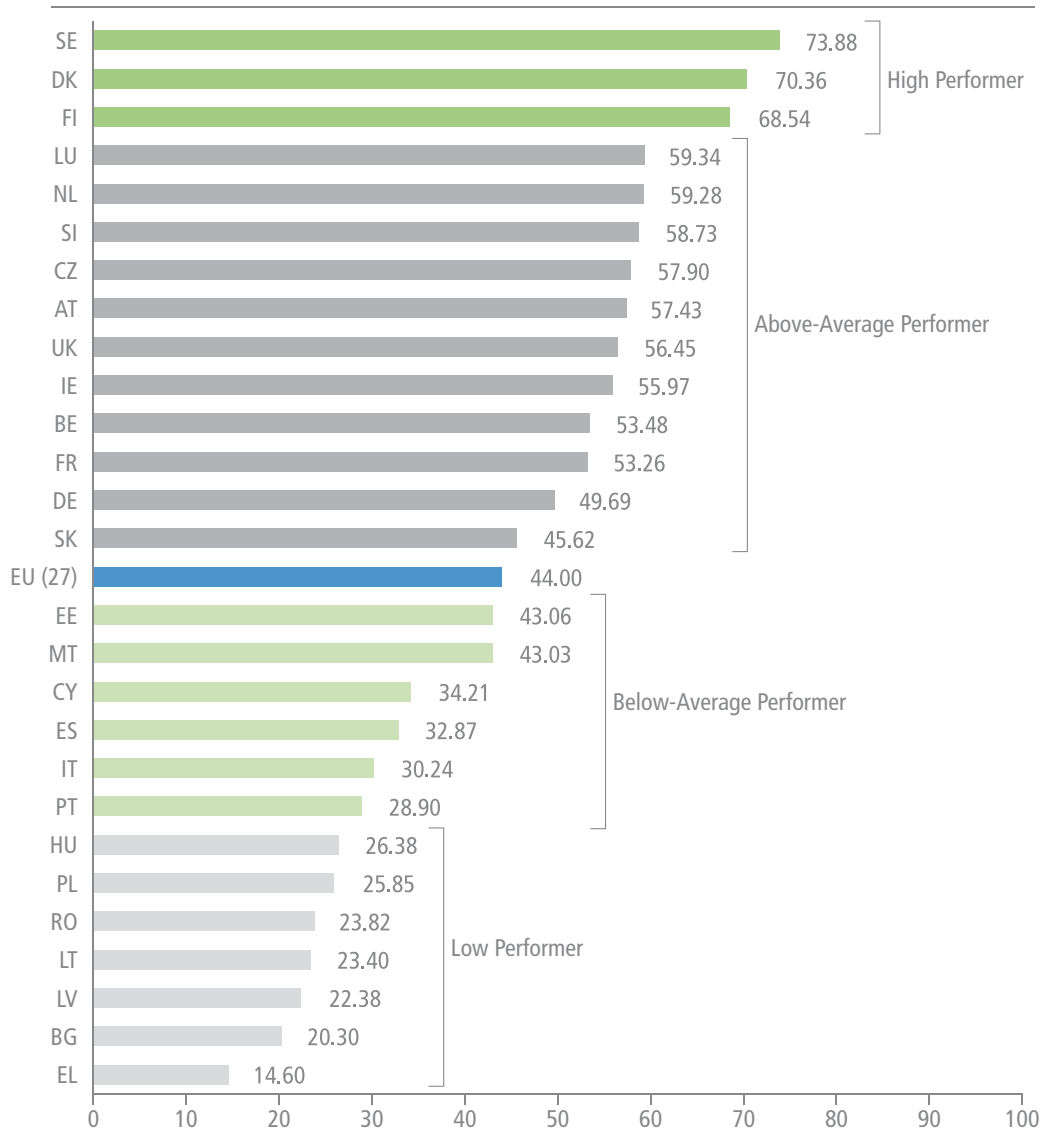
One reason for the top performance of the Nordic countries could be their VET system. **The Nordic countries VET systems integrate Vocational Education and Training with the learning needed for university, lifelong learning and democratic participation.** In Sweden, for example, 50% of upper school students (16–18) choose to take the vocational courses. The post-secondary VET, in Sweden, is carried out predominantly through Advanced Vocational Education, which offers courses designed in consultation with employers to meet labor market needs. It is funded by the government through grants to training providers and mostly based in the workplace.



