Equity in European Educational Systems :
An interpretation of the 29 indicators

Introduction

In Part 1 of this report we present some the key underlying ideas about the nature of justice in education, and in Part 2 we present 29 indicators of equity in education systems. We discuss each of these indicators in isolation, making comparisons between the countries involved. However there are several other ways that the indicators can be used, as it is illustrated in Part 3.

The first approach consists of using the variation between the presented countries to determine some global questions about the existing links between a particular type of inequalities and such or such variable. This is the approach adopted by Duru-Bellat, Mons and Suchaut (2003), on the basis of an analysis of the PISA 2000 database. These authors, as Crahay (1996, 2000), point out that the grade retention practice as well as the existence of various education tracks are associated with students' lower average achievements, with a less successful student elite, with a broader school achievement inequality between different social categories and with the presence of more weak students within any system. It seems that grade retention and track organization have no link with one approach to equity (equality and discrepancies between individuals), but *are* harmful to equity defined according to two other aspects (equality between categories and a proportion of students situated below a minimum threshold). Duru-Bellat, Mons and Suchaut also point out the presence of a weak positive relationship between a country's average school results and the weak influence of the social background on these results. Therefore, equality of opportunities (weak influence of the social background) and efficiency (average school results) can be complementary rather than contradictory objectives.

The second possible approach, which has been adopted here, consists in making comparisons between countries, in terms of equity. This is a matter of forming a judgement on the equity of the various educational systems, on the basis of the analysis of some inequalities measured by the indicators. This comparison can be made on the basis of one of the theories of justice, as a possible system of reference of what is considered as "just".

According to Sen's approach, for instance, justice can be measured mainly through the proportion of students that are situated below a given threshold, with some indices inspired by his own research works (C.1.2.). According to this author, there is no external or internal factor which can counterbalance the injustice of the existence of such a population. According to his *Theory of Responsibility*, it should be checked that results and career inequalities originate in differences of will, efforts of the pupils, and not in inequalities of contexts or process. The indicators built here do not allow us to make a clear distinction between as to cause.

Rawls's approach is more complex to illustrate. For Rawls, the just equality of opportunities has priority over the principle of difference: the just equality of opportunities should first be checked, then we should make sure that the remaining inequalities serve the interest of the most disadvantaged, through their tribute to the economic growth, social transfer or more directly. It would be possible to consider that countries are more or less equitable according to the equality of opportunities, then within a group of countries that would be similar in this aspect, to consider that the most equitable are those where the contribution by the most educated to the expectations of the most disadvantaged is the most important.

While the approach adopted below is inspired by Rawls, it is more syncretic in the sense that inequalities affecting internal results (C.1.1. to C.3.1.) as well as school processes (B.1.1.to B.2.4.) reveal inequity in the educational system, which is all the more important because:

1. *their consequences on the future life of pupils are significant (external results);*

2. *they are due to the education system (process) rather than social inequalities themselves (economic, social and cultural context);*

3. *they are used to a lesser extent to help the disadvantaged, they seriously affect the judgement that citizens or users make about the fairness of the education system, and the result is a loss of trust in institutions and lower socio-political participation.*

This line of reasoning may be put forward for each of the three criteria of fairness, i.e. the three columns of the framework: inequalities between individuals; inequality between groups; and, individuals beneath the threshold of equity.

In principle, some of the questions are a better match for one of the fairness criteria than the others are. So that, broken down according to these criteria, it appears equally necessary for education research in general, and for the public authorities, to be able to answer the following four major questions as comprehensively as possible, in particular via international comparisons:

1. *What is the importance of inequalities within Europe's education systems? Are there differences – between countries and within them – from the viewpoint of their degree of unfairness (particularly via the distribution of the system's results)?*

2. *What benefits are connected with education in the various European countries and what is the importance of social and economic (contextual) inequalities connected with the level of education? Is the influence of education in certain fields, such as inter-generational social mobility or economic and social aspects of citizens' lives, substantial?*

3. *Can European education systems have a role in amplifying or reducing contextual inequalities? If this is the case, are the education systems themselves responsible for the amplification or the reduction of certain inequalities?*

4. *To what extent do educational inequalities benefit the most disadvantaged populations, and encourage phenomena of upward social mobility, since it appears that education can help the most disadvantaged citizens, particularly by giving them educational resources that can be used on a daily basis, and putting the skills of better-educated citizens at their service? What is currently the importance of these mechanisms?*

1. The importance of skill and school career inequalities within the education systems of the European Union

Some of the indicators are about skill inequalities (C.1.1. and C.1.2.), some are about civic knowledge inequalities (C.2.1.) and some others are about school career inequalities (B.1.1.and C.3.1.). The following analysis only concerns skills and school careers. Duru-Bellat, Mons and Suchaut (2003), for instance, showed that skill inequalities explain only half of the school career inequalities.

The inequalities that affect skills and school careers are measured according to different approaches of the set of indicators:

- **Inequalities between individuals, and discrepancies in the results, i.e. the difference between lowest and best pupils**. Ideally, this approach would require a measurement of the skill discrepancy between those who left the earlier and later the educational system in terms of some skills, such as reading, written and spoken expression, and mathematics and sciences. Such data are unavailable, thus the indicators concern the discrepancies in results at the end of compulsory school, - which can be considered as an estimation by proxy of the disparities in the mastery of basic skills in reading, mathematics and science at the end of school -, the differences of length of the school careers and the proportion of pupils who leave school at the modal level of learning.

- **Inequalities between groups and the influence of the membership category on the skills or the school careers.** Inequalities between groups are observed. The importance and the systematic nature of these differences – it's characteristics from which individual can not escape : social origin, gender and nationality – limit strongly the significance of the interpretation of differences in terms of personal liability.

- **Equality of access to a minimum threshold of results,** as it is supported by some authors along the same line as Sen and his concept of "capabilities". This approach is quite similar to those requiring us to take into account *extreme situations*, by the measurement of the discrepancies between the minority of individuals below a lowest threshold and the rest of the population. Technically, in education, this leads us to adopt an index from Sen (1976), which would take into account both the importance of the disadvantaged subjects and the severity of that disadvantage. This index, first built like an index of poverty, when applied to school results (C.1.2.), has the advantage of capturing, both the percentage of pupils who do not reach a minimum result threshold, and the average distance that keeps them from that threshold and the variation in the results of those pupils. It is thus able to point out the extreme weakness situations of some pupils.

From concept to measurement

We are taking an interest in cognitive skills, via analyses relating to the PISA results (OECD, 2002); school careers are considered through durations of schooling and qualifications (Labor forces survey).

Cognitive skills

The skills of 15 year-old students who took part in the PISA evaluation were evaluated in maths, reading, and science by means of standardized tests. Their results were aggregated for each field into a score (OCDE, 2002). The three scores obtained in this way were aggregated in turn into a single score (table 1).

The dispersion of individual PISA scores enables us to assess the degree of unfairness of participating countries in terms of inequality of learning/results at a given age, if we are interested in the dispersion of all the scores, or access to a minimum skills threshold, if we take as our reference a particular score which constitutes that threshold[1].

In parallel, information was gathered about the profile of students including gender, and the factors that constitute a socio-economic profile such as the level of education of the father and mother and their profession. These variables will help us to deal with the question about inequality of treatment and opportunities.

Insert 1 – Notes related to index presented in table 1

(1) Mean standard deviation of the distribution of results in mathematics, sciences and reading. **(2)** 100 % of 25-34 years-old minus the percentage of 25-34 years-old holding the most common qualifications for their age group. **(3)** Schooling expectancy of a year n represents the number of years during which a pupil who entered the educational system in year n would remain in it, if the pass rates were as observed in that year throughout his/her school career. **(4)** Mean deviation (mathematics, reading, science) between the average scores of students whose parental socio-economic index is below the 75th percentile and those for whom the same index is below the 25th percentile (expressed as a % of the mean standard deviation) **(5)** Mean deviation (mathematics, reading, science) between the average scores of students were born in the country of the test and those whose father and/or mother were born abroad (expressed as a % of the mean standard deviation) **(6)** Mean deviation (mathematics, reading, science) between the average scores of girls and that of boys (expressed as a % of the mean standard deviation). **(7)** Ratio between the schooling expectancy of women and that of men, multiplied by 100 (if rate above 100, women have a higher schooling expectancy than men **(8)** Pupils with low scores are those whose score is below the PISA litteracy level 2 **(9)** For instance, in Austria, the 10 % who remain for the shortest period remain there for an average of 9.4 years, as indicated in the third column. **(10)** Average Sen index (mathematics, science, reading) for students with low scores. (C12) **(11)** Mean deviation (mathematics, science, reading) between students "with very low scores" and other students. Students "with very low scores" are those whose result is below the 1st decile of the national distribution for mathematics and science. For reading, the threshold is defined by literacy level 1 and below. It corresponds to 60 % of the median score in written comprehension of pupils from the various European countries. The European threshold is 306.43 **(12)** Percentage of individuals 25-34 years of age who do not have qualifications from higher secondary education.

