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COMMUNICATION FROM THE COMMISSION

Investing efficiently in education and training: an imperative for Europe

1. SUMMARY

This Communication sets out the Commission's view on the new investment paradigm in education and training in the enlarged EU within the framework of the ambitious strategic goal set by the Lisbon European Council in March 2000. In view of this goal, Ministers in charge of education adopted in February 2002 the *Detailed work programme on the objectives of education and training systems*, including its objective 1.5: *Making the most efficient use of resources* [1].

The Communication tries to look at the issue of investment in education and training from a broad perspective, paying attention in particular to the research and lifelong learning dimensions and to the European Employment Strategy. It starts by exploring the relevance and contribution of education to core elements of the Lisbon strategy, such as sustainable growth, competitiveness, R&D and innovation, the creation of more and better jobs, social inclusion and active citizenship and regional policies. The new investment paradigm in education and training will be shaped by factors such as the new requirements of the knowledge society, globalisation, EU enlargement and unfavourable demographic trends. In view of these factors, the challenge to be met will be even more considerable than envisaged in Lisbon. Many regions and several countries of the current and the future EU need to overcome massive challenges for Europe to reach the Lisbon goals.

Concerning the overall level of funding, the EU suffers from under-investment in human resources. A clear upward trend in *public* funding could not be identified, while there is a clear deficit in *private* funding in key areas for the knowledge economy such as higher education, adult education and continuing vocational training. EU enlargement is likely to exacerbate rather than reduce these deficiencies. In view of this, the Communication expresses the Commission's concern about the prospect of achieving the "substantial annual increase in per capita investment in human resources" called for at Lisbon, and concludes that new investment will be necessary in education and training, including (depending on countries' situation) targeted public expenditure and higher private spending which complements public funding.

Concerning the need to spend existing resources more efficiently the document looks first at their efficient *allocation*. It sets out the investment priorities in education and training resulting from the 'Objectives process', as well as from lifelong learning and the European Employment Strategy. It then identifies a number of common signs of inefficiencies in expenditure (high failure, dropout and graduate unemployment rates, excessive duration of studies, low attainment levels) and their possible sources, with a view to inciting Member States to address these factors and to measure their incremental costs. The need for the efficient *management* of resources (through educational decentralisation, partnership approaches and better coordinated action) and the indispensable role of national and European benchmarks are also underlined.

Finally, the Communication points out that investment can only be fully effective if anchored in a European context. Important, sometimes overdue reforms in key areas

[1] Detailed work programme on the objectives of education and training systems in Europe, Council document 6365/02, 2002. Objective 1.5 reflects also the need for "adequate resourcing" identified in the Commission's Communication "Making a European area of lifelong learning a reality", 2001.

such as curricular renovation, quality assurance and the recognition of qualifications, are basic conditions for efficient investment. Such reforms cannot achieve their full potential if they are designed for a purely national context and disregard the broader, new European context. Investors - whether state, region, enterprise or individual - failing to recognise the European dimension for investment decisions in education and training would create a handicap for themselves and reduce the efficiency of their investments.

The Conclusion emphasises that the high expectations of education and training systems set by Heads of State and Government in Lisbon are fully justified. Achieving the agreed goals in education and training will be crucial for the success of the overall Lisbon strategy. The Commission invites Member States to provide the level of public investment called for by the European social model [2], to put in place partnerships and incentives for more and sustained investment from enterprises and individuals, to focus funding on areas where it is most likely to produce the highest quality of outcomes, and to undertake reforms concerning curricula, quality and recognition with a view to maximising their efficiency in the European context.

2. INTRODUCTION

Education and training are crucial to achieving the strategic goal set for Member States at the Lisbon European Council to make the European Union the most competitive and dynamic knowledge-based economy (and society) in the world. The Heads of State and Government, meeting in a sequence of spring European Councils in Lisbon (2000), Stockholm (2001) and Barcelona (2002), confirmed the role and importance of education and training and set priorities for concerted action at European level.

In order for this role to be fulfilled, not only must sufficient resources be invested in Member States' education and training systems, but these must be well targeted and managed in the most efficient way. The new focus at European level on education and training policy issues gives a new context for considering questions of investment efficiency. The present Communication is based on economic and educational research as well as on direct contact with stakeholders in education and training. It wants to offer the Commission's view, and to launch a debate on key investment issues in education and training in the current and enlarged EU, within the framework of the implementation of the Objectives process and the Lifelong learning Communication - as well as in context of the European Employment Strategy. More specifically, its main purposes are:

– To analyse the implications for education and training of the call issued by the Lisbon European Council for a substantial annual increase in per capita investment in human resources[3].

– To clarify the new roles and responsibilities of Member States and Applicant Countries in ensuring that education and training play their full part in the achievement of the strategic goal set at Lisbon.

[2] Lisbon European Council, Presidency Conclusions, paragraph 24.
[3] Lisbon European Council, Presidency Conclusions, paragraph 26.

– To outline the main components and success factors of a new paradigm for investment in education and training in the current and in the enlarged European Union.

– To support Member States and Applicant Countries in their efforts to develop lifelong learning strategies and structural reforms in their education and training systems and to encourage them to reassess the levels and priorities of their investment in human resources.

– To prepare the ground for the joint report of the Commission and the Council to the spring 2004 European Council on progress achieved towards their shared Objectives, in particular Objective 1.5.

3. THE ROLE OF EDUCATION AND TRAINING IN ACHIEVING THE LISBON STRATEGIC GOAL

3.1. The call for a substantial increase in investment in human resources

In March 2000, the Lisbon European Council set the EU the ambitious strategic goal to become by 2010 "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion". Acknowledging that the Union was confronted with "a quantum shift resulting from globalisation and the knowledge-driven economy", the European Council stressed that this would require not only a "radical transformation of the European economy", but also "a challenging programme for the modernisation of social welfare and education systems". It also called for a "general reflection on the concrete objectives of education systems" and for "a substantial annual increase in per capita investment in human resources". It pointed out that the future of the European economy (and society) will depend on the skills of its citizens, and that these in turn needed the continuous updating which is characteristic of knowledge societies. In the context of the European Employment Strategy, the Feira European Council of June 2000 called on Member States to develop and implement coherent and comprehensive strategies for lifelong learning.

The 2001 Stockholm European Council agreed that the work should continue to develop a work programme organised around the quality and effectiveness, the accessibility and the openness to the world of education and training systems. It indicated that work should be carried out "in the framework of the open method of coordination and in a worldwide perspective" and that the Applicant Countries should be involved.

The Barcelona European Council of March 2002 welcomed the *Detailed work programme on the objectives of education and training systems*, including its enhanced ambition to make Europe "a world reference for the quality and relevance of its education and training and the most-favoured destination of students, scholars and researchers from other world regions" [4]. As outlined above, this Work programme includes a specific objective on "Making the best use of resources", which builds on the Lisbon Council's call for increased investment in human resources and on the need described in the Commission's Communication on lifelong

[4] Detailed work programme on the objectives of education and training systems, op.cit.

learning for adequate resourcing of lifelong learning in the knowledge society [5]. This objective focuses on "increasing investment in human resources while ensuring an equitable and effective distribution of available means" and refers to total investment, i.e. by public authorities as well as by private enterprises and individuals. Given the strong, synergetic links between education and research, it is important to note that the Barcelona European Council also set a twin objective for research, namely to increase the overall R&D expenditure to approach 3 % of GDP by 2010 and to augment the share of it funded by business to 2/3 [6].

3.2. Relevance of education/training to the Lisbon goal

When adopting the Work programme on objectives, the Council (Education) and the Commission underlined that making the European Union the leading knowledge-based economy in the world would be possible only if education and training functioned as factors of economic growth, research and innovation, competitiveness, sustainable employment and social inclusion and active citizenship. Ministers in charge of education and training acknowledged their responsibility in this process and re-affirmed their determination to meet the challenge. This was echoed by the Barcelona European Council in 2002 [7].