(For more information go to <http://www.yhmyndigheten.se/english>)

It is necessary to reaffirm the limitation of the data availability within the learning to do dimension. At the moment there are only input and process measures as there are currently no large-scale assessments of the outcomes of vocational education and training (Baethge and Arends 2009). This may effect the country rankings for this dimension.

**Figure 7: Learning to Do**



Source: Bertelsmann Stiftung

BertelsmannStiftung

## 4.4 Learning to live together

Denmark takes the overall lead for the learning to live together results, with other high performances from the other Nordic countries, the Netherlands and Austria. The Nordic countries also take the top positions for most of the individual indicators in this dimension, but do slightly less well in the areas of engagement in civil society and political participation, where the Netherlands and particularly Austria show excellent results. Above-average performances are achieved by mostly Western and Central European countries including Luxembourg, the UK, France and Germany. Spain performs well in this dimension and joins this group. Southern and Eastern European countries perform below the EU average. The bottom group of countries in the overall ranking for this dimension includes Greece and the former communist countries of Bulgaria, Slovakia, Poland, Lithuania, Romania and, last of all, Hungary.

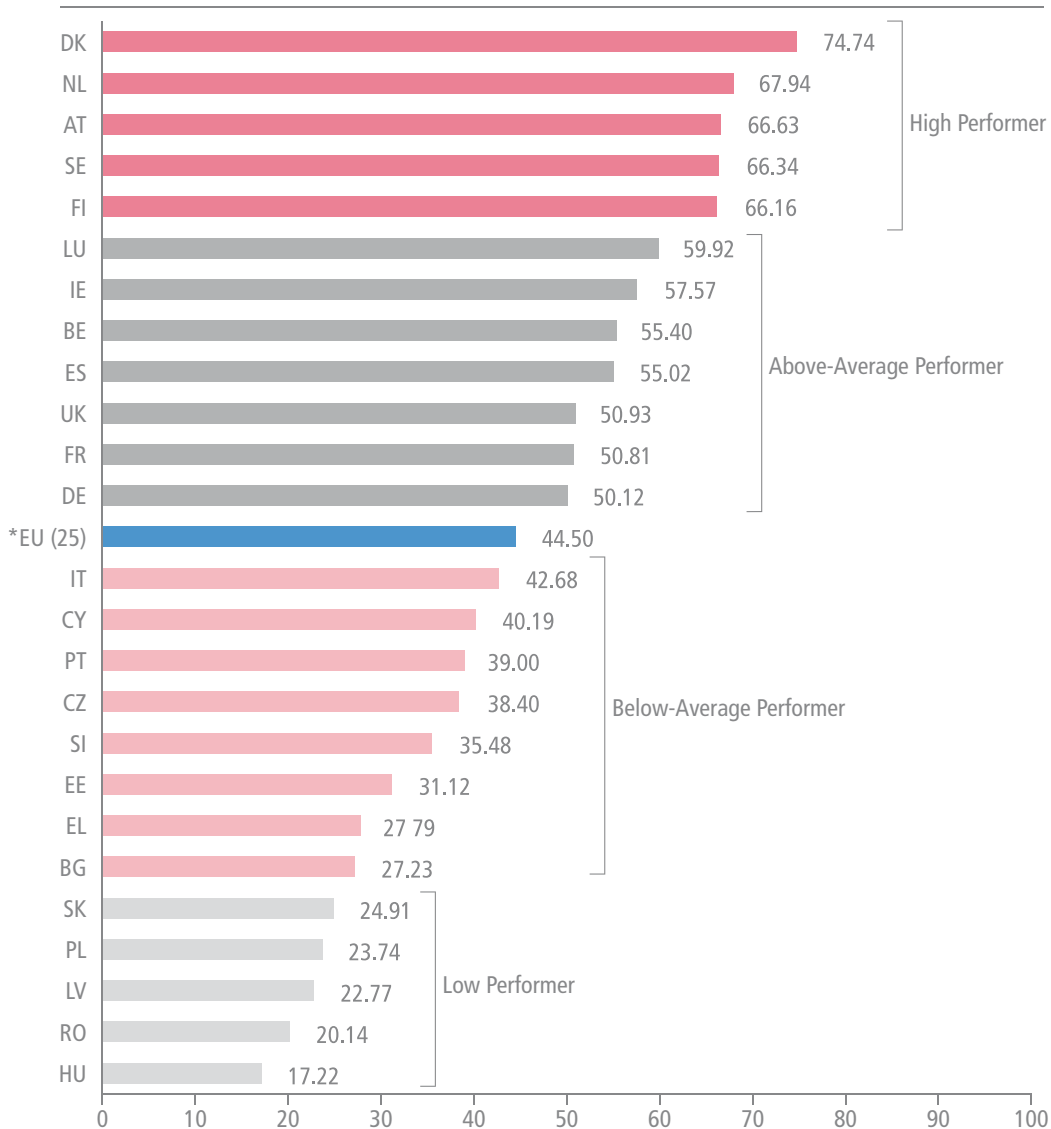
**Here, the typical determinants of the individual indicators for civic participation (volunteering, political participation, trust and tolerance) are the number of years a country has been a democracy** (Westholm et al. 2007). For example, the numbers of years a democracy has been in place gives an indication of the learning processes relating to democratic practices that are developed through civil society and education and, over time, passed on within families from one generation



