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# **The quality of education at the beginning of the 21st century**

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## **The Quality of Education at the Beginning of the 21st Century**

### **A. The Changing Concept of Education Quality**

1. The debate and the views of what constitute education quality is as old as education itself. It is a debate influenced by values, norms and subjective judgments. It is not too different from the equally long history of what constitutes the quality of wine. In both cases it is above all a question of subjective judgment.

2. There have been many attempts to clarify the meaning of education quality, and one of the most penetrating is the one carried out by the OECD in 1989<sup>1</sup>. This report makes two important contributions to the debate. First it analyses why educational quality surfaced so strongly in the education policy arena during the 1980s. It makes it clear that the return of the concept of education quality in the 1980s was not only a simple reaction to the prominence of the concern for equity during the sixties and seventies, but also the result of a more complex education policy debate that had become more politicised where simple contrasts between left and right, egalitarian and elitist, had become increasingly inadequate. Furthermore policy makers

became more and more concerned with accountability in the public sector, coupled with claims from different education stakeholders like parents, concerning maintaining and improving education standards.

3. Second, the OECD report made it clear that it is not meaningful to try to arrive at a tight, single definition of educational quality for the OECD countries, given the great variety of education systems and value-structures in those countries. It becomes then an understatement to say that trying to arrive at a single definition of education quality for the UNESCO members is more or less impossible.

4. It is also important to note here that the longstanding debate around equality versus quality of education has, through the recent PISA<sup>2</sup> studies, become more complex and in a way more promising. This report states « Quality and equity do not have to be seen as competing policy objectives. A number of countries achieved high overall performance standards alongside a relatively narrow distribution of student results. »

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<sup>1</sup> Schools and Quality, An International Report, OECD 1989

<sup>2</sup> Education Policy Analysis, Chapter 2, « Improving both quality and equity; Insights from PISA 2000 », OECD 2002

5. So, if it's extremely difficult to find an agreement on the measuring of education quality, it becomes even more difficult, not to say impossible, to find an agreement on the quality of learning. If values and norms are always involved in any definition of education quality, it is even more so when it comes to quality of learning, given that the learner itself is the ultimate judge of the quality of learning.

6. It can also be argued, given the rapid development of policies and practices for lifelong learning and, with it, the greater emphasis on moving from supply to demand, from education to learning, that attempts to define and ameliorate education quality will most likely over time be undermined by a greater policy concern for the quality of learning.

7. These developments point towards two major weaknesses in the present concern for education quality. First, and to a large extent, policies and practices of implementing life long learning are not sufficiently reflected in the debate and developments about education quality. Second, the debate and developments around educational quality are still to a considerable degree kept and defined by the different actors within the education system itself.

8. For example, when the great debate on education quality emerged during the 1980s, there existed another debate about quality in most advanced societies, namely the debate in the world of work around « total quality ». Despite attempts, not least by OECD <sup>3</sup>, very little, if any, learning took place in terms of ideas and experiences between these two major quality concerns.

9. Two of the key concepts in the « total quality » development could certainly have been, and still are, of importance for work and education quality. The first concept is that quality cannot be seen in isolation from the relevance of the quality searched for. Second, the quality of the work of those in the lower echelons of the work organisation is as important as the quality of those in the middle and top parts, hence the notion of total quality.

10. In my view, both of these concepts developed within the « total quality » development of the world of work have great potential for enriching the present debate about education quality. For instance, the relevance of education quality reaches well beyond school walls and the competence of the actors in the system, including a growing number of national and international education measurement specialists. Furthermore, the « total »

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<sup>3</sup> Human Resource Developments, Implications for Education, OECD 1990

dimension of quality implies for education that much greater attention should be given to the concept of multiple intelligence, accepting that human capital is not homogeneous but heterogeneous in terms of its range of potential skills and competences that each potentially can be developed to the highest quality in an education system if a voluntary policy exists to do so.

11. So, against this background of problems related to: the definition of education quality; who defines education quality; the relevance to society at large of present definitions of education quality; the question has to be asked if education quality as debated and conceived today is of relevance for the 21st century that will be based on an emerging knowledge economy and learning society.

12. Moreover, and in the context of the ambitious and fundamental quantitative objectives of EFA, the question has to be raised if the concepts and targets for education quality, elaborated to a large extent by developed countries, which huge expenditures devoted to education are the most relevant and realistic ones for developing countries?