The contribution of education and training to the achievement by 2010 of the Lisbon strategic goal will be particularly important in the following areas:

– **Growth**

The contribution of education and training to growth has been widely acknowledged and estimates suggest that investment in education and training produces rates of return to individuals (private return) and to society (social return) comparable to investment in physical capital [8]. The increasing share of services in the economy, the pace of technological change, the increasing knowledge/information share of the value of production as well as the scale of economic and social restructuring strengthen the case for such investment. A recent report produced for the Commission [9] concluded that investment in "human capital" contributes significantly to productivity growth and is an attractive investment relative to alternative spending, both at the microeconomic and at the social level. At the social level, there is evidence that human capital investment is responsible for a significant proportion of aggregate productivity growth. An estimate for OECD countries is that an additional year of average school attainment increases economic growth by around 5 % immediately and by a further 2.5 % in the long run [10]. The OECD also found that improvement in human capital was responsible for half a percentage point or more of annual growth in several EU countries during the 1990s as compared with the previous decade [11].

– **Competitiveness and dynamism**

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[5] Making a European area of lifelong learning a reality, Communication from the European Commission, 2001
[6] Barcelona European Council, Presidency conclusions, paragraph 47
[7] Barcelona European Council, Presidency conclusions, paragraphs 33 to 43
[8] Returns to investment in education: a further update, Psacharopoulos and Patrinos, World Bank, 2002
[9] De la Fuente and Ciccone, 'Human capital in a global and knowledge-based economy', Final report for DG Employment and social affairs, European Commission, 2002.
[10] De la Fuente and Ciccone, op.cit.
[11] Education at a glance, OECD, 2002

Competitiveness and dynamism are two aspects where the EU is currently lagging behind the United States. Education and training need to play a decisive role in attracting and keeping talent in Europe. The productivity gap between the EU and the USA continues to get wider. Reversing this trend calls for investment not only in research and development and ICT, but also in "human capital development". There is evidence that the reasons for Europe's under-performance in this area go beyond certain obvious mismatches between skills acquisition and needs. It is more deeply rooted in the insufficient level of educational attainment among the working age population. It took the EU many years to increase the average duration of schooling from 70 % of USA level in 1971 to 87 % in 1999 [12]. The outflow of highly educated people from Europe mainly to the USA continues, in particular in science and technology, and the EU will invest 1.6 billion Euro to combat it through the sixth Framework Programme for research and technology development. Education also contributes to entrepreneurship, both by creating awareness of self-employment as a career option and by developing the right skills for it [13].

– **Knowledge-based economy and society**

It has been widely acknowledged that the scale and quality of human resources are major determinants of both the creation of new knowledge and its dissemination. Key factors are the supply of new scientists and engineers in sufficient number, the reinforcement of research at university level and the constant updating of the scientific workforce, as well as the overall educational level of the working age population and the intensity of lifelong learning activities[14]. Education also plays a key role in fostering the advancement and dissemination of science and technology [15] in the transition to the knowledge society. The knowledge sector is dependent on the ability of education, in particular universities, to offer high quality curricula in knowledge-intensive areas and to attract a sufficient number of qualified persons to science and technology[16]. Furthermore, while innovation requires research and development activities, it is also dependent on the ability of social partners to ensure that a generally well-educated and creative labour force stimulates it, uses it and underpins it.

– **More and better jobs**

The Lisbon European Council called for "more and better jobs", set employment targets [17] and emphasised the role of social partners in achieving them. Education and training contribute to this in several ways. There is clear evidence that school attainment is a primary determinant of individual income and labour market status. Recent research suggests that across Europe an additional year of schooling increases wages at the individual level by around 6.5 % and by as much as 9 % in countries with a less compressed wage structure. In the positive link between education and earnings, upper secondary education forms a break point beyond which additional education attracts a particularly high premium[18]. Evidence also shows that

[12] 2002 European Competitiveness Report, European Commission Staff working document , 2002
[13] Entrepreneurship in Europe, Green paper from the European Commission, 2002
[14] 2001 Innovation Scoreboard, European Commission, 2002
[15] De la Fuente and Ciccone, op.cit.
[16] Commission Action Plan on Skills and Mobility, COM(2002)72final - point 2
[17] Lisbon European Council, Presidency conclusions, paragraphs 28 and 29
[18] Education at a glance, OECD, 2002

unemployment rates diminish with higher educational levels, thus also reducing the related social costs. It is also clear that the employment rate increases with educational levels achieved[19], including among older people, which is particularly important given the low employment rate for that age group in the EU and our rapidly ageing population. The gender gap in access to employment and career development is persisting and increases with age; gender mainstreaming has the potential to mobilise a considerable and increasingly highly educated workforce for Europe. Raising the quality of work contributes towards increasing employment, productivity and social cohesion. Two important dimensions of job quality are training (which is shown to have a positive impact in particular on productivity) and mobility (which requires the removal of barriers within the European labour market; cf. section 6.2.).

– **Social inclusion and active citizenship**

With an increasing premium on skills, the polarisation between the *knowledge rich* and the *knowledge poor* puts strains on economic and social cohesion. Access to employer funded training is often limited to those who are already well qualified and some groups get locked into the lower end of the labour market. An important challenge is to develop education and training throughout life in such a way that change and restructuring in the economy have no adverse effects on social cohesion. One of the most important conclusions of recent educational research is that investing in people is *both* a growth factor, particularly in the current context of rapid technological change, and a key instrument for enhancing social inclusion [20]. This is confirmed by the analysis of PISA results, which show that some of the countries with the highest average achievements also had the lowest levels of inequality between individuals and schools [21]: in other words improving quality does not imply restricting opportunities, but rather the opposite. Another study indicates that a 1 % increase in the proportion of the labour force with at least upper secondary education increases the income share of the poorest two-fifths by 6 % and that of the poorest three-fifths by as much as 15 %, thus contributing to greater income equality [22]. These rates also reflect the fact that education and training produces social and economic benefits by developing the personal and civic competencies as well as the vocational ones. Active citizenship education has the potential to raise the level of social and political responsibility in civil society and in the workplace.

- **Regional policies**

High quality education and training is also an important element of regional policies, as an instrument to reduce disparities between more and less developed regions by providing the human resources needed for economic and social development. The regional and local dimension of learning has been singled out as one of six key pillars for lifelong learning strategies in Europe and the movement of Learning Cities

[19] Eurostat, Labour force survey, quoted in Action Plan on Skills and Mobility, Communication from the Commission, COM (2002) 72
[20] De la Fuente-Ciccone, op.cit.
[21] PISA, OECD, 2002
[22] Inequality and development, Bourguignon and Morrison, Delta, Paris, 1997

and Regions shows how crucial they have become for local and regional employment and development. Since regional disparities are bound to increase in the period following enlargement, this role could become even more important in the few coming years. The Commission Action plan on skills and mobility has already called for particular attention to be given to the greater investments in human resources needed in regions lagging behind[23].

3.3. A new investment paradigm in education and training

Many regions and indeed countries in the current EU, as well as all Applicant Countries, face massive challenges to overcome for Europe to reach the Lisbon goals. The central role of education and training to the achievement of all major aspects of the Lisbon strategic goal, as set out above, implies significant changes to the paradigm for investment. It is not only the variables of the investment model that are changing, but also – and more substantially – the underlying parameters themselves. This can be seen in four areas:

– **New requirements of the knowledge society**

Creating a successful knowledge-based economy and society in Europe demands the universal acquisition of new basic skills and attitudes, much broader access to education and lifelong learning opportunities, and social protection measures (including anti-discrimination and gender-mainstreaming) to accompany rapid and generalised change. The main implications of these new requirements were set out in the *Detailed work programme on the objectives of education and training systems*. Although the main challenges implied by the Lisbon strategic goal are obviously related to the labour market, the contribution of education and training to the knowledge economy can hardly be dissociated from its contribution to society in general and to the individual citizen: these two dimensions are complementary and interdependent. This is shown in the high social returns generated by educational investment, which diminish the need for expenditure in other areas such as unemployment benefits, welfare payments, pensions, social insurance, healthcare, etc.[24]

– **Globalisation and worldwide competition**

The Heads of State and Government set a new challenge in Barcelona in spring 2002, with the announcement that the EU should become *a world reference for the quality and the relevance of its education and training and should be the most attractive world region to students, scholars and researchers*. Globalisation affects education and training systems and institutions in various ways, both directly (e.g. the growth in the funding of research and development activities and of universities in the USA and other knowledge-based powers in the world increases the need for more investment in these areas in Europe) and indirectly, through the need to equip citizens with the skills and competencies they need to take up jobs, and more crucially to keep these jobs in a rapidly changing technological and economic environment. Thus, globalisation implies not only increased investment levels but also a parallel reform process to increase the quality and relevance of school, university and adult education and vocational training curricula and the coherence of

[23] Commission Action Plan on Skills and Mobility, op.cit., point 11
[24] cf. EU-funded project on Public funding and returns on education – PURE, 2002

European education and training systems and to enhance their visibility and recognition abroad. In the light of such impacts of globalisation, and the accelerating pace of competition in education and training worldwide, the extent of the challenge at European level in terms of investment and reform is almost certainly widely underestimated. Developments such as the Bologna process in higher education and the Bruges process in vocational training move in the right direction. But the pace of change does not yet match the pace of globalisation, and we risk falling behind our competitors if it is not increased.