to the next (Weil 1985). The low results for former communist countries confirm this. The fact that Greece, Portugal and Cyprus are also in the bottom half of the table is also evidence of this effect. Spain, however, performs better than expected for learning to live together, something that is largely due to the country's high scores for sociability and friendship rather than civic participation.

**Education itself plays an important role in the learning of civic participation** (Hoskins et al. 2008). The methods for learning citizenship that can be demonstrated to be most effective are having a democratic climate in the school and an open climate for debate within lessons (Torney-Purta 2002). These methods support the feelings of self-efficacy and empowerment of the student, which then leads to greater intentions to participate (Benton 2008).

**Figure 8: Learning to Live Together**



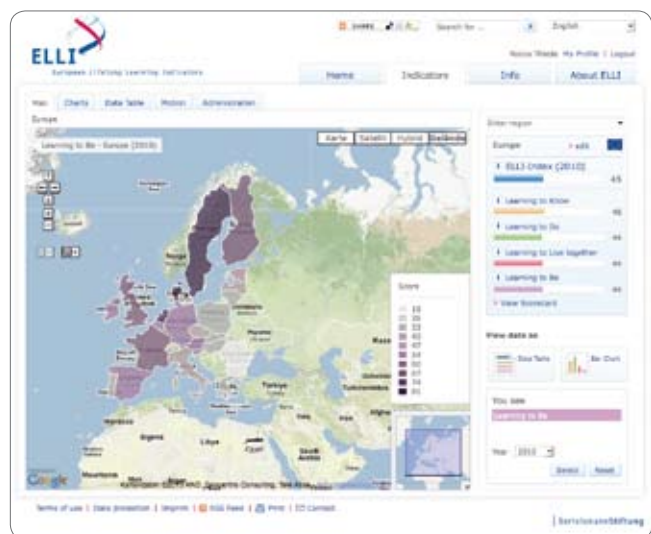
\*The original dataset includes the EU 27 countries. Due to the lack of data, Lithuania and Malta were excluded from the dataset.

## 4.5 Learning to be

Denmark, Sweden, the Netherlands and Luxembourg outperform other countries in this dimension. However, in contrast to all previous dimensions, Finland drops to seventh place. Above-average performances are exhibited mostly by Western and Central European countries, from the UK to Austria. In addition, Slovenia, Spain and Malta post above-average scores. Below-average results can be seen in Southern and Eastern European countries, with the two poorest and most recent members of the European Union, Romania and Bulgaria, exhibiting the lowest scores.