13. These basic questions will be analysed and further developed in the remaining parts of this paper. The next section will address the skills and competences that the emerging knowledge economy will require. This will be followed by a section on some lessons learned from recent developments and the identification of some crucial issues ahead for EFA, with particular bearing on education quality.

#### B. Skills and Competences in the Emerging Knowledge Society

14. There is today a wide-ranging debate in most countries around the globe about the knowledge economy, but it is not always very clear what is meant by it. The debate resembles somewhat the debate two or three years ago about the « new economy ». Was this « new economy » the « casino »dot.COM economy, or the ICT-based economy, or a new synergy between the new ICT-based economy and the old economy? Most likely, what the term the « new economy » reflected was a combination of the developments in all three interpretations. But in all three, the importance of knowledge and human capital formation was of great significance. What has become clear over the last half decade, is that the volume, the nature, and direction of knowledge

production, knowledge dissemination and knowledge use lies at the heart of any definition of the knowledge economy <sup>4</sup>.

15. It is also important to remember that the knowledge dimension in this knowledge economy is more than just ICT. One always needs to keep in mind the phrase, « Where is the knowledge in information, and where is the wisdom in knowledge? » All three terms are of relevance in describing the knowledge economy. There is no need in this report to elaborate on and provide hard figures proving that the knowledge economy is rapidly becoming a global reality, although with great and uneven developments around the world. A recent OECD report<sup>5</sup> clearly shows how the knowledge economy is evolving.

16. This emerging knowledge economy poses many new challenges for governments, institutions and individuals. Two key challenges stand out in particular. The first one is that we need to reach a better understanding of the key dynamics that are driving the knowledge economy. The second is about what are, and will be, the roles and functions of our education and learning systems in this knowledge-based economy.

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<sup>4</sup> Knowledge Management in the Learning Society, OECD/CERI 2000

17. As to the first challenge, there is the critical question of what type of knowledge are we talking about? A useful way of trying to clarify this difficult question has been developed in the OECD/CERI publication on Knowledge Management in the Learning Society (2000).

Knowledge is divided here into four categories that, in fact, have ancient roots<sup>6</sup>

- know-what
- know-why
- know-how
- know-who

18. *Know-what* refers to knowledge about « facts ». How many people live in New York, what the ingredients in pancakes are, and when the Battle of Waterloo took place are examples of this kind of knowledge. Here,

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<sup>5</sup> Science, Technology and Industry Scoreboard: Towards a Knowledge-Based Economy, OECD 2001

<sup>6</sup> Aristotle's knowledge taxonomy -- Knowledge has been at the centre of analytical interest from the very beginning of civilisation. Aristotle distinguished between:

◦ *Episteme*: knowledge that is universal and theoretical: know-why;

*Technè* : knowledge that is instrumental, context-specific and practice-related: know-how;

◦ *Phronesis*: knowledge that is normative, experience-based, context-specific and related to common sense: practical wisdom.

Lundvall, B-A. and Johnson, B. (1994), « The Learning Economy », *Journal of Industry Studies*, Vol.1, No.2, December, pp.23-42.

knowledge is close to what is normally called information - it can be broken down into bits and communicated as data.

19. *Know-why* refers to knowledge about principles and laws of motion in nature, in the human mind and in society. This kind of knowledge has been extremely important for technological development in certain science-based areas, such as the chemical and electric/electronic industries. Access to this kind of knowledge will often make advances in technology more rapid and reduce the frequency of errors in procedures involving trial and error.

20. *Know-how* refers to skills - i.e. the ability to do something. It may be related to the skills of production workers, but it plays a key role in all-important economic activities. The businessman judging the market prospects for a new product, or the personnel manager selecting the training staff, use their know-how. It would be misleading to characterise know-how as practical rather than theoretical. One of the most interesting and profound analyses of the role and formation of know-how is actually about scientists' need for skill formation and personal knowledge<sup>7</sup>. Even finding the solution to complex mathematical problems is based on intuition and on skills related

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<sup>7</sup> Polanyi, 1958/1978, *Personal Knowledge*, Routledge and Kegan, London

to pattern recognition, which are rooted in experience-based learning rather than on the mechanical carrying out of a series of distinct logical operations<sup>8</sup>.

Know-how is typically a kind of knowledge developed and kept within the borders of the individual firm or the single research team. As the complexity of the knowledge base increases, however, co-operation between organisations tends to develop. One of the most important reasons for industrial networks is the need for firms to be able to share and combine elements of know-how. Similar networks may be formed between research teams and laboratories.