– **Enlargement of the European Union**

The enlargement of the EU also represents a major new challenge. By 2010 at least twelve Applicant Countries should have become full Member States (with ten countries joining in May 2004 and at least two more later on). There are big discrepancies between the future Member States in their economic and educational performance, but they share a key factor, namely their relative deficit compared to current EU Member States in the development of a knowledge-based economy and society. The Lisbon strategic goal and its implications for education and training set for an EU of 15 will have to be met by 2010 by an EU of at least 27. The main challenge will be to create a knowledge-based economy and society in all new Member States, in spite of regional imbalances, and to forestall migration flows within the EU which would have serious negative consequences for education and training as well as research and development in the new Member States.

– **Demographics**

The stabilisation of birth rates at a low level within the EU would appear to hold out the prospect of fewer participants in all levels of education and training and consequent expenditure savings. However, this would be a mistake. In spite of fewer young children, total enrolments in education at European level did not decline, with more people staying longer in the upper end of education systems. In addition, the EU must keep up with fast changing technologies in spite of its ageing population, with significantly fewer young people than in the USA and in Asian countries (except Japan) leaving initial education and training with up-to-date skills. Another aspect of the demographic challenge concerns the working age population, since growth results also from higher labour force participation and education and training has been singled out as a key factor in influencing it[25]. These demographic constraints imply increased investment within Europe in lifelong learning opportunities for those who have left the formal education system, increased participation in the higher levels of education and training (also later in life), efforts to allow and encourage workers to stay in employment longer and investment in the integration of immigrants and their children and families (over 70 % of population growth is expected to come from immigration). Moreover, the EU as a whole will face over the coming decade the challenge of replacing a high proportion of its teaching workforce, as existing staff retires. It will be imperative to keep the profession attractive to high quality newcomers. Enlargement will not ease, but rather enhance this trend: all accession countries except Cyprus have birth rates

[25] Increasing labour force participation and promoting active ageing, Joint report Commission/Council to the Barcelona European Council, March 2002

below the EU level and in all but three the natural increase of the population is negative [26].

3.4. An even bigger challenge than envisaged in Lisbon

The logic of the previous analysis is that the challenge in education and training is likely to be even bigger than envisaged in Lisbon. It could be summarised as:

Providing an engine for the new knowledge-based European economy and society; overcoming accumulated delays and deficits in relation to key competitors; accommodating a severe demographic constraint; and overcoming high regional issues that will be exacerbated by enlargement during the vital transition period.

Simply maintaining the status quo or changing slowly would clearly be hugely inadequate in the face of such a massive challenge. It is of formidable size for many regions and several countries in the current EU, and will grow even further with enlargement. It calls for radical reform and resolute investment decisions in education and training in the years up to 2010.

It is therefore important to categorise spending on education and training as real investment with a lasting beneficial effect – indeed as providing a net saving when viewed in the larger context set out above – rather than merely as recurrent consumption expenditure. This is amply justified by the impact of such investment as economic and social factors of growth [27]. The paradigm shift needs to be from government consumption to knowledge investment, in recognition of the "compelling evidence that education contributes to personal development, social cohesion and productivity, has a measured and major impact on economic growth and reduces societal costs by preventing social exclusion, health problems and crime" [28].

4. THE CHALLENGE OF ACHIEVING A SUBSTANTIAL INCREASE IN TOTAL INVESTMENT

Overall, the analysis of the current situation and recent trends reveals that the EU suffers from a global under-investment in the development of human resources. This applies to education and training in general and to some areas of particular importance in the knowledge era in particular. Public authorities have a key responsibility in addressing these funding deficits in order to deliver a substantial increase in total investment. However, they cannot succeed without the support of a wide range of partners. Realising a genuine and sustained increase in investment in human resources requires action from all relevant actors, i.e. from individuals, enterprises, social partners and public authorities.

4.1. No clear upward trend in <u>public</u> expenditure on education and training

On average EU Member States spend just over 5% of their GDP on publicly funded education and training, with very substantial differences between Member States. This figure is the same as in the USA and is higher than in Japan (3.5%). However it

[26] Eurostat, Population change in 2001.
[27] The new economy: beyond the hype, OECD,2001
[28] DG-group meeting, Copenhagen, June 2002; follow up paper by Hans Borstlap, Ministry of Education, Culture and Science of the Netherlands

has not increased in recent years. On the contrary, there has even been a slight decline, from 5.2% of GDP in 1995 and 1996 to 5.1 % in 2000, with a low of 5,0 % in 1998 and 1999, resulting from very substantial reductions in some countries. Yet, over the same period, the share of total public expenditure devoted to education and training has slightly increased (from 10 % to 11 %), partly as a consequence of falling levels of total public expenditure in the EU, but also as a signal of a relative shift of priorities towards education in several countries. A similar observation applies concerning per capita public expenditure: the number of new entrants to primary education has stabilised in recent years after a prolonged period of decline, but this decline has been offset by students staying longer in education, which means that the per capita expenditure remained about stable overall, but increased with respect to primary and secondary school-age people. At the other end of the lifelong learning spectrum, new investment needs are created by the promotion of active ageing in the EU as a contribution to higher employment rates and longer working lives. Europeans in the age group 55 to 64 have large skill gaps and educational deficits.

Investment does not yield the same returns at all levels of the education and training systems. Rates of return to both individuals (private return) and society (social return) vary according to country and gender. Different rates of return may reflect labour market deficiencies (unemployment among the low-skilled and migrants, rigidities in wage bargaining, low female employment levels, etc.) and different levels of investment (higher investment causes marginal returns to diminish and so drives average returns down). Current estimates for the EU indicate that such investment returns tend to be lowest in Nordic countries and highest in the UK and Ireland, and that returns to women are significantly higher than to men. Comparing estimated rates of return at various stages of the education system indicates that upper secondary education is becoming the basic level of education for the knowledge society. There is compelling evidence that the duration (and so the cost) of periods of unemployment falls substantially once average attainment increases from below upper secondary to upper secondary education [29]. In the EU at present, 25% of 25-29 year olds and 52 % of 55-64 year olds have not attained upper secondary level. Investment is needed to ensure that in future everybody attains at least this level.

4.2. A clear deficit in <u>private</u> funding in key areas for the knowledge economy

There are major discrepancies between the EU and the USA in the <u>level of private funding of education and training</u>. Private expenditure on educational institutions has been increased very little in the EU since 1995 (from about 0.55 to about 0.66 % of GDP). In Japan the figure is more than double (about 1.2% of GDP) and in the USA it is as much as three times higher (1.6%). Expenditure by enterprises on continuing vocational training has increased in the period 1993-1999 (from about 1.6 % to about 2.3 % of total labour costs, i.e. from about 0.8% to 1.1 % of GDP) and may have increased somewhat more since, but it remains insufficient to ensure the "adequate resourcing" called for in the Communication on lifelong learning.