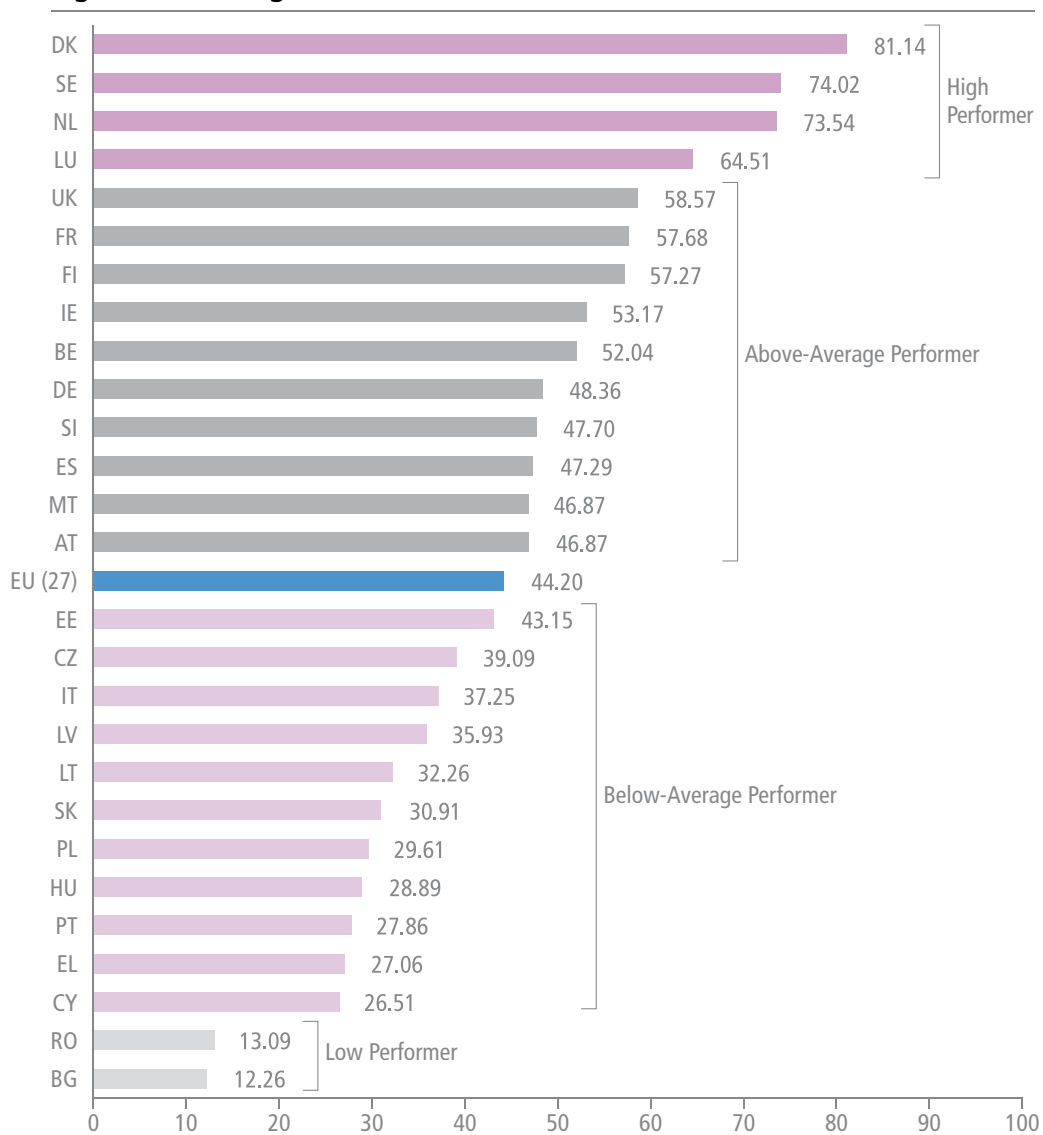
For the individual measure participation in lifelong learning, Swedes rank first, and Denmark ranks at the top for achievement in work-life balance. People in the Netherlands have the highest participation rates in cultural activities and have the best access to information and knowledge through the internet.

**One reason for Sweden's top performance in lifelong learning could be the country's long history in this area. One of the main outlets for adult learning is the "Folk" schools, which were established in Sweden in 1868.** These are autonomous, state-funded schools that have been created to promote civic education among adults and they are typically run in a democratic, participatory way together with students.



The schools decide for themselves what courses they offer, but subjects typically range from basic skills to courses on social awareness. The qualifications provided are mostly equivalent to those of upper secondary schools enabling students to apply to university. (More information is available at [www.folkhogskola.nu](http://www.folkhogskola.nu).)