21. This is one reason why *know-who* becomes increasingly important. The general trend towards a more composite knowledge base, with new products typically combining many technologies, each of which is rooted in several different scientific disciplines, makes access to many different sources of knowledge more essential<sup>9</sup>. Know-who involves information about who knows what to do. But it also involves the social ability to co-operate and communicate with different kinds of people and experts.

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<sup>8</sup> Ziman, J. (1979), *Reliable Knowledge*, Cambridge University Press, Cambridge.

<sup>9</sup> Pavitt, K. (1998), « *Technologies, products and organisation in the innovating firm: What Adam Smith tells us and Joseph Schumpeter doesn't* », Paper presented at the « DRUID 1998 Summer Conference, 9-11 June, Bornholm.

22. All the above four types of knowledge exist and have an important role in the knowledge economy. But it seems clear that increasing importance is being given to the last three types, i.e. know-why, know-how and know-who. The know-how is also closely related to another distinction, much debated among economists, between explicit and tacit knowledge<sup>10</sup>. Explicit knowledge is knowledge that can be coded and shared by all. Tacit knowledge is more locally bound and more complicated to code and share. Tacit knowledge is closely related to know-how. In an increasing number of companies, strong efforts are being made to find an adequate balance between explicit and tacit knowledge with the purpose of strengthening their competitive edge.

23. Still related to the first challenge, is the need for a better understanding of the dynamics between knowledge production, dissemination and use. Today, this is the subject of intensive studies by the many institutions of research, not least OECD. It focuses on the way knowledge-driven communities operate and function, how knowledge-management is developing in different sectors of the economy where huge differences exist between

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<sup>10</sup> Nonaka and Takiuchi (1995), *The Knowledge-Creating Company*, Oxford University Press, Oxford.

sectors. It also includes a major effort at micro and macro levels to conceptualise and clarify what can be called a new discipline, namely, the economics of knowledge. A very difficult challenge for economists is how to take into account and measure the fact that when knowledge is shared, it grows. In most economic theories when something is shared, its value depreciates. This is not the case with knowledge - the raw material in the knowledge economy. There might well be a Nobel prize in economics waiting for those who will come up with a convincing theory about the economics of knowledge and the way it operates both at micro and macro levels in the economy. The crucial challenge will be how to measure something that grows when shared. In this sense, knowledge is somewhat like love, it grows when shared.

24. On this second challenge, what is and will be the role and function of our education and learning systems in the emerging knowledge economy? there are certainly no easy answers. It has often been argued and rightly so, that our present systems were not built for the knowledge economy but rather for the old industrial economy, some 100-150 years ago. Today, it seems fairly clear that in a knowledge economy and society, there will be less room for major institutions claiming a knowledge monopoly. Rather, there will be increased

competition in supply and demand for knowledge production, mediation and use. We already see this in a number of countries in terms of competition between public and private education. Furthermore, the on-going work within the World Trade Organisation (WTO) under the Global Agreement on Trade in Services (GATS), where education is one of the sectors, is likely to accelerate this development over time. The emergence of new types of providers of education, particularly at the post-secondary level, and with trans-national ambitions of providing education, will most likely create new tensions between traditional, national providers, and the new trans-national providers of education.

Most of our education systems as we know them today are national initiatives and entities that were not built for a rapidly developing global knowledge economy, where the production, mediation and use of knowledge increasingly operates in a borderless world. Over time, this is likely to have a profound and dramatic effect on national educational infrastructures. This new situation for national educational systems has, for instance, led OECD/CERI to work on possible scenarios for the future of schooling. Six different scenarios up until 2025 were presented to OECD Ministers of

Education when they met in 2011<sup>11</sup>. The scenarios were very well received by the Ministers and have led to an intensive debate in OECD countries about their probability and desirability. More recently, OECD/CERI has embarked on developing scenarios for the future of higher education, not least in the context of trade in educational services, the development of lifelong learning and important changes in demography.

26. Most of the OECD countries and many others are well aware of what these new challenges of the global knowledge economy have started to pose for their educational systems. In brief, their responses to this second challenge can be summarised as follows:

- There is a growing number of countries in agreement on the imperative of developing lifelong learning for all. With the exponential growth of new knowledge, and the obsolescence of so much existing knowledge, it has become clear for these countries that the present front-end model of education has reached its limits, and needs to be transformed into a system of lifelong learning.