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[1] The scale of scores in PISA is subdivided into five levels. Each level is described qualitatively and corresponds to certain skills. Students below level 2 are considered here as being below a minimum reading skills threshold.

Table 1 : Measurement of (un)fairness of results : summary of main results

Countries	Interindividuals differences			Differences between groups				Pupils below the threshold of competences				
	Standard deviation of PISA scores	% 25-34 years-old not in the modal category of qualification	Schooling expectancy inequalities between the 10 % who have the longest education and the 10 % who have the shortest education	Differences of cognitive learnings, according to the socio-economical background	Differences of cognitive learnings, according to parents' nationality	Differences of cognitive learnings, according to the gender	Inequalities in gender schooling expectancy	% of pupils with low scores	Schooling expectancy for the 10 % who have the shortest education	Sen index	Deviation between pupils with low scores and others	% of 25-34 years-old below high secondary education
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Belgium	104.90	60.87	10.3	0.98	0.62	0.09	103.8	19.0	11.6	1.25	-244.03	27.00
Denmark	95.39	41.41	13.3	0.80	0.38	0.01	105.8	17.9	9.7	0.81	-212.08	12.78
Germany	101.04	36.37	12.0	0.98	0.55	0.07	98.8	22.6	10.8	1.91	-224.87	14.82
Greece	99.50	53.99	10.7	0.71	0.21	0.12	102.6	24.4	9.4	1.61	-212.63	28.84
Spain	91.64	54.52	12.4	0.70	0.25	0.03	104.1	16.3	9.5	1.11	-207.41	45.48
France	96.22	54.55	11.4	0.85	0.31	0.05	102.4	15.2	10.7	1.23	-211.61	23.63
Ireland	90.04	62.76	5.5	0.74	-0.16	0.07	105.1	11.0	10.3	1.23	-203.65	33.30
Italy	93.76	54.55	-	0.62	-0.06	0.13	103.2	18.9	-	2.28	-212.06	44.55
Luxemburg	100.15	60.21	-	0.90	0.52	0.08	-	35.1	-	1.67	-214.93	39.00
Netherlands	91.64	51.13		0.81	0.71	0.07	97.1	-	10.8	1.15	-216.08	26.00
Austria	94.90	29.37	13.2	0.65	0.53	0.04	98.7	14.6	9.4	1.18	-199.98	16.82
Portugal	92.31	30.48	12.9	0.91	-0.07	0.04	103.6	26.3	9.4	1.56	-198.06	69.52
Finland	87.14	51.86	13.0	0.54	0.26	0.20	107.3	6.9	10.0	0.76	-206.62	14.41
Sweden	94.02	44.70	10.2	0.71	0.32	0.11	119.3	12.6	10.8	0.85	-213.29	12.96
United-Kingdom	97.47	61.35	13.0	0.93	0.09	0.05	108.8	12.8	10.0	0.79	-215.47	34.09
Norway	98.01	38.89	12.1	0.61	0.37	0.12	106.3	20.3	10.8	1.16	-218.89	6.08
Switzerland	97.57	37.16	12.3	0.93	0.52	0.04	95.2	17.5	9.6	1.05	-210.01	11.24
Mean	*95.63*	*48.48*	*11.57*	*0.79*	*0.31*	*0.08*	*103.88*	*18.21*	*10.19*	*1.27*	*-213.04*	*27.09*

The first column shows the mean standard deviation of the scores in mathematics, reading, and science. This statistic gives a good idea of the scale of the disparity of results in the various education systems at the end of compulsory schooling[2]. Belgium, Germany and Luxemburg present a more important dispersion of results than France, Ireland, Spain or Portugal, which have a more tighter dispersion of results.

Statistics presented in columns 4, 5 and 6 give an idea of the degree of breach of the principle of equality of treatment or opportunities, in relation to characteristics such as gender, socio-economic profile, and national origin, at the end of basic education (age 15). As far as the aspect "dispersion of learning between individuals" is concerned, we observe a general trend to maintaining substantial differences between students whose parental socio-professional profile is high compared with those of a low parental socio-professional profile. The mean deviation in the European is of the order of 80 % of a standard deviation. This figure reflects the tendency of education systems to reproduce, in terms of educational results, the pre-existing social hierarchy, as shown previously by Bourdieu and Passeron (1970). It is not yet possible, because of the synchronic character of the PISA data, to evaluate the tendency of the phenomenon to accentuate or regress over time.

The fourth column (Table 1) shows that the skills inequalities according to social origin vary between the countries. The problem is undoubtedly less acute in Finland than in Belgium.

Columns 5 and 6 present two other measurements of the tendency towards inequality of opportunities. They show the intensity of deviations according to two inherited characteristics, which are parents place of birth and gender. They show deviations of lesser amplitude than those observed for the socio-professional origin (especially for gender), and the direction is sometimes opposite. The figures suggest that there may even be an advantage for students in certain countries, like Portugal, whose parents are born abroad. On the other hand, in other countries like the Netherlands[3], Germany, France or Belgium there is a situation that some people deem much more predictable, where the advantage is clearly on the side of pupils whose parents were born in the country. The mean deviation European Union-wide is only 31% of a standard deviation (compared with 80 % as far as socio-professional origin is concerned).

Turning to the gender of students, we observe that, in the majority of countries, the gap between girls and boys are, all fields combined, relatively modest: on average, a standard deviation of only 8 % separates the two categories. Careful examination of the data (not presented here) reveals that a *gender gap* continues to exist. This gap can be variable and in the opposite direction, depending on the subject matter. Boys generally do better in the maths test than the girls, who are often more competent in reading (the intensity of the differences is greater in this area of skills) (Blondin et Lafontaine, 2005). With regard to gender, it is the aspect of inequality according to subject matter that should be borne in mind rather than differences between countries.

Columns 8, 10 et 11 give a clearer picture of the phenomenon of students "with very low scores".

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[2] PISA evaluated the skills of 15 year-old students, because this is the age when compulsory education ends (at least full-time schooling) in many European countries.
[3] Data relating to the Netherlands and derived from PISA 2000 must be considered with caution since the sample does not meet the requirements of the study.

Column 8 shows, for each country, the proportion of pupils whose PISA score is below the literacy level 2

A question emerges of the appropriateness of reference to an international skills threshold as opposed to a strategy that consists of using a "local" threshold specific to each country/region: for example, the 1st decile of the distribution within each country. Is a reference that transcends the frontiers of different systems legitimate? Is is possible to create a scale for measuring skills that is common to a very diverse group of education systems? The answer is tentatively yes, as exemplified by the PISA project. It appears difficult, once we are working on the basis of PISA, to completely avoid the idea of an international reference framework.

That being said, we could work system by system, as we do for the majority of other indicators. As we are dealing with skills thresholds, such an approach would be consistent with the idea that the indispensable minimum skills for integration into society does not correspond to a *level* but rather to a *ratio* (a certain deviation) between individuals who have to live together. We believe this approach is relevant. We have not adopted it in its entirety here, because we refer to it implicitly via all of the other indicators that we have calculated in this section on the results. However, it is necessary to be aware that this perspective, which we readily qualify as relativist leads us to consider that an individual with a given score may be threatened with social exclusion if he lives in Finland (the country with the best level of scores in PISA 2000) and a member of the "educated" class if he lives in Brazil (the country with the lowest average score in PISA 2000). To conclude on this point, we should indicate that this discussion on the right way to grasp the inequalities of the scores is very similar to that which, for some years, has been the subject of argument between advocates of an "absolute" or "objective" approach to poverty (whether or not people own a series of goods) and defenders of the relative character of the phenomenon.