The EU invests significantly less in total in <u>higher education</u> than the US. In spite of a massive increase in participation and the consequent substantial growth of public

[29] Training and Learning for Competence, CEDEFOP, 2001 (tables pp. 334 and 246)

expenditure on higher education, the current level of total (public and private) investment at tertiary level remains much lower in Europe than in the USA. The USA spends more than twice as much as the EU per student in tertiary education [30]. In terms of GDP, the EU average is only 1.1 % compared to 2.3 % in the USA. The funding gap is thus even greater for higher education than for research and development, where the figures are 1.9% of GDP in the EU and 2.7% in the USA and the difference is also mainly explained by lower R&D spending from European companies. Given the dual role of universities in education and research, the funding deficit arguably hits them hardest and makes it more difficult for European universities to promote their attractiveness to students and researchers from the whole world and to reverse the outflow of talent. It is very important to realise that the largest share of this deficit stems from the low level of private investment in higher education and research and development in the EU compared with the USA. At the same time, private returns on investment in tertiary education remain high in most EU countries, because the demand for highly qualified manpower has grown even faster than participation in higher education. This demand however varies enormously between countries, and such discrepancies could well constitute an incentive for greater mobility of graduates within the enlarged EU, including in the form of unwanted brain drain from certain less favoured regions or countries.

Faced with relatively low private investment levels and high private returns on university education, the main responsibility of authorities is not only to continue to provide higher education institutions and students with a sufficient level of public funding, but also to find ways to add to it by increasing and diversifying private investment in higher education. The new EU-level target to raise the level of investment on research and development to 3 % of GDP by 2010 [31] is likely to have a positive impact on universities as one of the main beneficiaries of such additional spending. At the same time there is an increasing need to ensure that additional resources produce higher quality and relevance, lower failure and dropout rates, and enhanced social equity in access to higher education and its benefits.

The other area where there is a clear need for more private investment is continuing vocational education and training and adult education. Lifelong learning is still far from being a reality for all and there are signs of a widening gap in the take-up of learning opportunities between those with low skills and the higher educated and between younger and older age groups. Measures to broaden access and increase participation levels therefore need to be vigorously pursued, with particular attention paid to those adults least prepared or inclined, or with the least opportunity to learn. Emphasis should also be given to addressing market failure and ensuring that the right incentives are in place to encourage disadvantaged groups to take up training opportunities[32]. In spite of the growth of private enterprise spending on vocational training mentioned above (from 1.6% to 2.3% of labour costs from 1993 to 1999), the current level of funding does not match the challenge facing Europe in this area. There are still great differences from one country to another (e.g. the above percentage varies in the range 3:1). Only 40% of European employees participate in continuing vocational training courses (23% in SMEs) and only 62% of all

[30] USD 19,200 in US, USD 8,600 in EU (weighted average), in PPPs. Education at a glance, OECD, 2002

[31] More Research for Europe – Towards 3 % of GDP, Communication from the European Commission, DG RTD, 2002

[32] Employment in Europe 2002, European Commission, DG Employment and Social Affairs, 2002

employers provide any type of training to their staff (56% of SMEs) [33]. This raises important questions concerning the dialogue between public authorities and social partners.

A particularly important issue concerns the fiscal treatment of lifelong learning and other incentives to invest in learning (including the recognition of prior learning) According to OECD, there was a convergence of views in the late 1990s that public authorities alone could not provide the resources needed for lifelong learning, that employees and employers should finance at least part of it in view of the considerable private returns it generates, and that financial incentives were insufficient to lift the very low levels of participation of poorly qualified persons [34].

4.3. The likely impact of enlargement on EU investment performance

While some Applicant Countries (the Baltic countries and Slovenia) spend more than the EU average, the majority of them, including all the large ones, are below EU average in terms of public expenditure on education and training as a percentage of GDP [35]. This is of course even more visible in terms of expenditure per student or employee[36]. In several countries this represents however a comparable or higher proportion of total public expenditure as in the EU (varying from less than 10% to over 15%). Except in two, the level of private funding is very low in the Applicant Countries, especially with regard to in-company training. Enrolment rates tend to be high (often higher than in the EU) up to upper secondary level, but they decline very sharply at higher education level. Participation in higher education (in particular in areas relevant to the knowledge economy), in continuing vocational education and training (in terms of beneficiaries, volume of courses and proportion of training companies) and active labour market measures lies in most cases below EU average - even though they may be higher in some Applicant Countries than in some current Member States. The decrease in public investment in adult education has been very sharp in several countries over the last decade. The current funding deficit in higher education and continuing vocational education and training in the EU will become even greater after enlargement. Considering the whole education and training system, there is in several Applicant Countries a need for more public investment, which is a particular challenge in some of them, in view of their budgetary constraints and the already high proportion of public expenditure dedicated to formal education. In spite of some strong achievements, international surveys like IALS and PISA also show qualitative gaps, with Applicant Countries tending to score towards the bottom of the groups [37]. This indicates that, notwithstanding past efforts and the priority already given to human resource development (by the countries themselves as well as by EU through the ETF and PHARE), education and training systems in most Applicant Countries will need very considerable new investment in the form of funding as well as qualitative and structural reforms to catch up with the requirements of the knowledge-based economy and society [38].

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[33] CVTS 1 and CVTS 2, Eurostat

[34] New mechanisms to finance lifelong learning, OECD, 2002

[35] Preparation by candidate countries for involvement in the EU lifelong learning policy: achievements, gaps and challenges, Interim report (Synthesis of monographs exercise), European Training Foundation, 2002

[36] CVTS2, Eurostat 2002

[37] Preparation by candidate countries for involvement in the EU lifelong learning policy, op.cit

[38] Prof. Erich Gundlach (Kiel Institute of World Economics), quoted by De la Fuente – Ciccone, op.cit.

4.4. Targeted increases in public expenditure and higher private contributions

The above analysis of the current situation and recent trends raises legitimate uncertainties concerning the achievement of the "substantial increase" in investments in human resources called for in Lisbon. This is even more the case when one considers that the goal set in Lisbon by the EU of 15 will need to be achieved by 2010 by an enlarged EU of at least 27.

Given the increased pressure on public resources created by low growth since 2001, a deteriorating economic outlook and severe budgetary constraints, the current investment levels already represent a real effort. Despite this, the arguments for holding to the Lisbon objective of a "substantial increase" in investment in education and training remain as compelling as ever, in particular since this investment is itself a determinant of future growth.

Significantly higher investment, especially in some Member States and regions, will be necessary in education and training - in coordination with those needed in research and development - to transform the EU into the most advanced knowledge-based economy and society. This conclusion is however not an appeal for all Member States to invest more public money across the board: this would be unlikely to produce high results while it would put additional strain on public resources, productivity and competitiveness.

The increase needs to come from a combination of targeted public investments and higher private contributions. The biggest funding deficit in European education and training is the comparatively low contribution from private sources (companies and individuals) in addition to (not as a substitute for) the public funding which guarantees the continuity of the European social model in education and training.

Public authorities in Member States and Applicant Countries have the responsibility to deliver the "substantial increase" in total investment. Targeted increases in public investment are needed in some countries, e.g. to ensure that all have access to learning opportunities throughout life, that everyone reaches upper secondary education and that regions lagging behind receive adequate support. Such targeted increases in public investment may be achieved within overall budgetary constraints, where appropriate, by re-directing funds from areas of lower returns towards investment in the development of human resources[39]. Setting benchmarks to monitor progress will be indispensable[40].

The Structural Funds, as the financial arm of the European Employment Strategy, with €60 billion available in current programmes (2000-2006) from the European Social Fund alone, have also an important role to play in supporting the improvement of policies and systems and the special effort needed to address the problems of regions lagging behind. The forthcoming mid-term review of Structural Funds programmes provides an opportunity to assess the nature and direction of Community investments.

[39] *Public Finances in EMU 2002*, European Economy n° 3/2002

[40] European benchmarks for education and training: follow-up to the Lisbon European Council, Communication from the European Commission, COM(2002) 629 final

Governments will also need to mobilise support from a wide range of actors and to provide positive incentives for more and sustained investment from enterprises (including SMEs) and individuals and for public-private partnerships in the field. Enterprises could e.g. be invited to fund or co-fund equipment, schools, scholarships, activities for curricular change, chairs or departments at universities, research units, training courses to attract students and apprentices in areas facing a lack of qualified workers, etc.

Such measures would avert the worst-case scenario, where insufficient public funding is not offset by increased private funding, resulting in endemic underfunding, reduced quality and socially restricted availability of education and training opportunities.