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<sup>11</sup> What Schools for the Future? , OECD/CERI, 2001

- Education has a crucial role in combating social exclusion, which is a reality in all OECD countries. Too many young people are leaving the education system demotivated to pursue further learning later in life. They risk being excluded from the emerging knowledge economy and society. What is needed are new approaches to teaching and learning, taking into account the variety of abilities and interest that exist among young people. The bottom line is to keep all young people motivated for learning later on in life.
  
- There is also an urgent need to develop new systems of financing of lifelong learning, which most likely, will have to be based upon a new balance between three sources of financing, namely the public sector, the private sector and the individual.
  
- There is also an urgent need to bring in ICT at all levels of education as has happened in so many other sectors of society and a specific challenge is to train all teachers in the use of ICT.
  
- There is also a need to develop new approaches for the education system to recognise and accredit real competences that individuals have

gained from work and informal learning. There exist many interesting experiments on this issue in several OECD countries.

- There is also a need to develop much more partnership in education between the public, private and voluntary sectors at all levels of education. In particular, there is a strong need for such partnerships in higher education, including its research function, when it comes to partnerships between the public and private sectors.

- There is the need to pursue and further develop the management of education that is inspired by practices and experiences of knowledge management from other sectors within the economy and society.

- When OECD Ministers of Education met in 2001, they discussed trade in educational services for the first time. Although this topic has been discussed for some years within WTO, the education sector itself has been very little involved. The Ministers decided that the OECD should follow and monitor this development in trade in educational services and that it will be important that different educational stakeholders get involved in this discussion.

◦ Finally, OECD Ministers of Education have also engaged their countries in a major effort to monitor and evaluate the results of their education systems by means of publishing yearly comparative indicators<sup>12</sup>. In addition, they have also agreed to launch a major comparative study on testing their 15-year-olds on a regular basis in the core subjects of reading, mathematics and science. Such comparative studies provide the countries with important benchmarks in terms of measuring the results of different education policy initiatives<sup>13</sup>.

27. Given the rapid development of the knowledge economy, education has again become a top priority for most governments. They are all faced with a double challenge of making the existing educational infrastructure more efficient and equitable, and at the same time, developing it into a system of lifelong learning. In addition, and with the proliferation of new providers of education and learning in the knowledge economy and in an individual's lifecycle perspective, there are still some very basic questions to be addressed. The most critical one will be to find the proper balance between investment in human and social capital (cognitive and non-cognitive). An interesting

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<sup>12</sup> Education at a Glance, OECD/CERI, 2001

discussion of this issue has been made by Manuel Castells and Martin Carnoy<sup>14</sup>. One of their arguments is that, most likely in the future, initial education will have to assume a greater role in forming social capital and social cohesion, while the many learning settings later on in the individual's lifecycle will assume a greater responsibility for skills and competences needed in the knowledge economy.

28. In summary these heavy trends, on a global level, announcing clearly the emerging new context and parameters for education and learning in the 21st century, will require urgent policy and research focus on:

- the coming to an end of traditional definitions of education quality basically developed by the different actors within existing educational systems. In the knowledge society many other definitions of education quality and learning quality will develop;
- the need to develop concepts, practices and quality standards for a range of different types of knowledge from know-what to know-who, from explicit to tacit knowledge;

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<sup>13</sup> Knowledge and Skills for Life: First Results from PISA 2000, OECD/CERI, 2001

<sup>14</sup> Castells, M. and Carnoy, M. (1997) *Sustainable Flexibility: « A Prospective Study on Work, Family and Society in the Information Age »*, OECD/CERI General Document, OECD/GD(97)48.

- the need to rethink to what extent, if at all, the concept of universal standards based on a limited and traditional definition of education quality is of relevance to the knowledge society. The costs of developing international comparable tests based upon traditionally defined universal standards of education quality should be compared with the costs of developing measurement for a broader range of competences and skills needed for the 21st century. Moreover, such comparison of costs becomes even more pertinent and urgent in a world where huge inequalities exist between countries in terms of educational provisions and expenditures.

### C. Lessons Learned and Issues Ahead

29. A strategy for implementing the vision of EFA needs to be based on two basic premises. First, the hard facts from the last decades of the extreme difficulty of reducing inequalities in access to and completion of education, and second, the new facts from what has been elaborated in the earlier section about a radically different context for the role of education and learning in the 21st century. Five more specific lessons with their issues ahead will be developed below.