When we analyse the table 1, it appears that the proportions of students below the international threshold (whose poor performance in the reading test probably compromises their ability to integrate into society) are extremely variable according to the country, since the proportion oscillates between 7 % in Finland, 26 % Portugal to 35 % in Luxemburg (column 8).

The Sen index (column 10), which also focuses on reading and an international definition of the minimum threshold necessary for social integration, largely confirms this analysis.

The third index derived from PISA (column 11), founded on a national measurement of the minimum threshold and relating to mathematics and science, gives an idea of the deviation in terms of gross score between individuals below the threshold and the rest of the population. Since it is around 200 points, it appears quite simply gigantic, being equal to approximately two standard deviations.

Schools careers

Table 1 allows the analyse of the schools careers too. The columns 2, 3, 7 , 9 and 12 present data related to qualifications et schooling durations.

The EUO database (UNESCO, European Union, OECD) provides information about the level of qualifications per age category, and served to build the second column of Table 1. That second column shows inequality in the distribution of another "asset" produced by education systems: qualifications. In principle, some of them refer to a state of knowledge and skills.

They stand out by their "flagging" function, particularly on the labour market, a function that may vary within a country, depending on the sector of activity, as well as between countries. In any case, knowledge of a given level, having been certified by the award of a certificate "is worth more", particularly in terms of salary, on the labour market than those that are uncertified. This is why it is interesting to attempt to measure the degree of inequality/unfairness in access to a certificate or other educational qualifications.

In column 2, Belgium, Ireland, Luxemburg and United-Kingdom present the most important proportions. More than 60 % of the 25-34 years-old are not in the modal category of qualification.

Turning to gender schooling expectancy, it's often stronger for women than for men. Actually, only Switzerland, Austria, Netherlands and Germany presents rates which are below 100.

Column 9 shows schooling expectancy for the 10 % who have the shortest education. The expectancy schooling is higher in Belgium, Germany, France, Netherlands, Sweden and Norway.

Finally, column 9 indicates the proportion of young adults (25-34 years-old) who did not progress beyond the stage of the higher secondary certificate. Then, they risk to signal themselves negatively on the labour market, with an increased risk of low salary. The proportion of young adults below the stage of higher secondary education is particularly important in Portugal, Spain, Italy (from near 70 % to 45 %). More of 30 % of 25-34 years-old are below the higher secondary education in Ireland, United-Kingdom and in Luxemburg.

This first table offer a snapshot of the possibilities offered by existing databases for exploring the various facets of the fairness of education systems. By exploiting the distribution of levels of learning in maths, reading, and science, as well as some category-related variables such as gender or the socio-professional status of the parents, we succeeded in producing a quantitative measurement of three of the main concepts of (un)fairness that we started with.

The table 2 presents a first international comparison, relating to the fifteen European (2001) Member States as well as Norway and Switzerland.

This comparison showed a widespread tendency towards some unfairness. However, the most important result is the pronounced difference between countries. Obviously, not all education systems are equivalent in their ability to treat students fairly. While this assessment is undisputed, the question of how it should be explained, and the reasons for deviations in performance remains to be answered.

Table 2: Measurements of (un)equity and analysis of results: summary in terms of ranking

Countries	Interindividuals differences			Differences between groups				Pupils below the threshold of competences				
	Standard deviation of PISA scores	% 25-34 years-old not in the modal category of qualification	Schooling expectancy inequalities between the 10 % who have the longest education and the 10 % who have the shortest education	Differences of cognitive learnings, according to the socio-economical background	Differences of cognitive learnings, according to parents' nationality	Differences of cognitive learnings, according to the gender	Inequalities in gender schooling expectancy	% of pupils with low scores	Schooling expectancy for the 10 % who have the shortest education	Sen index	Deviation between pupils with low scores and others	% of 25-34 years-old below high secondary education
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Finland	1	9	12	1	7	17	3	1	8	1	4	5
Sweden	7	7	2	7	9	13			2	4	11	4
Ireland	2	17	1	8	4	9	6	2	7	11	3	12
Denmark	9	6	15	9	11	1	5	9	10	3	9	3
Spain	3	11	10	5	6	2	7	7	12	6	5	16
Norway	13	5	8	2	10	15	4	12	2	8	15	1
Austria	8	1	14	4	14	5	14	5	13	9	2	7
France	10	12	6	11	8	6	12	6	6	10	7	8
Switzerland	12	4	9	15	12	3	16	8	11	5	6	2
Portugal	5	2	11		2	4	9	15	13	13	1	17
United-Kingdom	11	16	12	14	3	7	2	4	8	2	13	13
Italy	6	13	-	3	1	16	10	10			8	15
Netherlands	4	8		10	17	10	15	-	2	7	14	9
Greece	14	10	4	6	5	14	11	14	13	14	10	11
Germany	16	3	7	16	15			13	2	16	16	6
Belgium	17	15	3	17	16	12	8	11	1	12	17	10
Luxemburg	15	14	-	12	13	11	-	16	-	15	12	14

Table 2 is based, indicator-by-indicator, on the *ranking* of the country, from the fairest (first position) to the least fair (last position). The general ranking of the countries is based on the average of the ranks obtained by each of the countries examined for each of the disciplines. Therefore, it "summarises" the tendency towards overall (un)fairness (inequality of results, access to basic skills, and treatment/opportunities) and allows an international ranking.

On that basis, it is Finland, Sweden and Ireland which appear to be the fairest overall. On the other hand, the unfairest countries are Germany, Luxembourg, and Belgium. Of course, these results should be treated with all the usual reserves. They are based on estimates that do not use inferential calculation for the most part (no test of hypotheses). The use of rankings means that we lose the intensity of the deviations between the systems. In addition, the correlation coefficients between the ranking of the country based on the standard deviation of the results (unfairness of the results) and the ranking of the country in comparison with other measurements of unfairness is sometimes low. This suggests that the countries may appear relatively unfair in relation to one dimension and relatively fair for another, which the calculation of an average ranking –the basis of the ranking in Table 2 – tends to overcome.

Finally, we can observe that two dimensions of unfairness explored here differ by both their lower intensity and the classification of countries that they generate. This concerns the "nationality" and "gender" aspects. It is true that countries continue to display deviations in results according to nationality and especially gender. As far as the last aspect is concerned, it is difficult to say that this problem is of the same import as that posed by the deviation of results according to socio-professional background or the distance separating pupils "with very low scores" from the rest of the population.

Figure 1 presents a first synthesis map reflecting the ranking of the countries, wich is related to the results of education. This map is based on the ranking shown in table 2. It only concerns EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

The countries belonging to the group of the most equitable countries are the countries which are on the first four ranks; the countries considered as the less equitable countries are the one situated on the last four ranks. However, a rank could be occupied by several countries. If it was the case, the number of equitable or less equitable countries could be higher than 4.

The more equitable countries – Finland, Sweden, Ireland, Denmark and Spain – are colored in yellow; the less equitable countries – Luxemburg, Belgium, Germany, and Greece – are colored in pink. The other countries are in green.

Figure 1: Importance of results inequalities (cognitive skills and career)
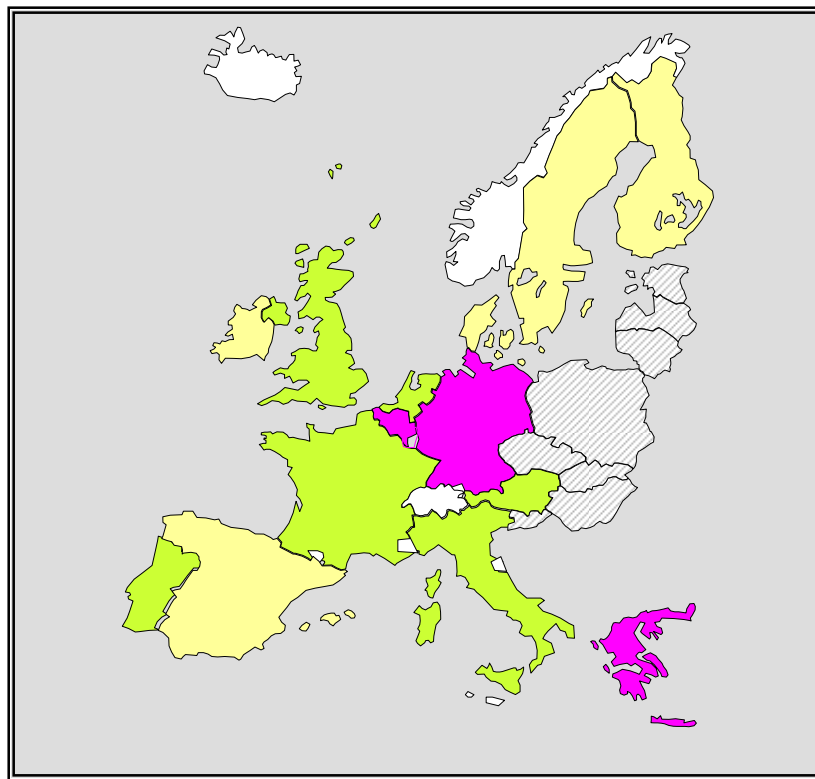
2. What advantages are tied to education in the European Union Member States?