**Figure 9: Learning to Be**



Source: Bertelsmann Stiftung

BertelsmannStiftung

“In this rapidly changing world, economic and social success increasingly depend on the capacity of countries to anticipate the evolution of the demand for learning; to promote quality and equity of learning throughout life; to deploy their talent pool effectively by ensuring that the right mix of skills is being taught and learned; and to develop efficient and sustainable approaches to the financing of learning that establish who should pay for what, when, where and how much. The ELLI index provides a first-of-its kind instrument to quantify learning with a life-cycle approach that can help governments to design coherent policies for the development of skills, their utilisation in labour markets, up to how learning feeds into better jobs, higher productivity, and ultimately better economic and social outcomes.”

Andreas Schleicher

Advisor to the Secretary-General on Education Policy

Head of the Indicators and Analysis Division at the Directorate for Education, OECD

### 4.6 Why does it matter?

#### Connections to outcomes

Learning is often seen through a deficit model, similar to health. People tend to take action only when presented with evidence that learning is not taking place, a perspective that focuses on minimum competence thresholds. Unfortunately, once these minimum thresholds are met, attention formerly paid to learning then shifts to more tangible social and economic outcomes.

However, **focusing on outcomes may be fruitless if one does not know how to produce those outcomes.** If we want to achieve a goal in the future, it makes more sense to focus on the factors that will bring about that goal than to repeatedly check the current status to determine if the goal has already been met. The results of ELLI indicate that the relationships between learning and a wide variety of outcomes continue to be strong at all levels: there is no threshold after which learning diminishes in importance.

Figures 10, 11 and 12 illustrate the relationship of ELLI to three important measures of well-being: corruption, accessibility of healthcare, and global competitiveness. In every case, we can see a strong relationship with ELLI. Each of these outcomes makes a profound difference to the well-being of individuals and nations.

The effects of corruption can cripple economic development while the accessibility of health services can literally make the difference between life and death. Recent economic events, moreover, prove that the institutions and policies that enable a country's competitiveness are not merely facilitators of productivity, but are also the mechanisms preventing social and economic collapse.

Progress in achieving outcomes is often not visible in the outcomes themselves, but in the conditions necessary for those outcomes. These and other **social outcomes are the end results of long chains of causal factors, chains that invariably begin with learning and human development.** ELLI provides a useful means of monitoring these preconditions and thus maintaining reasonable expectations about what can be achieved and how. Conversely, if progress is not made in outcomes, an examination of learning conditions may reveal potential causes.