30. The first lesson is that international comparisons of education, despite their problems and costs, have two particular advantages. First, they have pushed the debate away from measuring inputs towards measuring output. Second, they have become important instruments for education policy makers in responding to an increasing demand for greater accountability in the public sector of education. Many countries, for example, have set national and local standards for assessing outcomes. Many of these standards are not internationally comparable but they establish important benchmarks<sup>15</sup>. Above all they foster a culture of self-evaluation around outcomes. Hence there is a need for EFA in its work on quality to stimulate these developments and analyse their spin-off effects on other countries and regions.

31. The second lesson relates to the key features and types of knowledge referred to in the earlier section. There seems to be an urgent need in the context of the new concern for the measurement of outcomes that the definitions of such outcomes are indeed reflecting the new skills and competences for the 21st century.

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<sup>15</sup> Human Development Report 2001, UNDP

32. For example, investment in human capital is today seen as central and critical to the development of advanced and democratic societies. But it is important to bear in mind that educational attainment and readily measurable skills account for less than half of individual wage differences in OECD countries<sup>16</sup>. Most likely the remainder is explained by a wider set of human capital. These include the ability and motivation to learn, effective job search and personal characteristics. Such a wide concept of human capital, not limited to measurable educational attainments, helps also reconconcile those who emphasise education's economic mission and those who emphasise the broader social and personal benefits<sup>17</sup>. It will be of importance for the implementation of EFA in general, and for education quality in particular, to take into account these recent developments of rethinking human capital. Their consequences for what is defined as education quality are fundamental.

33. A third lesson relates to the rapid multiplication of education providers over the last couple of decades. Private education and training providers are growing both in developed and developing countries of the world. An emerging global market for education and training is becoming a reality. The

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<sup>16</sup> Bowles, Gintis, Osborne (2001), «*The determinants of earning a behavioural approach* », Journal of Economic Literature, Vol. 39.

<sup>17</sup> EPA OECD (2002), Chapter 5, « Rethinking Human Capital ».

global market for education is estimated at more than \$2trillion, and worldwide corporate training expenditure at about \$30 billion today<sup>18</sup>

34. This new reality poses at least three major challenges for public education. First there is an urgent need for this sector to establish partnership and networking with the new providers in terms of programmes and certification<sup>19</sup>. There is also a need to establish patterns of mutual learning between the sectors in terms of « what works » in innovation, pedagogy and student motivation. The boundaries between living and learning, between formal and informal education, between school and community, all become more blurred, and this will require more partnership between providers.

35. Second, and this is indeed very important, increased expenditure for implementing EFA and lifelong learning is to be expected. However, it would be unrealistic to expect the resources to come only from the public purse. Hence there is a vitally important issue of developing strategies for financing these education objectives based on contributions from the public, private and voluntary sectors. For EFA in general, it implies close cooperation at the

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<sup>18</sup> Lifelong Learning in the Global Knowledge Economy; Challenges for Developing Countries, World Bank, 2002

<sup>19</sup> Knowledge Management in the Learning Society, OECD 2000

international level between UNESCO and the World Bank and, in each country, between the different providers of education..

36. Third, this evolving new global market for education and learning, with a multitude of providers, will create tensions for national education authorities in keeping a balance between preserving and transmitting national cultures and values through education, and also be open to and profit from new providers whose education provisions and content will become increasingly ICT-based.

It has been convincingly argued by Miller<sup>20</sup> that a learning society implies a major break with the mass-era and age-based systems of schools as the main recognised source of what people know. New institutions for providing and validating what people know will develop in the international learning market and national education authorities will have to develop new policy initiatives that will balance the supply-based national provisions with new ICT- and demand-based international and national providers.

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<sup>20</sup> Miller, Riel « 21st Century Transitions: Opportunities, Risks and Strategies for Government and Schools», OECD 2001

37. This might be seen as being far off from the EFA agenda, but the quantitative targets in EFA will have to be evaluated in one way or another, and that is where problems will arise against the developments described above. 2015 is 10 years ahead and an enormous amount of learning, not least ICT-based, will have taken place in new institutions outside the formal education system. What kind of evaluation estimating this kind of learning can be put in place? This is certainly an issue that has to be brought into the picture of developing a strategy for evaluating the quantitative targets of EFA and, with that, what kind of education quality should be evaluated.

In addition, there is a need for the EFA programme to closely follow strategies to combat child labour and malnutrition of children with devastating consequences for their capacity to learn. For instance, there is a need to carefully analyse the effect of pilot programmes that offer fees for schooling at the same level or shortly above what the child earns from working. Examples include Bolsa Escala in Brazil, Progressa in Mexico and Food for Education in Bangladesh. Progressa, for instance, distributes education grants to poor families every two months, the level of support determined in part by what a child would earn in the labour force. Initial analysis of Progressa shows a positive impact on the welfare and human capital of poor rural families in

Mexico<sup>21</sup> <sup>22</sup>. Although such programmes have little to do with the debate on education quality, they are fundamental in terms of increasing access to education for the poorest and they clearly indicate the need for partnership, and that EFA can not be limited to education policy initiatives alone.