5. SPENDING EXISTING RESOURCES MORE EFFICIENTLY

This section relates to Objective 1.5 “Making the most efficient use of resources” in the Work programme on objectives, as well as to “adequate resourcing” in the terms of the Communication on lifelong learning. It identifies some priority areas for ensuring long-term system efficiency in view of their importance for achieving the EU-wide Lisbon strategic goal.

This exercise is also highly relevant to lifelong learning policies and to the European Employment Strategy. The Lifelong Learning Communication emphasised that resources must be re-channelled across the whole spectrum of formal, non-formal and informal learning at all ages, and all decisions aimed at maximising the efficiency of investment in education and training should be screened against this background.

Priorities identified in this way may also be of relevance for ensuring the maximum efficiency of European Investment Bank and Structural Funds investments, both in current and in future Member States.

5.1. The implications of the "Objectives process" in terms of investment

The *Detailed work programme on the objectives of education and training systems* calls for investments in certain areas that have been identified as shared priorities of the Member States. It takes on board priorities from the Lifelong learning and European employment strategies. It also includes the priorities that were outlined by the Lisbon European Council itself, in particular the halving of the number of young people not achieving upper secondary education, the transformation of schools and training centres into multipurpose centres, the renovation of curricula, the development of IT skills, *e*-learning, foreign languages and mobility. The Work programme thus provides a good background for the efficient allocation of resources in view of the situation, needs and policy choices in each country. An analysis of the Objectives programme shows that it calls for investments in the following main areas:

– **Investment in the training and retention of education staff**

This concerns mainly: a) young and in-career teachers and trainers in initial and adult education, in particular concerning open and flexible teaching methods and *e*-learning, the use of ICT, the renovation of curricula in initial education and

continuing education courses and the availability multimedia; b) heads and administrative staff at all level to underpin the decentralisation of curricular and management issues; and c) staff providing customised guidance and counselling. The ageing profile of teachers, trainers and support staff across the EU creates particular investment needs, in the form of training and measures to attract new personnel to the teaching and training professions [41]. Similarly, higher education needs to remain attractive to young researchers and mature talent, in particular by building up bridges and mobility between universities, research laboratories and industry.

– **Investment in new basic skills**

The new basic skills include digital literacy, learning to learn, social competencies, entrepreneurial skills and language learning and should be accessible to all age groups. Needs for higher levels of basic skills adapted to the new labour market and the knowledge society concern young people and adults, employed or unemployed, and are particularly acute for certain categories (e.g. low-skilled and older workers or inactive women who want to return to work) and in certain regions or whole countries. The potential of ICT and new *e*-learning methods to improve the learning process, reach more people and reduce costs needs to be further researched and exploited.

– **Investment in providing access to lifelong learning to all**

Public expenditure in this area has generally risen and there is evidence of increasingly shared responsibility for financing, including a rise in businesses' expenditure on continuing training. Since 1997, Member States have developed efforts in the direction of coherent lifelong learning strategies and increased investment in quality and access within the context of the European Employment Strategy. The Communication on lifelong learning calls for adequate resources and for their redistribution across the learning spectrum. Key conditions for success are the development of further fiscal and other incentives to learning, and the involvement of the social partners in these strategies.

– **Investment in ICT**

Investment is needed in hardware, software, maintenance and training, as well as in the development of *e*-learning activities and teaching material, in line with the new *e*-learning programme [42]. Substantial investments have been made in all countries in the past few years, equipping schools with ICT, providing nearly 100 % of them with an Internet connection, creating web-based information and educational resources, etc. Nonetheless, ICT is likely to remain a significant cost item until the pace of technological change slows and it becomes a universal commodity such as stationery, which may be the case by 2010. The potential of networking between public education and training institutions and of public-private partnerships as a source of complementary funding in this area does not seem to have been fully exploited up to now[43].

– **Investment in social inclusion and active citizenship**

[41] Eurydice Reports on Teachers, particularly Report 1 on initial training and Report 3 on conditions of service
[42] e-Learning: designing tomorrow's education, European Commission, 2000
[43] Commission Action Plan on Skills and Mobility, op.cit., point 8

Measures aimed at fostering social inclusion concern key aspects such as pre-primary education, active citizenship education, gender mainstreaming, the prevention of failure and dropout, second chance schools for adult learners, etc. They go well beyond employment-related issues and are strongly emphasised in both the Communication on Lifelong Learning and the *Detailed work programme on the objectives of education and training systems*. These longer-term measures are maybe the most fundamental ones. They require deep-reaching curricular and structural reforms to enhance the quality and relevance of learning opportunities available to all, as well as targeted increases in public investments to underpin these reforms - including in the form of support to relevant civil society organisations which have played, and will need to play a crucial role in this area throughout the enlarged EU. Such investments are a natural priority in all countries in need of more efforts to ensure that the development of education and training systems is for the benefit of all.

– **Investment in guidance and counselling**

Investment in guidance and counselling services should be seen as providing early prevention strategies capable of significantly reducing mismatches between education and training and the needs of the labour market[44], increasing completion rates in secondary and higher education and facilitating the transition to work as well as the return to studies [45]. Reinforcement of these services is also needed in view of the necessity to increase the number of young people, especially young women, choosing further study and careers in mathematics, science and technology [46].

5.2. Tackling areas of inefficiency

In addition to priority areas for investment identified in the Objectives work programme, actual investment decisions need to be taken in the light of the situation in each country. One way of increasing the return on investment at Member State level is to identify and eliminate current inefficiencies in spending. The corresponding resources can be saved and re-invested more meaningfully elsewhere. The following paragraphs set out a list of common signals and possible sources of such inefficiencies.

- **Higher than average failure and dropout rates**

In the EU, still about 30 % of pupils leave school without achieving upper secondary level and non-completion rates are also high in higher education in several countries. Where failure/dropout is higher than elsewhere, it may result from the imposition on learners (or on their parents) of too early a choice between future learning pathways. This situation can be created either by inflexible systems or by socio-economic conditions. Premature or ill-informed decisions can lead to higher failure rates, dropout, or other manifestations of demotivation. In this context, one should point out the indirect costs of allowing vocational education and training options to be

[44] Commission Action Plan on Skills and Mobility, op.cit., point 1
[45] Why Guidance matters, OECD working paper Rationale, 2002
[46] Detailed work programme on the objectives of education and training systems, op.cit., Objective 1.4.

perceived as second best, in secondary as well as in higher education. This tends to distort orientation choices away from studies more suited to certain students and towards those that are regarded as more prestigious or better fitting male or female stereotypes. Better guidance leading to higher completion rates would save social expenditure resulting from failure and dropouts and could free these resources for more productive investment in areas such as special needs education or the regular updating of courses curricula[47].

– **Comparatively high graduate unemployment**

While general economic factors have an important role to play in graduate unemployment, it may also be comparatively high in some countries as a result of curricula that are too rigid or only partly relevant to employers' needs. Addressing this issue may call for a reallocation of funding to other sectors of the education or training system, or for linking increased investment to improvements in relevance and flexibility. There may also be more hidden, longer-term effects entailing significant inefficiency costs, e.g. when education and training systems overtly or implicitly transmit values such as risk aversion rather than an entrepreneurial spirit[48].

– **Lower achievement levels**

While there is a general positive correlation between investment level and achievement, this is not the case in all countries. In some cases achievement levels (as measured by instruments like PISA or IALS) are lower than in other countries with a comparable or even lower level of expenditure. Several factors could account for such a situation, including poor quality of courses, poor teaching, the inability to tackle the problems of disadvantaged groups or regions or inefficient allocation of resources.

– **Excessively long degree or other qualification courses**

The time actually spent by students studying for a particular higher education degree in different Member States may vary by as much as 100%. The total cost of a graduate varies enormously within the EU and can account for a large proportion of apparent differences in funding in some countries or institutions. The relevance for efficient spending of monitoring the duration of courses is underlined by recent attention given across Europe to the validation of informal and non-formal learning, which has become recognised as an effective investment. It lowers the threshold for entrance into lifelong learning and increases the return to the person, the employer and society. It means less time is needed to complete a qualification or to attain a certificate, suppliers are required to provide more tailored but also shorter and more targeted modules, the individual has to finance him/herself for a shorter time, he/she misses work less, and there is the added motivation of knowing that what individuals have already achieved will help them progress more quickly.