Even those commentators who are most resistant to an economic approach to education must consider the possibility that the main merit of education is its effects, which are felt for a lifetime: reading and expressing oneself more easily, being more cultivated, thinking more independently, being more capable of inventing, etc. However, it is difficult to estimate precisely the importance of the advantages tied to increasing skills acquired through education (Demeuse, 2002) and which constitute part of what economists refer to as "human capital". Education is nevertheless an "intermediate product" and since educating people is a cost, it constitutes an investment. Parents and young people themselves invest in education, in the sense that they agree to spend on their education, or at least, even if education is free, lose out on an "opportunity cost" – i.e. the value that they would have earned if they had occupied their time by working instead of studying – in the hope of benefits accruing from a successful school career, higher, more numerous and more complex skills (Paul, 2005). Besides private expenditure, there is also public investment in education (provision of infrastructure, payment of teachers' salaries, miscellaneous benefits, scholarships, etc.) (Bayenet et Demeulmester, 2005).

Some of the benefits of education can be directly converted into financial terms – higher salary, lower risk of being unemployed – while others have a "non-market" value: cultural or civic benefits, as well as belonging to a higher social category, a more prestigious job, involving less risk of accidents, better health, the opportunity to give a better education to one's own children, etc.

Many studies have been carried out by economists on these effects, whether they are market (OECD 2002b) or non-market effects (Mac Mahon, 1997). Their purpose is to improve the calculation of the return from education.

Educational assets do not have the same value everywhere

The advantages associated with education are also important for measuring equity, for a simple reason. If we share identical assets between individuals, whether the distribution is fair or not does not depend on the value of the assets, but only on the equity of the sharing process. This is confirmed by comparing the allocation received by each person with a criterion of equity. On the other hand, many commentators will agree that the unfairness is of the same nature, but of greater or lesser seriousness: it is the case if diamonds are shared out less fairly than lumps of coal, or water in a desert rather than in a particularly wet region. An injustice comparable to another from the sole viewpoint of equity will have more or less important repercussions on the beneficiaries, depending on the nature and the value of the assets in question.

If, in a given country, salaries hardly depend on a person's school career, then an unfair distribution of education would be less serious than if they were heavily dependent on it. Likewise, if a country teaches young people to read by methods that do not give them an appetite for reading, so that even those who are capable of reading well at school give up reading as soon as the school no longer obliges them to read, and thus lose their reading skills, *unfair* teaching of reading skills would not be so serious there (i.e. the problem would be one

of efficiency rather than equity). The same applies if, in general, the school passes on knowledge that is not relevant for living a worthy and successful life or to have a better career. However, it is probable that countries will differ less in relation to the relevance of education than to the inequality of distribution of the assets with which it is associated and that the scale of the effect of education will be correlated above all with the scale of unfairness in the distribution of these assets.

In practice, what the selected indicators highlight is the correlations between successful completion of higher education (left the education system at ISCED level 5 or 6) and the possession of certain 'desirable' social characteristics. We observe a certain co-occurrence, without being able to be certain whether it is actually, in the strict sense, an effect of education. That is one of the drawbacks of only having correlations. Nevertheless, it is possible to analyse complex situations, even if the causal nature and the direction of the relationship is unknown. So, let us suppose that a country where successful education is strongly connected with the prestige of a person's profession, but where, in reality, social origin has a strong influence on both prestige of profession and school career. It will be no less true that in this country, the social consequences for individuals with a poor education are more serious than elsewhere, and therefore, the question of unfairness in the distribution of education is more important than elsewhere.

We can formulate this in the following way: the more unfairly a country distributes assets among adults, and the more possessing them depends on the education received, the more important it will be that school should distribute its benefits fairly, so as to avoid further aggravating the situation. This fair distribution will be even more difficult to establish since the social and economic context is inegalitarian, and groups that are more prosperous may exert pressure on schools to maintain their advantages.

The relationships that we have just described apply to the three equity criteria adopted for this work:

- For inequalities *between individuals*: the more sizeable the effects of a successful career, the more important it is that 'talented' pupils – in the sense intended by *Responsibility theory* – should not be advantaged by comparison with others but benefit from their personal investment.

- For *inequalities between* groups: the greater the effects of a successful career, the more important it is that children of disadvantaged categories should have the same opportunities for success as the others.

- For *possession of minimum skills*: the more serious the effects of not possessing them are, the more important it is for nobody to fall below that skills threshold. The latter observation will become even more important if the persons falling below the threshold mostly belong to a group that is already disadvantaged in other ways.

Moreover, in an ideal situation, a distinction should be made between these three criteria and the assets to which they apply: relating equity in education for the weakest pupils to the scale of consequences of having a skill level below the minimum threshold; relating equity of access to higher education to the scale of consequences of having a higher education degree rather than a certificate from the second cycle of secondary education, and so on.

Here, we adopt a more holistic approach focused, for the most part, on a comparison of those who have a higher education degree and various other population groups.

The value of certain assets also depends on the individuals who benefit from them, and their relative situation

The effects of education may be more important for certain groups of individuals than for others. For example, in France, if young people have equal qualifications, those from immigrant families have poorer prospects of avoiding unemployment or finding a job that corresponds to their qualifications (Silberman and Fournier, 1999). We also know that, where they hold equal qualifications, women are often paid less than men are.

Of course, one cannot deduce from this that unfairness in education for disadvantaged groups through the operation of the labour market would be less serious since the benefits of education have been less in their case. In fact, it is the opposite that is true: while children of immigrants have more difficulty finding employment with equal qualifications, equity demands that the resources of the education system should be allocated in such a way as to give them greater opportunities of obtaining the same qualifications or the same opportunity of obtaining a degree. In fact, while the low average return of education in a given *country* means that it is less serious for a young person to receive less education than others, the poor return of education for a given *group* in a country means that it is even more serious for a member of this group to be disadvantaged by his/her level of education.

The parallelism between groups and countries is as follows: if the benefits associated with education are lower for immigrants than for nationals, the issue of equity in education *between* immigrants is less crucial than it is *between* nationals. That reasoning should not obscure the fact that an increase in educational resources should compensate the low external return of education for immigrants. Likewise, if the benefits of education are lower in country A than country B, the issue of the equity of education will be less important in the former country than the latter, without this releasing country A from the need to reflect on the ultimate aim and the results of its own system.

Social advantages and economic advantages

One of the main advantages of education is that it enables people to reach a higher social status than their parents. Social status usually entails the possession of a whole series of desirable goods, such as those which Lévy, Joye, Guye and Kaufmann (1997) identified for Switzerland.

Unfortunately, we were only able to identify data comparable in this respect for three European countries: Spain, Italy, and the United Kingdom. This data, drawn from the *European Community Households Panel*, is used in the fourth part of our analysis (Question 4. To what extent do educational inequalities benefit the disadvantaged and encourage social mobility?).

More data are available to understand some basic advantages associated with education. We made a distinction between the economic advantages (A.1.1.) and the social advantages (A.1.2.).

A summary presentation of these indicators is provided in the list below. The figures in brackets refer to the columns in table 3.