Figure 10: ELLI and Global Competitiveness Index

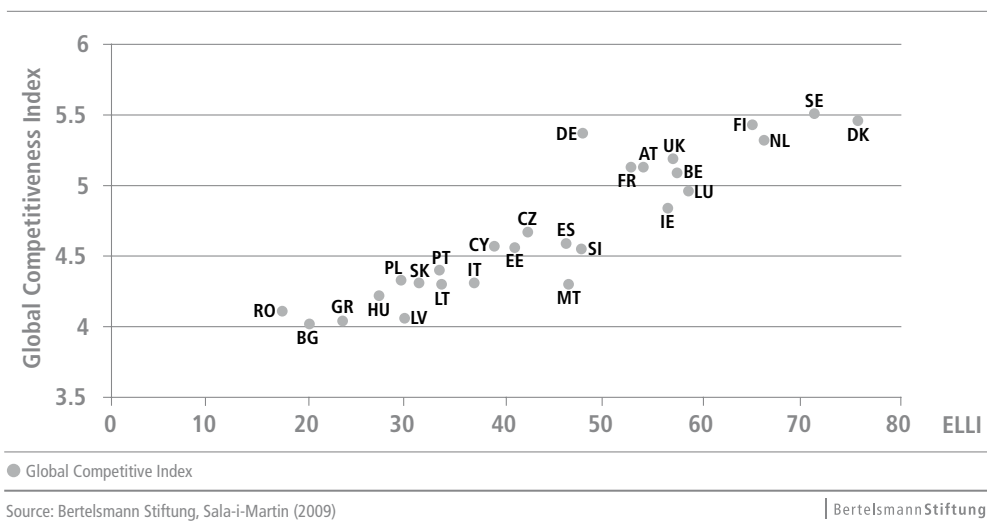


Figure 11: ELLI and Consumer Health Index

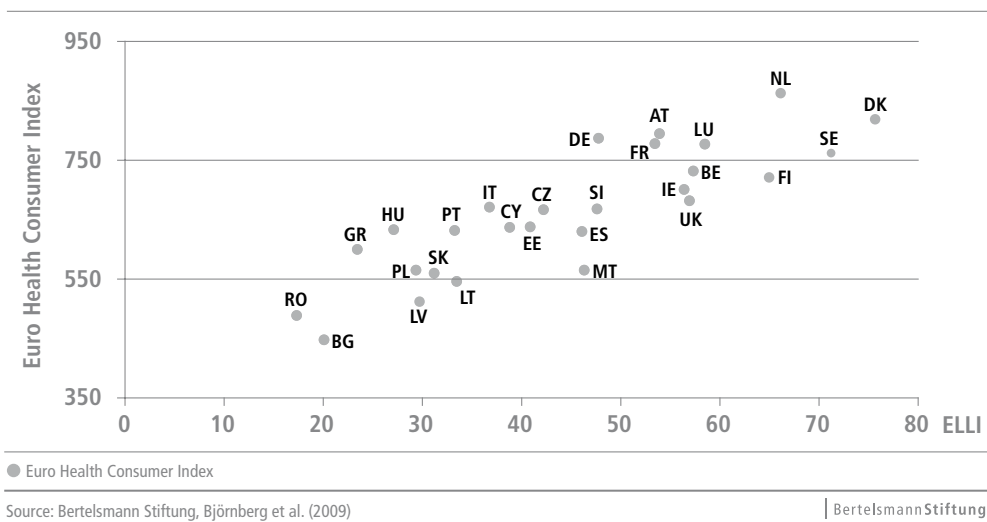
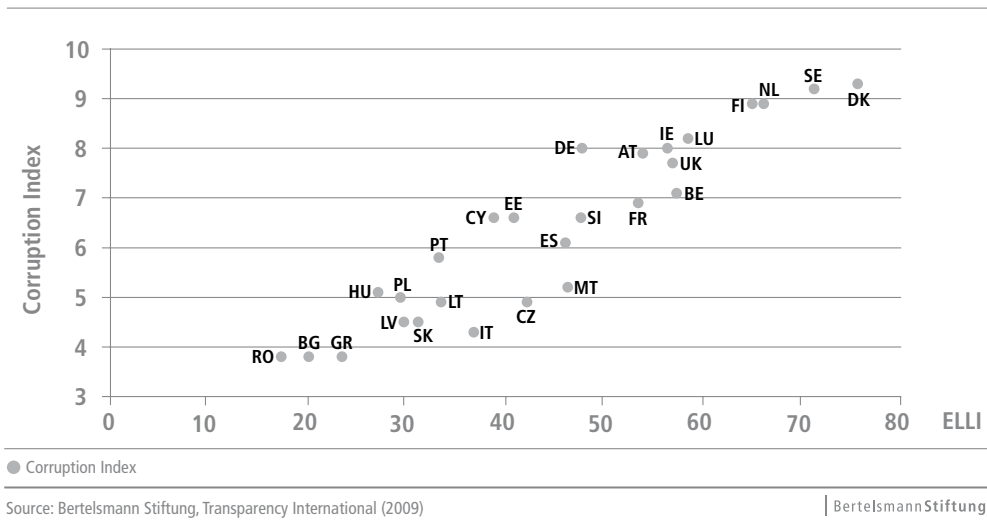


Figure 12: ELLI and Corruption Index



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## 5. Frequently Asked Questions

**Q:** Most educators agree that early childhood learning is the best predictor of lifelong progress in education. Why not simply monitor early childhood learning?

**A:** While early childhood learning is the best predictor in general, for specific purposes and at different time periods other measures are far more useful. For example, transitions to the work force or post-secondary education have a stronger relationship to secondary education outcomes than to early childhood education. To be most useful to the most number of people, ELLI needs to include a wide range of measures.

**Q:** Why not just monitor expenditures on education and learning, since those represent the actions of governments and individuals?

**A:** Expenditures provide many things, including the services and basic infrastructure that facilitate learning, but they do not represent learning itself. We also need to monitor whether or not learning has actually taken place, including looking at proxy measures that have strong associations with learning, such as the actual use of the learning infrastructure.