– **Educational dead-ends.**

[47] Commission Action Plan on Skills and Mobility, op.cit., point 3
[48] Entrepreneurship in Europe, Green paper from the European Commission, 2002

Dead-ends occur where there is a lack of flexibility and permeability within and between the various constituent parts of education and training systems – and sometimes between education/training and work: people are prevented from swapping tracks if they find they are on the wrong one or when they want to resume study/training at a higher level or a later in life. This is usually the result of a lack of assessment of prior and informal learning acquired by applicants to education and training courses, in particular when they change tracks, and in continuing vocational education and training and adult education.

There are of course other areas where there is concern about the efficiency of spending. This is the case for e.g. the Active Labour Market Policies to re-train the unemployed and inactive wanting to work; evaluations suggest that combining training with other measures such as work experience and taking into account both the characteristics of the individual and labour market conditions are crucial factors of success.

Overall, investing more pays off only when it is linked to higher quality, more relevance to the learners needs, increased social, economic and democratic efficiency and/or improved access. Investing more in inadequate or over-long curricula without first reforming them would perpetuate inefficiencies rather than resolving them. Efficient investment should serve to boost and reward quality and innovation in teaching/learning. This requires careful monitoring of inputs and outputs at European, national as well as institutional level, with an eye to equality of access across socio-economic and age groups taking their different learning needs into account.

5.3. Efficient management of resources

There is a positive link between educational decentralisation (i.e. not just the deconcentration of central administration, but the possibility to change and adapt curricula, methods and management) and attainment which became increasingly clear in the light of TIMSS / PISA results. The importance of local management of resources was emphasised by Member States themselves in their response to the Commission's Memorandum on lifelong learning.

Efficient decentralisation however calls for new investment in a) the training of local authorities and school administrators and teachers in the management and efficient use of resources; b) the establishment of a quality assurance system permeating all levels, i.e. the dissemination of a culture of quality awareness throughout the educational and training system, based on confidence in, and autonomy of local actors working according to a common core of quality standards; these should in particular ensure that more accountability at school/local level does not jeopardise equity, gender mainstreaming or student participation; and c) a transparent qualification framework encompassing general and vocational qualifications, suited to national needs but also compatible with similar frameworks at the European level (cf. Section 6 below).

Another important aspect is the involvement of all relevant actors through a partnership approach. In particular, governments and social partners should explore the possibility of developing various types of public-private partnerships in order to

mobilise additional human and financial resources [49]. Partnership working has been identified as a critical factor for motivation, openness, relevance and quality of education in a lifelong learning perspective [50]. Partnerships involving private financial contributors may also have the potential to encourage more responsible behaviour of students, families and educational staff, and may thus enhance the efficiency of overall spending. This should however under no circumstances be allowed to restrict access for learners from less favoured backgrounds.

Maximising efficiency also requires coordinated action between ministries. Lowering the barriers at national and European level between the ministries in charge of education, employment, economy, research, youth, environment, health, etc. could avoid the duplication or dispersion of effort and funding and could thus boost the results of reforms. A particularly telling example of this can be found in the area of customised counselling/guidance provided to learners and to employed and unemployed youth and adults, some of them in difficult situations. Despite the common pattern of tasks, these key activities tend to fall under the purview of different ministries depending on the target group involved and/or the activity envisaged (study, first job, labour market training, etc.). Such fragmentation often creates major difficulties for users and reduces the overall effectiveness and efficiency of the services provided. Investing efficiently for the knowledge society also requires a coordinated approach between the authorities in charge of education and training and those in charge of research and innovation, in view of the ambitious twin Barcelona objective to increase R&D expenditure and the share of it funded by business. Coordination efforts in these directions are also in progress at European level, in particular through the integrated approach to the implementation of the Work programme on objectives and other relevant European policy developments.

The setting of national and European benchmarks is also an indispensable means for each country to situate its own achievements in comparison with others'. It is also crucial to measure progress towards the overall Lisbon strategic goal and the detailed Objectives agreed for European education and training systems [51].

6. EFFICIENT INVESTMENTS NEED TO BE ANCHORED IN THE EUROPEAN CONTEXT

The need for reforms in education and training depends in each country on its particular structures, levels of attainment, strengths and weaknesses and policy orientations. Such reforms are the responsibility of Member States and Applicant Countries, in accordance with the principle of subsidiarity. Accordingly, the purpose of this section is not to review possible national reforms, but to point out that these reforms, while decided and conducted at national level, need to take serious account of their increasingly important European dimension, which has become a critical factor for their efficiency.

The importance of investing in the European dimension of education and training has been stressed in the Communication on lifelong learning and in the Action plan on skills and mobility and is emphasised in the Objectives work programme (in

[49] Financing of Education, Eurydice, 2002
[50] Making a European area of lifelong learning a reality, Communication from the European Commission, op.cit.
[51] European benchmarks in education and training: follow-up to the Lisbon European Council, op.cit.

particular in Objective 3.5). The provision of a clear and stable frame of objectives at European level is also a necessary condition for success of the investment strategies in the Applicant Countries. It avoids the danger of moving targets, which can easily undermine even generous investment policies. The fact that all Member States (current and new) introduce convergent change/reforms towards goals shared by all may in itself serve as a powerful factor of motivation and integration. This underlines the importance of including Applicant Countries in both the European Employment Strategy and the implementation of the Objectives work programme - as agreed by education Ministers in Bratislava in June 2002.

6.1. National reforms in the context of the European knowledge area

In a more integrated Europe, investments in education and training have acquired a much stronger European dimension. Investment and reform in these areas geared only towards national and regional needs and disregarding their European dimension would not be as effective as they could be in the context of the European knowledge area. Criteria for assessing the quality and relevance of study/training programmes and institutions need to be compatible at European level and to pave the way to making Europe a world reference in these areas. In other words, investment and reforms need to be undertaken in such a way as to achieve *as much convergence as necessary* (while keeping *as much diversity as possible*), in line with the message sent by Education Ministers in their policy statement at the beginning of the Objectives work programme [52]. Acting in this coordinated way has the potential to release considerable European added value, in higher education, adult education and continuing vocational education and training as well as in other policy areas, e.g. employment or regional development. Such reforms are also crucial for economic growth and employment policies and for the efficiency of EIB and Structural Funds investments, i.e. for the overall achievement of the Lisbon goals.

6.2. Investing in curricular renovation, quality assurance and recognition of qualifications in the context of the European knowledge area

The most fundamental need for reform in education and training with respect to the emergence of the knowledge society concerns curricular renovation in general education, vocational education and training, higher education and adult education - in other words throughout the whole spectrum of lifelong learning. Such renovation needs to reflect the priority given to basic skills; the diversification of learning pathways and methods to suit various types of learners; the effective use of ICT in teaching and learning; the promotion of sustainable employability for men and women; the integration of a European dimension into all courses, including through the effective learning of foreign languages and the possibility for students and trainees to undertake a significant part of their learning in another country; as well as more flexibility in the articulation of courses and greater permeability between education/training tracks. Such multifaceted curricular renovation is at the core of the Work programme on objectives (cf. Section 5.1). It is also a basic requirement in the Bologna process in higher education and in the newly adopted resolution on enhanced cooperation in vocational education and training (the Copenhagen

[52] Detailed work programme on the objectives of education and training systems, op.cit. (introduction)

declaration) [53]; in both cases, contacts between the world of education and work (professional bodies, employers, research units, etc.) may contribute to shaping better curricula and to creating incentives for more private contributions to education and training. While the issue of curricular renovation concerns all countries, it has particular importance and urgency in a number of Applicant Countries, where there is a risk that funding may go to unproductive parts of the education and training systems if curricular reforms are further postponed.