Economic advantages

- Private return from a tertiary education (1 and 2)4
- Private return from an additional year of education, with a given level of professional experience (3 and 4)5
- Increased salary associated with a tertiary education (5 and 6)
- Increased probability of finding gainful employment (7 and 8)

Social advantages

- Reduction of the risk of unemployment (9)
- Effect on professional status (10)
- Thorough grasp of written comprehension as an adult (11)
- Probability of attending continuing training (12)

Advantages in relationships with children

The benefits accrued not directly by the person, but by his/her children or in the context of relationships with children were also taken into account. This is an aspect of the benefits of education whose importance was shown by Wolfe and Haveman (2000):

- cultural practices of children (13);
- quality of communication between parents and children (14);
- educational skills of children (15).

We would have liked to be able to use other criteria like the effect of education on the risk of coming into contact with the judicial system or on people's state of health. The latter effect is one of the most firmly established non-market effects of education (Gilleskie and Harrisonn, 1998). But we have not found suitable international comparisons, for example on the links between qualifications and the individual's perceived state of health, although such data is collected at national level, in certain censuses, such as in Belgium (INS, 2001).

The results of the comparison are presented in table 3. All of the indicators were devised so that a high value means that an increase in education is associated with a particularly high increase in a desirable asset. This table is a synthesis of the indicators A.1.1 and A.1.2, to which we have added the comparison of the private return of tertiary education (OECD, 2002, p.147).

The shades of colour used in the following table mean that the countries concerned differ from the others due to particularly pronounced values (in pink) or low values (in yellow) of the indicator. The assignment of these two colours was carried out in a relative way: the pink means that the country is among those which have either one of the four or five or even six highest values if the 15 countries are classified for this indicator, or one of the two highest values if only 6, 7, or 8 countries are classified. The green means that the country is among those with an intermediate position for the indicator under consideration. The cells are left blank where data is unavailable.

This method of working has been preferred to the total of rankings because the extent and form of the distribution vary according to each criterion. This method of working enables us to take into account, by distinguishing the countries by size, which are in the "leading group" or the "trailing group" (if we can use a cycling metaphor). The method of calculation used is equivalent to giving a weighting of 6 out of 15 to salary benefits, 3 out of 15 to benefits in

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[4] This indicator was borrowed from *Education at a Glance*, 2002, p. 147. The precise definition of other indicators is given with the indicators A.1.1. and A.1.2. (Part 2).
[5] This is the only criterion which does not compare populations with a tertiary degree to other populations.

terms of employment / unemployment, 2 out of 15 to effects in terms of status and prestige, and 5 out of 15 to personal benefits and those connected with education of children.

In view of the limitations of this approach (non-exhaustive nature of criteria, disparities in populations, periods taken into account, etc.), this classification should not be interpreted too conclusively or too inflexibly.

It appears that the European countries where the advantages associated with better education are lowest are Sweden, Norway, Greece and Ireland while they are more pronounced than elsewhere in the United Kingdom, in Switzerland and in Finland. In the latter three countries, to which we can probably add Germany and Luxemburg, equity of education is a particularly crucial issue.

Other lessons can be gained from this analysis. Some countries have a homogenous profile: their relative position does not appear to be different from one criterion to another. That is the case of Sweden which belongs to the countries where the benefits associated with education are least pronounced on almost all the criteria, or of France which is not distinguished itself neither positively nor negatively. On the other hand, Finland, Switzerland, Portugal and United Kingdom belong to the countries where the benefits associated with education are the strongest on almost all the criteria.

Others have a contrasting profile. In Italy, for instance, the benefits associated with education are particularly high on one criteria, low on three others and in an intermediary position on the last. The United Kingdom combines particularly high monetary benefits to education with particularly low benefits in status of the profession entered.

We can also observe that this analysis "blurs" somewhat the usual geographical divides: Nordic and Latin countries can be found both among the countries where the benefits of education are particularly high as well as the countries where they are low.

Table 3: Magnitude of benefits associated with a better education[6]

Countries	Tertiary education return (1-2)		Add. Year of education return (3-4)		Salary linked with tertiary education (5-6)		Employment probability (7-8)		Unemployment decrease (9)	Professional status (10)	Reading level (11)	Continuing training (12)	Cultural practices with children (13)	Communication with children (14)	Children skills (15)
	Male	Female	Male	Female	Male	Female	Male	Female							
Sweden	11.40	10.80	4.00	3.00	155.00	141.00	106.00	118.00	76.00	145.00	117.00	1.90	0.30	0.20	1.10
Greece	-	-	6.00	4.00	-	-	-	-	21.00	149.00	-	-	0.20	0.20	3.20
Norway	-	-	5.00	5.00	133.00	167.00	112.00	147.00	32.00	133.00	125.00	2.60	0.30	0.20	2.00
Ireland	-	-	9.00	7.00	-	-	-	-	-	136.00	130.00	3.90	0.20	0.20	2.20
Austria	-	-	7.00	7.00	-	-	-	-	74.00	141.00	-	-	0.60	0.30	4.30
Italy	6.50	-	6.00	5.00	170.00	166.00	112.00	372.00	35.00	147.00	-	5.80	0.50	0.30	2.60
Netherlands	12.00	12.30	6.00	5.00	160.00	143.00	135.00	393.00	53.00	136.00	120.00	2.20	0.50	0.30	-
France	12.20	11.70	8.00	6.00	-	-	-	-	65.00	142.00	-	-	0.50	0.30	2.70
Denmark	13.90	10.10	6.00	6.00	-	-	-	-	63.00	141.00	118.00	2.10	0.40	0.40	9.40
Spain	-	-	7.00	6.00	-	-	-	-	32.00	152.00	-	-	0.50	0.40	3.60
Belgium	-	-	-	-	-	-	-	-	74.00	145.00	119.00	5.20	0.40	0.10	2.60
Portugal	-	-	10.00	8.00	-	-	-	-	21.00	152.00	127.00	6.90	0.50	0.40	1.10
Luxemburg	-	-	-	-	-	-	-	-	-	148.00	-	-	0.60	0.20	2.50
Germany	9.00	8.30	8.00	7.00	157.00	156.00	119.00	152.00	73.00	135.00	123.00	3.80	0.60	0.40	5.40
Finland	-	-	9.00	9.00	175.00	173.00	130.00	138.00	62.00	149.00	120.00	2.10	0.40	0.20	3.70
Switzerland	-	-	9.00	8.00	-	-	-	-	75.00	136.00	115.00	2.80	0.50	0.40	6.10
United Kingdom	17.30	15.20	9.00	8.00	172.00	196.00	128.00	135.00	82.00	131.00	117.00	2.30	0.60	0.30	5.50

[6] The colours mean that the countries concerned differ by high values (pink) or low values (yellow) of the indicator. These colours refer to relative values. Pink indicates that the country is among those which have one of the 4 or 5 highest values (if the 15 countries are classified for this indicator), or one of the two highest values if only 6, 7, or 8 countries are classified. Yellow has the opposite meaning. The green means that the country occupies an intermediate position.

The 4 first indicators distinguish between men and women. In all countries, the benefit associated with education with regard to the prospects of obtaining gainful employment is higher for women than for men. As to increased pay, the situation is more favourable to men, but changes according to the indicator under consideration: the premium associated with higher education is higher for men in five countries out of seven and higher for women in two other countries. On the other hand, the rate of return per additional year of education is greater for men in a majority of countries and equal for women and men in Austria, Denmark, Finland, and Norway.

Overall, therefore, equity in education does not seem to be, on examination of this clearly incomplete data, more crucial for women than for men.

The figure 2 presents a second map, which is synthesising here the benefits associated with education. It is based on the ranking from table 3. It only concerns EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

The countries belonging to the group of the most equitable countries are the countries which are on the first four ranks; the countries considered as the less equitable countries are the one situated on the last four ranks. However, a rank could be occupied by several countries. If it was the case, the number of equitable or less equitable countries could be higher than 4.

On this map, the most equitable countries are in yellow – Sweden, Greece, Ireland and Austria – and the less equitable from the point of view of the benefits associated with education are in pink : United Kingdom, Finland, Germany and Luxemburg.