**Q:** Isn't there another international learning index produced by a different organization? Why introduce ELLI?

**A:** There are already several learning indexes produced by several organizations. However, all of them tend to suffer from common conceptual or methodological weaknesses. Either they take too narrow a view on learning to be relevant to the needs of modern societies (e.g., by examining only secondary or post-secondary completion rates), or they have been created in such an arbitrary manner that the results have limited credibility (e.g., the variables are combined using arbitrary methods without checking on the validity of the results). ELLI is the first international index of learning conditions to provide a holistic picture of lifelong learning produced with replicable scientific statistical methods.

**Q:** What do the data mean for policy makers?

**A:** Often, policy decision making is influenced by a small set of highly visible indicators: mortality, school completion, unemployment, and so on. These indicators tend to be followed by the media, and effective government begins to be equated with the values of these indicators. Unfortunately, this narrows the interpretations of what policymakers can or should do. ELLI provides an alternate "single indicator" that

is as convenient as other single measures, but with several advantages: first, it summarizes a broader range of conditions than other indicators and, second, it establishes a clear relationship between desired outcomes and the necessary factors for achieving those outcomes.

**Q: ELLI includes measures about trust and one of the outcomes is unemployment. Does this mean that if people trusted each other more, the unemployment rate would decrease?**

A: Like most statistics, the relationships described in ELLI are not completely mechanistic or deterministic. Changing a learning condition is not like pushing a button on a machine; the outcomes do not ensue automatically. The measure of trust is simply one possible measure of how well people interact with each other for which sound data were available, but it does not mean it is the only (or even the ideal) measure. However, current research indicates that it is a reasonable measure, so a more appropriate conclusion would be that, if people developed better skills at interacting with one another (for example, learning to trust others), then they would probably be more effective at cooperating and working together, which would likely result in increased productivity and a stronger economy, which generally leads to lower unemployment.

**Q: Is ELLI saying that people in Denmark are smarter than people in Romania?**

A: No. ELLI is not a measure of individual or collective intelligence. ELLI simply measures the degree to which the learning conditions of a country facilitate social and economic well-being.

**Q: Why do some very productive countries, such as Germany, only have average ELLI scores?**

A: Economic productivity is only one outcome dependent on learning, and it is also influenced by many geographical and historical factors. Germany has a great advantage over other countries in terms of productivity due to its long history of heavy industry. However, the ELLI results suggest that to maintain this relatively high standard of productivity in the future, Germany will need to focus on improving its learning conditions.

## 6. The Making of ELLI

It is important to remember that the ELLI Index is just one part and one instrument of the larger European Lifelong Learning Indicators (ELLI) project.

The ELLI project was launched by the Bertelsmann Stiftung in January 2008 in an effort to make the concept of lifelong learning more understandable and transparent. It is meant as a resource for political decision makers – from the European to the community level – as well as educational institutions, private industry, academics and journalists. In addition, it assists individuals in Europe who want to know more about learning in their own community, country and the rest of Europe, i.e., what learning entails and the impact it has. The ELLI project is breaking new ground by expanding its focus to include not only the formal educational system, but also learning that takes place outside of traditional educational institutions. This holistic approach is an essential component of the project, and is reflected in all of its instruments and activities. For an overview of all activities please visit our webpage [www.elli.org](http://www.elli.org) or see page 54.

### Making of the ELLI Index Europe

The ELLI Index has been compiled by the ELLI Development Team (EDT), a group of committed international researchers from different scientific fields and backgrounds. Within the last two years they have intensively worked on the conceptualization, implementation and validation of the index.

The development of the ELLI Index used a structured iterative process. The initial work in 2008 examined the feasibility of defining and measuring lifelong learning consistently across Europe, informed by a large international panel composed of 191 experts representing regional education providers, academic researchers, government policymakers, social services and employers. This stage culminated in the production of the final conceptual framework. This framework guided the subsequent selection and evaluation of data sources in 2009, beginning with over 500 initial sources. The development process alternated between evaluating statistical and semantic evidence to select and classify data sources to produce stable and robust results. Finally, in 2010, the ELLI Index was calculated and the results were sent to a selection of international experts for final review.