Related to curricular reform is quality assurance. Not all investments in quality assurance will pay off. This will be the case only where priority is given to curricular reform linked to the needs of the economy and of society, and where the need for quality assurance mechanisms to be trusted beyond national boarders is fully recognised. "Quality" in a European perspective cannot be decreed by law or authorities. It exists only where it is seen as such by others (users, employers, other institutions, other countries). Hence, the first imperative for quality assurance systems developed at national level should be to build up their relevance and credibility (e.g. through the inclusion of stakeholders and non-nationals in the quality assurance bodies) and their compatibility with those used elsewhere in Europe. These aspects are fundamental to the future development of higher education (as emphasised in the Bologna process) as well as of vocational education and training (as underlined in the follow-up to the Quality Forum and in the Copenhagen Declaration). In both areas, a common core of quality criteria is needed at European level to ensure their transparency, comparability and compatibility. Work towards this goal has started but it needs to be reinforced and accelerated.

The achievement of greater efficiency of educational investment in the European context and the completion of a European labour market call for a step change in the recognition of qualifications and competencies acquired anywhere in the EU. The Barcelona European Council of March 2002 welcomed the Commission Action Plan to remove the barriers within European labour markets by 2005, including those resulting from failure to recognise formal qualifications and non-formal learning. In spite of significant policy measures in this area (e.g. the Directives on professional recognition, the Commission Action Plan on Skills and Mobility or the Mobility Action Plan adopted by the Nice European Council) and various instruments that were introduced to support these policies (European curriculum vitae, EuroPass, ECTS credits, NARICs, Diploma Supplement), progress has been much slower than expected. The cumbersome and tardy recognition processes in place in many countries or at many institutions remains the single biggest obstacle to a fluid and effective European labour market and to Europe-wide employment perspectives for holders of qualifications[54]. No European knowledge area, and no European labour market can exist without a transparent, user-friendly and predictable system for the recognition of degrees and qualifications across internal borders in the current and enlarged EU.

Ensuring the efficiency of investment in education and training - and making progress towards the Lisbon strategic goal - requires in the above areas resolute decisions based on clear priorities. At a time of accelerating integration of labour

[53] Council Resolution on the promotion of enhanced cooperation in vocational education and training (VET), Document 14343-2002 and "Copenhagen Declaration" of the European Ministers in charge of VET and the European Commission of 30 November 2002.

[54] Commission Action Plan on Skills and Mobility, op.cit., points 10, 15, 19 and 20

markets and economies, education and training cannot and must not be allowed to fall behind. Moreover, there is growing awareness among European students and trainees of a need and a right to study for qualifications that can effectively be used all over the EU. Institutions and national accreditation bodies will increasingly need to find ways of delivering such qualifications, and those that do not will run the risk of penalising their own citizens by restricting their opportunities in the European knowledge economy and society.

6.3. Enhancing the value of European education in the world

Making Europe a worldwide reference for the quality and relevance of its education programmes and institutions implies specific action and investment. It is a highly ambitious target for the current EU, and even more so for the enlarged Union. Initiatives such as Erasmus-World and the introduction of common visa policies for non-EU students and trainees, combined with similar action in the area of research, have the potential to enhance the image of Europe worldwide as a destination for students, scholars and researchers. However, lasting success in this area will depend on curricular renovation, the establishment of an understandable, coherent qualifications framework, and the promotion of European institutions and degrees throughout the world [55]. Of course, European degrees are unlikely to be better recognised in the wider world, and the world is unlikely to see Europe as a reference, as long as Europeans themselves do not cross-recognise their own degrees.

7. CONCLUSION: THERE IS AN URGENT NEED FOR DETERMINED ACTION

The political targets set by Heads of State and Government imply that expectations of education and training are extremely high. They are fully justified in view of the essential role of education and training in the achievement of the Lisbon strategic goal, as the European Council has explicitly acknowledged.

The Lisbon goals and the ensuing objectives agreed for education and training remain more valid then ever. They were set by Member States themselves for themselves. This Communication does not intend to provide indications of what should be done in any particular country, and issues raised in it are clearly more important in some countries than in others. The core responsibility to deliver on the agreed goals lies with the education and training authorities in the current and future Member States. It is clear that if regions and countries fail to invest more, and more efficiently in their people they see their economic and social performance - and those of Europe as a whole - fall behind. In view of this, the Commission emphasises the importance of sticking to the agreed targets and of pursuing an investment policy where sufficient funds are directed to those areas where they will contribute most to achieving the goals set at national and European level.

These goals will be more difficult to achieve than was originally thought, as a result of raised European ambitions, stronger competition resulting from increased investments in knowledge systems in other world regions and the challenges related to demographics and enlargement. In view of these challenges and of the current signals of a slow start to action, the Commission is concerned that the goal of more

[55] The globalisation of Education and Training: Recommendations for a Coherent Response of the EU, report by Academic Cooperation Association (ACA) for the European Commission, DG EAC, September 2000

and better investments in education and training might not be achieved by 2010; given the core contribution of education and training to other policy areas, this could well jeopardise the EU's overall goal set in Lisbon.

In order to avoid this, the Commission invites Member States and Applicant Countries, depending on their specific situation:

– To review public investment - overall and to important sectors of the education and training system – increasing it in a targeted way where necessary, including by re-directing existing investments to the development of human resources throughout the life cycle. This is essential in the enlarged EU to ensure the quality, equity, social cohesion and regional balance (in terms of growth and employment) called for in the Lisbon conclusions, the Work programme on Objectives (and lifelong learning), the European employment and social inclusion strategies and the "European social model".

– To put in place policies and incentives to encourage more private investment in education and training as a complement to, not as a substitute for adequate public expenditure. This should be coordinated with similar efforts in R&D, in view of the twin Barcelona objective to increase overall R&D expenditure and to have 2/3 of it funded by business. Achieving this requires a partnership approach and action from all relevant actors: individuals, enterprises, social partners and public authorities. The state has the responsibility to avoid situations of underfunding which could jeopardise not only the quality and attractiveness of its own education and training systems, but also the achievement of the EU's internal goals and its international competitiveness.

– To target investment on the long term efficiency of systems, i.e. to focus funding on areas where it is most likely to produce more quality, relevance, efficiency and access possibilities. This requires a review of the allocation and management of current spending. Current inefficiencies in spending need to be identified and their cost should be estimated. The setting of national and European benchmarks is an indispensable means for each country to situate its own achievements in comparison to others' and is also crucial to measure progress towards the overall Lisbon strategic goal and the detailed Objectives agreed for European education and training systems.

– To create the conditions for maximum efficiency of investments, by undertaking the kind of curricular renovation, quality assurance and qualification recognition called for by the new European context in the field of education and training as well as employment. Reforms and investments that are designed and implemented in a purely national context, disregarding broader European issues, will not achieve their full potential. Institutions and systems failing to recognise that learners need and demand qualifications that can be used throughout Europe would handicap their own citizens and reduce the efficiency of their own investments.

As has been shown in this document, "making the most efficient use of resources" (Objective 1.5.) will be crucial for allowing education and training to meet their own objectives and to play their full role in the European Employment and Social Inclusion strategies and in the achievement of the overall Lisbon goal. The Commission looks forward to discussing these issue with Member States and

Applicant Countries and invites them to look at their policies for investment and change in education and training as core determinants of their own future in the enlarged EU and of the future of Europe in the world.