Figure 2: Benefits associated with education
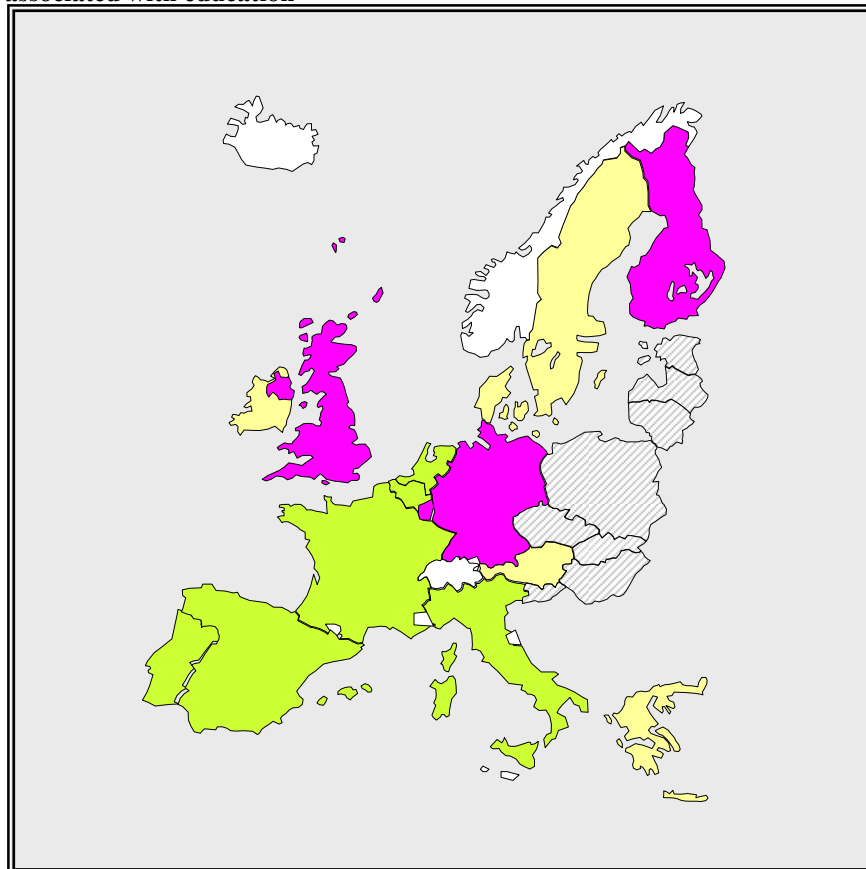
3. Do the European Union's education systems have a role in amplifying or reducing contextual inequalities?

School is not an island

School is not an island: much depends on the social and economic system in which it exists, which can also modify it by contributing to a greater or lesser extent to reducing inequalities that are considered unfair. Even if, as Boudon, Bulle and Cherkaoui (2001, p. 2) put it, "School was probably the first institution called to take up the challenges thrown down by social, economic and political changes for the future of societies. It was and still is, more than ever before, the institution most exposed to the dangers engendered by the pressing social expectations that it nurtures, and by the continual changes to which it is subject, and whose consequences it is not in a position to control". Giving school too much power to change is certainly just as serious a mistake as giving it none at all, limiting it to a role as a marshalling yard, facilitating reproduction of one generation to the next, with a greater or lesser dose of meritocracy capable of reshuffling a small number of the cards.

What are the objectives actually assigned to school?

Not granting any power of change to education systems, and not adopting the tools intended to measure equity in the processes set up to achieve change, is even less relevant if one considers the concrete future objectives of European education and training systems. The section "Increase the quality of education and training systems" of the work programme provides that the basic skills must be brought within the reach of all, including the most disadvantaged people, those who have specific needs, young people who have dropped out of school, and those undergoing training. The aspect "Facilitating access to education and training for all" also shows the potential benefits of an approach focused on equity, not only in terms of access to education and training ("Ensure that education and training are accessible to all"), but also in terms of results ("Ensure fair access to the acquisition of skills") and internal processes ("Fully integrate the dimension of equality of opportunities into the objectives and operation of education and training")[7].

While at a certain level of education, one can consider the question of specialization of objectives, and lead certain individuals to differentiated expertise, and possibly a variable individual return, this does not apply to basic schooling. Basic schooling must develop in all pupils the skills necessary to participate fully in the Information Society. Once we focus on developing the same basic skills among all individuals, there is a necessary link between effectiveness and equity, framed in terms of equality of results.

If we consider matters from the viewpoint of equality of results, the idea of linking effectiveness and equity appears to be an integral part of the principal of equality of learning and its valuation by society. From this viewpoint, an education *system* will be considered effective *if, while raising the average level of knowledge, it reduces the overall variance of internal and external results of the education system*. In any case, this is the ideal advanced by Bloom (1976) since, according to him, effective education is characterized by three joint effects at the end of each phase of learning:

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[7] http://europa.eu.int/scadplus/leg/en/cha/c11049.htm

- a rise in the average standard of results;
- a reduction in the variance of results;
- a reduction in the correlation between the social origin of the pupil (and in general, his/her initial characteristics) and achievement.[8][9]

The latter aspect poses the problem of being able to discern an initial aptitude, which would depend on individual characteristics and which would determine the results that an educational action may have (Cronbach, 1967, p. 23 translated by Birzea, 1982, p. 108), and the social determinants linked to the environment in which a child is born and brought up, and which, if they are penalized by the education system, constitutes a curb on individual development.

In a way, it is by focusing the objectives of school on a group of skills to be mastered by all that certain education systems solve the problem: whatever the initial or social characteristics may be, the mission of these systems is to implement the necessary resources so that everyone can master the skills deemed to be fundamental for the development of every individual and for society as a whole.

School is more a matter of right than aptitudes

As emphasised by John Dewey (1897), the debate about equality in education involves questions about societal policy, and not only individual or social data: "Belief in equality is an element of the democratic credo. It is not, however, belief in equality of natural endowments. Those who proclaimed the idea of equality did not suppose they were enunciating a psychological doctrine, but a legal and political one. All individuals are entitled to equality of treatment by law and in its administration. Each one is affected equally in quality if not in quantity by the institutions under which he (*sic*) lives and has an equal right to express his judgment, although the weight of his judgment may not be equal in amount when it enters into the pooled result to that of others. In short, each one is equally an individual and entitled to equal opportunity of development of his own capacities, be they large or small in range. Moreover, each has needs of his own, as significant to him as those of others are to them. The very fact of natural and psychological inequality is all the more reason for establishment by

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[8] Coleman (1966, p. 72) writes on this subject: « Another way of putting this is to say that the schools are successful only insofar as they reduce the dependence of a child's opportunities upon his social origins. We can think of a set of conditional probabilities : the probability of being prepared for a given occupation or for a given college at the end of high school, conditional upon the child's origins. The effectiveness of the schools consists, in part, of making the conditional probabilities less conditional – that is, less dependent upon social origins. ».

[9] Miller (1977) clearly indicates the risk of only considering one aspect at a time, since the reduction in variance of results obtained and belonging to a particular group may merely mask the increase in individual differences not attributable to belonging to that group. So, we can observe that belonging to the black minority is no longer that much of a disadvantage in itself, in relation to academic achievement or the possession of certain assets, but we can also realize that the gap between the most well-off and the most disadvantaged, whatever their ethnic background, has widened in the same period of time. That is the appeal of the three criteria proposed by Bloom, and why they should be considered simultaneously. They are stricter, from an egalitarian perspective, than the Rawlsian system that tolerates substantial differences between individuals, while enabling the fate of the most disadvantaged to be improved in absolute terms.
Walzer, in his book "Spheres of Justice" (1983) refers to this necessary independence between goods to ensure complex equality, in the absence of being able to achieve simple and absolute equalization of all individuals in all fields (see also Meuret, 2000a, p. 243). Michel (1999, pp. 76-77) explicitly makes the link between this concept of independence of "spheres" and that, which is more familiar to readers of Bourdieu, of "specific types of capital". These two ways of considering justice by independent distribution of various types of capital or benefits through independent economic, administrative, educational, family, religious spheres, as proposed by Walzer, may be compared to the third condition posed by Bloom (the absence of a link between socio-economic status of parents and academic success).

law of equality of opportunity, since otherwise the former becomes a means of oppression of the less gifted"[10].