### ELLI Development Team (EDT)

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**Dr. Christof Wolf and Dr. Heinz Herbert Noll**, Centre for Survey Research and Methodology (ZUMA), Leibniz Institute for the Social Sciences GESIS, Mannheim, Germany.

**Dr. Ulrich Schoof and André Schleiter**, Bertelsmann Stiftung, Gütersloh, Germany.

The project team and EDT have been advised by an international advisory board, to strengthen coherence with national and international scientific and policy trends and initiatives.

### Members of the ELLI Advisory Board (EAB)

**Dr. Jörg Dräger**, Member of the Executive Board, Bertelsmann Stiftung, Gütersloh, Germany.

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**Prof. Tom Schuller**, Director of the UK Inquiry into the Future of Lifelong Learning, former Head of CERI at the OECD, Leicester, UK.

**Dr. Gerhard Stahl**, Secretary General, Committee of the Regions, Brussels, Belgium.

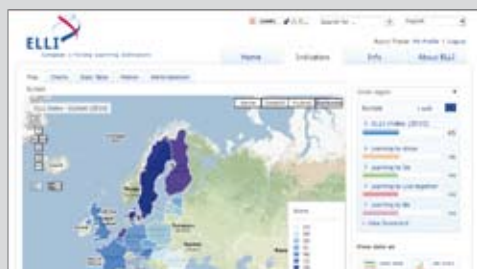
**Josef Vogel**, Mayor of the City of Arnsberg, Germany.

Moreover, many other experts and practitioners have supported the project by conducting additional research and analysis, by collecting and providing data or by contributing valuable feedback and review. A full list of all supporters of the project can be found at [www.elli.org](http://www.elli.org).

[www.elli.org](http://www.elli.org)

## Further Information

More information on the ELLI project is available on the ELLI IT platform [www.elli.org](http://www.elli.org).



[www.elli.org](http://www.elli.org)

Central to the project is the ELLI IT platform, which provides, free of charge, easy online access to a variety of data analysis, graphing tools and current statistics related to lifelong learning. Following an integrative statistical approach, the platform combines various European statistics from different sources. Users will also soon have access to regional German data, including statistics down to the community level (NUTS-3 Level).

**On the ELLI platform you will find – amongst others:**

ELLI Index – Europe results 2010

Access all index results and underlying data free of charge. Display results and data on google maps. Analyze data with free diagramming and charting tools. Compare scores among concepts or countries and explore relationships between ELLI results and other indicators in the Motion Chart section.



ELLI Index – Methodological Basis of the ELLI Index

The innovation driving the index is the marriage of two different approaches to aggregating different data in meaningful ways. Read a detailed explanation of the procedure used by ELLI and understand how ELLI accurately summarizes the state of learning.



### ELLI Index Europe 2010 – Indicators in Depth

Constructing a single index on lifelong learning for Europe brings many empirical challenges, including data quality, indicator selection and the weighting of indicators. In this paper, we will provide you with more detailed information on the data and indicators that have been used constructing the ELLI Index.

### ELLI Index – Statistical Validation Report (JRC)

The statistical robustness of the ELLI Index has been tested and evaluated by the Joint Research Center (JRC) of the European Commission.

## Forthcoming



### ELLI Study – Social and Personal Benefits of Learning

One of the most comprehensive literature review studies on the “wider” – not economic, but social and personal – benefits of learning.

### ELLI Community Learning Report

How can a community or a city monitor and assess lifelong and lifewide learning, in order to provide the best and most sustainable learning infrastructure to its citizens? Together with the city of Bielefeld and the Sociological Research Institute Göttingen (SOFI), the ELLI team is presently developing a tool that allows communities to use the ELLI IT platform to compile holistic learning reports in accordance with scientific standards.

### ELLI Index – Regional German Results

A regional German ELLI Index is currently under development and will shed more light on the current state of learning at the regional and the community level (NUTS-3 Level).

## Forerunner

### Canada’s Composite Learning Index

The world’s first lifelong learning index, Canada’s Composite Learning Index (CLI), was launched by the Canadian Council on Learning in 2006. Developed as a measure of lifelong learning conditions in more than 4,500 communities across the country, the CLI was the model from which the ELLI Index was built. Five year’s worth of CLI data and trends can be found at [www.cli-ica.ca](http://www.cli-ica.ca).



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