ANNEX

Table 1: Public expenditure on education and training

Public expenditure on education and training as a percentage of GDP

	1995	1996	1997	1998	1999	2000	2001
EU	**5.2i**	**5.2i**	**5.1i**	**5.0i**	**5.0i**	**5.1i**	**(:)**
B	5.0i	5.0i	4.9i	5.2	5.5I	(:)	(:)
DK	7.7	8.1	7.9	8.2	8.0I	(:)	(:)
D	4.7	4.8	4.7	4.7	4.7	(:)	(:)
EL	2.9	3.1	3.4	3.5	3.7	3.5e	3.5e
E	4.7	4.7	4.5	4.5	4.5	4.5e	4.4e
F	6.0i	5.9i	6.0i	5.9i	5.9i	5.8e	5.7e
IRL	5.5	5.3	5.2	4.9	4.6	4.5e	(:)
I	4.9	4.9	4.6	4.6	4.5	4.6e	4.5e
L	4.3	4.0	4.1	(:)	(:)	(:)	(:)
NL	5.0	5.0	4.8	4.9	4.8	4.9e	4.9e
A	6.5	6.4	6.3	6.3	6.3	(:)	(:)
P	5.4	5.5	5.6	5.6	5.7	(:)	(:)
FIN	6.9	7.0	6.5	6.2	6.2	6.0e	(:)
S	7.5	7.6	7.9	8.0	7.7	8.4e	8.3e
UK	5.0i	4.8i	4.7i	4.6i	4.6i	4.9e	(:)
USA	4.9	:	5.2	5.0	4.9	:	:
JAP	3.5	:	3.5	3.5	3.5	:	:

Data for 1999 for selected Candidate Countries

BG	CZ	EE	CY	LV	LT	HU	MT	PL	RO	SK
3.8	4.4	7.4	5.7	6.3	6.5	4.7	4.7	5.2	3.4	4.3

Source: Eurostat, data for USA and Japan: OECD
e = data for 2000 and 2001 are estimates
i = see footnotes
(:) = Data not available, Candidate countries: only countries for which data are available are shown
B: only Flemish Community for 1995-1997
B, DK: change in coverage in 1999
FR: educational expenditure figures do not include OD's (Overseas Departments).
K: estimates, based on data for UK financial years, which run from 1 April to 31 March

Table 2: Private expenditure on education and training

Private expenditure on educational institutions as a % of GDP			**Enterprise expenditure on continuing vocational training** as a % of labour costs		
	1995	**1999**		**1993**	**1999**
EU	**0.6**	**0.7**	**EU**	**1.6**	**2.3**
B	:	0.3i	**B**	1.4	1.6
DK	0.3i	0.3i	**DK**	1.3	3.0
D	1.3	1.2	**D**	1.2	1.5
EL	:	0.3i	**EL**	1.1	0.9
E	1.0	0.9	**E**	1.0	1.5
F	0.4	0.4	**F**	2.0	2.4
IRL	0.5	0.4	**IRL**	1.5	2.4
I	0.1	0.4	**I**	0.8	1.7
L	:	:	**L**	1.3	1.9
NL	:	0.4	**NL**	1.8	2.8
A	0.3i	0.3i	**A**	:	1.3
P	0.0i	0.1i	**P**	0.7	1.2
FIN	:	0.1	**FIN**	:	2.4
S	0.1	0.2	**S**	:	2.8
UK	0.2	0.7	**UK**	2.7	3.6
USA	1.7	1.6	**USA**	:	:
JAP	1.2	1.1	**JAP**	:	:

Data on enterprise expenditure on continuing vocational training for selected candidate countries (i), % of labour costs, 1999

BG	**CZ**	**EE**	**LV**	**LT**	**HU**	**PL**	**RO**	**SI**
1.0	1.9	1.8	1.1	0.8	1.2	0.8	0.5	1.3

Source: Private expenditure on educational institutions: OECD (Education at a Glance 2002)
Enterprise expenditure on continuing vocational training: Eurostat
i = see footnote
A, B, EL, P: Public subsidies to households included in private expenditure
Candidate Countries: only countries for which data are available are shown in the table

Table 3: Total expenditure per pupil/student by level of education, 1999

in 1000 US Dollar converted using Purchasing Power Standards (PPS)

	Primary level (ISCED 1)	**Secondary level** (ISCED 2-4)	**Tertiary level** (ISCED 5-6)
EU	**4.1**	**6.2**	**8.5**
B	4.0	6.4	9.7
DK	6.7	7.6	10.7
D	3.8	6.6	10.4
EL	2.2	2.9	4.3
E	3.6	4.9	5.7
F	4.1	7.2	7.9
IRL	3.0	4.4	9.7
I	5.4	6.5	7.6
L	:	:	:
NL	4.2	5.7	12.3
A	6.6	8.5	12.1
P	3.5	5.2	4.8
FIN	4.1	5.9	8.1
S	5.7	5.9	14.2
UK	3.6	5.6	9.6
USA	6.6	8.2	19.2
JAP	5.2	6.0	10.3

Source: OECD

Netherlands: Public and government-dependent private institutions only
Greece, Italy: Public institutions only
USA: Public and independent private institutions only
Austria: Enrolment data for 1998/99

Data for selected Candidate Countries:
Czech Republic 1.8/3.4/5.7
Hungary 2.2/2.4/5.9
Poland 1.9/1.6/3.9
Slovak Republic na/2.2/5.3

Table 4: Expenditure on tertiary education from public and private sources as a % of GDP

	1995	1999		
	total	**total**	**public**	**private**
EU	**1.1**	**1.1**	**1.0**	**0.2**
B	**:**	1.3	**:**	**:**
DK	1.6	1.6	1.5	< 0.1
D	1.1	1.1	1.0	0.1
EL	0.7	1.0	1.0	< 0.1
E	1.0	1.1	0.9	0.3
F	1.1	1.1	.0	0.1
IRL	1.3	1.4	1.1	0.3
I	0.8	0.8	0.7	0.1
L	:	:	:	:
NL	1.2	1.3	1.0	0.3
A	1.5	1.5	1.4	< 0.1
P	0.9	1.1	1.0	0.1
FIN	1.9	1.8	1.8	< 0.1
S	1.6	1.7	1.5	0.2
UK	1.2	1.1	0.8	0.3
USA	:	2.3i	1.1i	1.2i
JAP	1.0i	1.0i	0.5i	0.6i

Source: OECD

i = see footnotes
Because of rounding public and private not always add up to total
USA, Japan: Post secondary non-tertiary included in tertiary education

Data for selected Candidate Countries, Total, 1999:

Czech Republic 0,9
Hungary 1,1
Poland 1,0
Slovak Republic 1,1

Table 5: Lifelong Learning-Adult participation in education and training Population aged 25 to 64 years

	Per cent having followed any kind of education or training in the 4 weeks preceding the survey				**Participation rate in continuing education and training during one year (%)**		
	1996	**1999**	**2000**	**2001**	Survey year	Job related continuing education and training	All continuing education and training
EU	**5.7e**	**8.2**	**8.5e**	**8.4e**		**:**	**:**
B	2.9	6.9	6.8	7.3	95/96	14	22
DK	18.0	19.8	20.8	17.8	98/99	49	56
D	5.7	5.5	5.2	5.2	2000	29	42
EL	0.9	1.2	1.1	1.4		:	:
E	4.4	5.1	5.1	4.9		:	:
F	2.7	2.6	2.8	2.7		:	:
IRL	4.8	:	:	:	95/96	16	22
I	4.4	5.5	5.5	5.1	98/99	16	22
L	2.9	5.3	4.8	5.3		:	:
NL	12.5	13.6	15.6	16.3	94/95	24	36
A	7.9	9.1	8.3	8.2		:	:
P	3.4	3.2	3.3	3.3	98/99	:	13
FIN	16.3	17.6	19.6	19.3	2000	43	55
S	26.5	25.8	21.6	17.5	94/95	:	54
UK	:	19.2	21.1	21.7	95/96	40	45
USA	:	:	:	:	2001	40	51

Source: Per cent having followed training in the 4 weeks preceding the survey: Eurostat:Participation rate in continuing education and training during one year: OECD
(:) = Data not available
b = break in series
e = estimate

Table 6: Change in the number of young people in the European Union, 1975-2000

(Mio)	**0-9 age group**	**10-19 age group**	**20-29 age group**	**0-29 age group**
1975	54.2	55.6	50.5	160.4
1980	48.5	58.0	52.2	158.8
1985	44.7	54.9	55.8	155.4
1990	43.6	49.1	58.4	151.1
1995	42.9	46.0	56.6	145.4
2000	41.4	44.9	51.0	137.2
projection				
2005	40.1	43.9	46.7	130.7
2010	39.2	42.4	45.3	126.9

Source: Eurostat, EU projection based on Eurostat data for 14 EU countries

Table 7: Change in the number of pupils and students in the European Union, 1996-2000

(Mio)	**All pupils and students**	**Primary and secondary level**	**Tertiary level**
1996	83.5	71.6	11.9
1997	83.4	71.1	12.3
1998	83.7	71.4	12.3
1999	85.1	72.6	12.5
2000	85.1	72.5	12.6

Source: Eurostat
Break in time series in 1999