When we are considering the educational establishment, Dewey points out that above all, this concerns a philosophical or legal position, and not a psychological given: as men are different by nature, it is the Law that guarantees them equal rights. Since Dewey, compensatory education and the wish to provide everyone with equal rights in terms of access, as well as in success, have led to taking account of the pupil himself or herself in deciding the resources that must be allocated to the various institutions: a child is no longer equal to a child, at least when it is a question of allocating the resources necessary for each individual in response to different needs but shared objectives.

Some go a long way in their concern to make school and society fairer. Husén (1972, p. 42), in a document published by the OECD, has no hesitation in writing: "It is not enough to introduce formal equality of access to education; children from diverse social backgrounds must be given greater possibilities of access to intelligence, and to do this, accentuate the inequality in pre-school institutions or in school itself. As far as differentiation in IQ is concerned, it is already accomplished to a large extent before the child starts school. The family, and above all, the cultural level of his/her friends (Coleman, 1961) continue to exert an important influence. To equalize school results, it is necessary for society to take special measures to compensate the shortcomings of the environment in which the child grows up, and to supplement what may have been done at home. To achieve the objective of equality at all costs, it may be necessary to act against the wishes of families who are indifferent or even hostile to the measures envisaged by society[11]. The report by the Swedish Royal Commission on pre-school establishments confirms this data".

Husén (1972) emphasises how an approach based on talents can constitute a form of social Darwinism: school exerts identical pressure on everyone, while selecting ruthlessly and putting "the blame" on parents who do not take sufficient interest in the pupil's progress, or on the pupils who do not have the talents, abilities or determination to advance.

Coleman (1973, p. 135) qualifies slightly the actions to be taken in relation to equal opportunities: "For these two reasons, firstly because it is unachievable and secondly because if it were achieved, it would lower the overall level of opportunities offered to children, the ideal of equal opportunities is a false ideal. A society cannot take a decision, and make it achievable, to create equal opportunities for all the children that form part of it. What it must do is to decide how far its investment of public resources can go to reduce the size of inequalities caused by private means".

So the role of each individual cannot be entirely determined by essentially non-changeable variables as defined by Bloom (1976) and school is not simply there to reveal potential that is mainly innate or linked to family resources which sanction the logic of "heirs" (Bourdieu and Passeron, 1966; Bourdieu, Passeron and Chamboredon, 1970). It remains to be defined what is tolerable with regard to social determinism, and in which fields this cannot be tolerated (for example, what are the vital skills that all citizens must master in order to fully exercise their rights and duties within a democratic society?).

Once the common minimum is established as an objective to be attained by all, the wish to ensure genuine equality of results implies accepting the postulate of educability advanced by Bloom (Bloom, 1976; Slavin, Karweit and Madden, 1989), to accept that school gives more to those who have less, and to break with ideologies based on talents or (innate) aptitudes. In

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[10] Translation made by the authors of this report.
[11] Emphasis added by the authors of this report.

terms of action, it is important to ensure that the education system assigns itself such an objective among its ultimate aims. In the conviction that pupils' performance is not fixed at a given and permanent level by stable aptitudes, those who adhere to these principles are attempting to reduce the scale of a series of forms of negative discrimination and demanding voluntarist policies that result in the implementation of positive discrimination (Crahay, 2000; Demeuse and Monseur, 1999; Slavin, Madden, Dolan and Wasik, 1996), whose real effectiveness has yet to be demonstrated (Slavin and Fashola, 1998).

Analysts should verify that no public funds are being used to reinforce inequalities through, for example, more coaching for pupils who are already advantaged, and their distribution should be analysed, to check that it is appropriate to the identified requirements. To summarise these objectives, Husén (1972, p. 43) put it very elegantly: "Paradoxically, we could say that everyone should be given equal opportunities of unequal treatment with regard to social differences", long before the statement attributed in France to Minister Savary: "Giving more to those who have less".

Using indicators of equity

As we have seen, evaluating equity in education systems does not imply ruling out analysis of their effectiveness. For some people, like Bloom, the two concepts are even synonymous. However, we distinguish them here: for the two dimensions do not necessarily overlap, and each enables a separate judgement to be made of the quality of education systems. With this in mind, the construction of our framework of indicators of education systems has focused on indicators of equity. These indicators were organized to enable analysis of systems that also take account of external or "contextual" parameters. Even if internal processes of education systems can reduce or increase inequalities between pupils, it is also important to take account of economic, social, and cultural contexts of which the systems are a part.

To answer the question raised in this section, we are trying first of all to find out to what extent contextual inequalities are observed to have been increased or reduced when an individual leaves the education systems. Then we analyse to what extent education systems are or are not responsible for these increases or reductions, in terms of internal processes.

Are increases or reductions in contextual inequalities observed within school systems?

When you restrict your ambitions to a single study and when very varied information is collected about the same individuals, greatly enhanced analyses can be carried out. That is what PISA makes possible, by collecting data relating to skills (in reading, maths, and science) and information about the profession of parents, their qualifications, the aspirations of pupils, the way in which they describe their family and school environment (assistance received and available, funds and material resources, climate). The publications relating to PISA and drafted under the responsibility of the OECD and relating to the first data collection in 2000 have already found a large number of uses. It is not our aim to quote them all here, but to show their diversity and the wealth of possibilities.

The PISA data allows, for instance, to highlight the impact of the socioeconomic and cultural status of pupils taken individually and by schools[12] on the performance of pupils in written comprehension (OECD, 2001, p.216).

 According to this analyse, in Belgium, when the average index of the socioeconomical and cultural level of the establishment is increased by a half standard deviation, the increase is 56

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[12] The average socio-economic status of pupils who attend the school.

points on the reading comprehension scale. It is only 7 points when it concerns an individual increase of the socioeconomical and cultural level index. Quite close to Belgium, Germany recorded an increase of 66 points at the "institution" level, but 8 points at the "individual" level. At the other extreme, in Iceland, the increase at the establishment level is of 5 points but 11 at the individual level. Belgium, Germany, Netherlands or Austria belong to the countries where school effect is one of the strongest (Demeuse, Lafontaine and Straeten, 2005).

This analyse of PISA data is entirely consistent with similar analyses carried out on data from the *Third international study on mathematics and sciences* (Demeuse and Monseur, 1999). Belgium, Germany, Netherlands and Austria positioned themselves among the countries where the institution effect is strongest, in contrast to the situation in the Nordic countries[13], like we can see it on the map presented here below.

Figure 3 : Typology of the States Members, depending on the level of heterogeneity of the classes (Demeuse and Monseur, 1999)
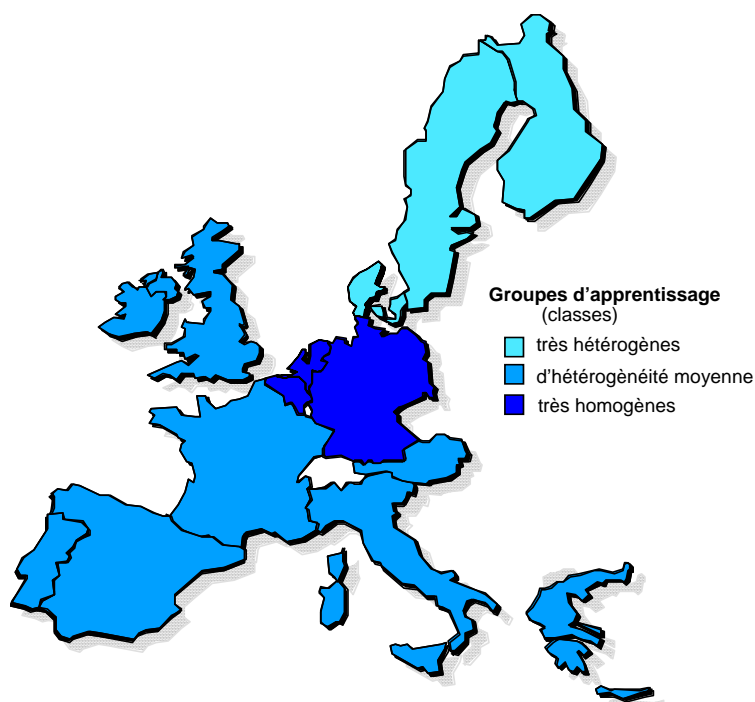
Some other countries more than others are seeing the performance of institution improve considerably, only via a modification of the composition of the audience, without any other form of improvement in teaching, while countries that have little segregation can only hope to improve performance of their institutions by an improvement in teaching.