38. A fourth lesson learnt over the last half-century is that social facts are stubborn. The fact is that the gap in educational access and achievements between different economic and ethnic groups, and between generations, has not narrowed over the past two to three decades in most countries around the globe<sup>23</sup>.

39. The issues of education inequalities are rooted in social, economic and cultural conditions with different norms, and with political interest groups and pressure groups at stake. Education policies alone will not be sufficient in overcoming the challenge. There is no easy solution, the challenge is real and earlier policy initiatives have not proven sufficient. This hard reality has to be reflected upon in any strategy for implementing EFA. The key lesson seems to be that education alone will not be able to do it and that the idea of

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<sup>21</sup> Skoufias, E., McClafferty, B.; »Is Progress Working? Summary of the evaluation by IFPRI », International Food Policy Research Institute, Washington (2001)

<sup>22</sup> See also forthcoming report by the National Academy of Sciences, Washington, US, « *Monitoring Compliance of International Labour Standards* »

universal standards of education quality is unlikely to be of relevance for all learners.

40. A fifth lesson that has emerged over the last 10 - 15 years is that all knowledge-intensive sectors in the economy devote an increasing amount of resources to research and development. It is often in the order of 15 - 25% of turnover that is reinvested in research. Education which, by definition, is a knowledge sector, is dramatically behind here. Only about 0.27% of total education expenditure is devoted to educational research and development in OECD countries<sup>24</sup>.

41. But the education research and development system is not only suffering from limited resources, it also suffers from serious weaknesses in its organisation and links between research and practice. As Gibbons et al<sup>25</sup> have convincingly argued, a major transformation of the production, mediation and use of knowledge is taking place in the merging knowledge society. These changes, covering most research areas, are characterised by a move from « Mode 1 » - pure, disciplinary, homogeneous, expert-led, supply-driven,

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<sup>23</sup> EPA OECD, Chapter 3 (2001), « *Closing the gap: securing benefits for all from education and training* »

<sup>24</sup> OECD/CERI (1995), « Education R and D; Developments and Challenges Ahead ».

<sup>25</sup> Gibbons, M., Limoges, C., Nowotny, H., Scharzman, S., Scott, P. and Trow, M., *The New Production of Knowledge*, Sage (1994).

hierarchical, peer-reviewed, university-based; towards « Mode 2 » - applied, problem-focussed, transdisciplinary, heterogeneous, hybrid, demand-driven, entrepreneurial, accountability-tested, embedded in networks.

42. Education research and development is still very little affected by these developments, although there exist some interesting developments, like the search for a more science-based educational R and D model in the US and a more evidence-based model in the UK. In both cases development in the medical field serves as inspiration. In this respect the recent strong interest and development of brain research and learning sciences reflects well these new challenges ahead for educational R and D<sup>26</sup>.

43. The implication of this for EFA is far from being clear-cut, but if the education sector will continue to be part of the knowledge society, it becomes urgent to reform its R and D system in line with what happens with R and D in other knowledge sectors. It can also be argued that the commitment to EFA will not end with a report in 2015 but that this commitment will be with us for a good part of the 21st century. A more performant and more modern system of educational R and D can make an important value-added contribution to

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<sup>26</sup> OECD/CERI, 2002. « Understanding the Brain: Towards a New Learning Science ».

this continuous commitment to EFA, including the need to develop new instruments for defining and measuring an education quality concept with relevance for the knowledge society of the 21st century.

44. In summary, and based upon the analysis above concerning the changing definitions of education quality, the skills and competences in the emerging knowledge society and key lessons learnt, four conclusions stand out.

First, the impressive progress made over the last decade in measuring education development has clearly proven the need to focus on education outputs rather than inputs.

Second, there is an urgent need to rethink and redefine what these outputs should be in the 21st knowledge society.

Third, such a redefinition of the outputs (including education quality) should not be left only to the different stakeholders of the present education system.

Partnership with society at large will be needed.

Finally, EFA is perhaps the potentially most powerful instrument for democracy that we have today. But as with democracy itself, all voices have to be heard and when it comes to the concept and definition of education quality, many new voices will be needed from society at large.