So Martin and Owen emphasis, from the foreword to the report on the initial results of PISA 2000 (OECD, 2001, p.4), that results obtained in the international tests can vary, not only in average, from one country to the other, but to what extend ever within the same country they can be sensitive to the socio-economic context of pupils. They continue : "one of the edifying conclusions of PISA is that some countries that succeeded in attenuating the effects of socio-economic inferiority appear among those who are already producing the best average performance. The experience of these countries shows that is possible to raise the level of

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[13] For all OECD countries, the impact of the average socio-economic and cultural level of the establishment seems to play a more important role for boys.

performance while reducing inequalities, and issues a challenges to other countries by demonstrating that quality and equality are not incompatible".

Moreover, analyses of the national socio-economic gradients also provides interesting answers to the question about the link between performance and socio-economic status of students (OECD, 2001, p.200-209). The data analysis shows that, if on average, in the OECD zone, 20 % of the variation in reading performance of pupils (combined scale) is connected with economic, social and cultural status, these proportion varies, for the European Union Member States (2001), between 9 % in Finland and 24 % in Austria.

Are educational systems responsible for in the level of inequalities?

Highlighting mechanisms which do or do not encourage equity in and on leaving the education systems is particularly complex due, in particular, to the fact that the school is part of a particular society, and therefore it is not easy to identify the actual effect of the school institution. First, the analyse focuses on the context of the different Europeans countries.

Insert 2 : Notes related to the categorisation of indexes presented in table 4

(1) In pink, countries where the proportion of children in poor households is highest between 13.80 and 20.00% ; in green, from 7.70 to 12.20 % of children in poor households and in yellow, from 3.90 to 4.50 %. The blank boxes refer to missing data (A.2.1) **(2)** In pink, dispersion of household resources is over .84, in green, between .78 and .83, and in yellow, between .68 and .77. (A.2.1.) **(3)** In pink, the unemployment rate is over 10%, in green, between 5 and 9%, and in yellow, less than 5%. The blank boxes refer to missing data (A.2.2). **(4)** In pink, over 45 % of adults have a low level of education; in green, between 30 and 44%, and in yellow, between 15 and 29% of adults do not have a certificate of higher secondary education. The white boxes refer to missing data. (A.3.1.) **(5)** In pink, the cultural resources are more dispersed than average, in yellow, they are less so; in green, the dispersion of cultural resources is comparable with the average (A.3..2.) **(6)** In pink, cultural practices are more dispersed than average; in yellow, they are less so; in green, the dispersion of cultural practices is comparable with the average (A.3.3.) **(7)** A single colour is used: countries are comparable from this aspect. (A.4.1.)
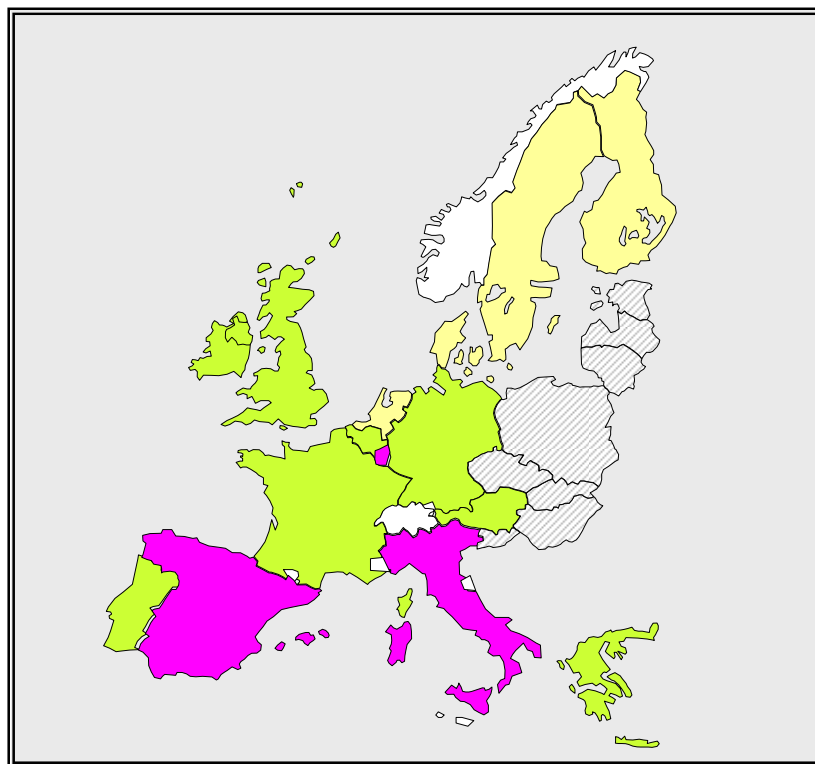

Table 4: The social, economic and cultural context in which European educational systems operate. *Countries were classified in ascending order, depending on the number of contextual criteria on which countries stood out as being negative.*

Pays	Proportion of poor households	Dispersion of household resources	Unemployment rate	Proportion of adults with a low level of education	Dispersion of cultural resources	Dispersion of cultural practices	Dispersion of professional aspirations
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Norway	3,90	0,78	3,50	15,00	_		_
Denmark	8,70	0,76	4,50	20,00	0,97	0,90	18,50
Netherlands	8,10	0,68	2,70	35,00	0,93	0,96	16,54
Sweden	2,60	0,82	5,50	19,00	0,97	0,97	17,30
Finland	2,80	0,71	11,20	26,00	0,99	0,94	18,69
Switzerland	_	0,83	_	12,00	0,99	0,98	_
Ireland	13,80	0,84	4,40	42,00	1,00	0,90	17,28
Germany	10,60	0,85	8,00	18,00	0,98	0,96	16,67
Austria	15,00	0,78	4,70	24,00	0,96	1,02	15,45
France	7,90	0,75	10,30	36,00	1,00	0,94	18,09
Belgium	7,70	0,78	6,60	42,00	0,99	0,97	17,92
Greece	_	0,85	11,30	49,00	0,87	0,88	16,73
United Kingdom	15,40	0,84	5,60	17,00	1,05	0,99	16,72
Portugal	_	0,98	4,10	80,00		0,94	16,54
Luxemburg	4,50	0,90	2,40	47,00	1,04	1,03	16,82
Italy	20,20	0,79	11,00	55,00	0,91	0,97	16,64
Spain	12,20	0,83	14,10	59,00	0,96	0,97	18,14

The economic, social and cultural in which the Spanish, Italian and British education systems operates seems to be harsher than in the other countries, while it seems more favourable in Denmark and in the Netherlands. Figure 4 presents this ranking according to the context. It only concerns EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

The countries belonging to the group of the most equitable countries are the countries which are on the first four ranks; the countries considered as the less equitable countries are the one situated on the last four ranks. However, a rank could be occupied by several countries. If it was the case, the number of equitable or less equitable countries could be higher than 4. The countries with a favourable context are in yellow; the ones with more difficult context are in pink.

Figure 4: Contextual inequalities

Moreover, table 5 provide information about the disparities between categories of individuals concerning social, economic, and cultural welfare.

Table 5: Social, economic and cultural inequalities, depending on individual variables. *The countries are classified in ascending order, depending on the number of contextual criteria for which countries stand out in a negative way.*

Pays	Family Wealth		Unemployment rate		Level of education		Cultural resources				Cultural practices				Professional aspirations			
	Social origin	National origin	Male	Female	Male	Female	Gender	Social origin	National origin	Reading achievement	Gender	Social origin	National origin	Reading achievement	Gender	Social origin	National origin	Reading achievement
Sweden	0,44	0,50	6,00	5,10	21,00	18,00	0,02	-0,59	0,08	-0,53	-0,23	-0,29	0,14	-0,17	-0,20	-0,36	0,32	0,72
Greece	0,83	0,09	7,50	16,90	46,00	51,00	-0,20	-0,47	0,22	-0,55	-0,17	-0,10	-0,27	-0,10	-0,18	-0,35	-0,26	-0,80
Ireland	0,75	0,03	4,40	4,20	45,00	40,00	-0,24	-0,34	-0,08	-0,45	-0,47	-0,19	0,07	-0,22	-0,20	-0,34	0,20	-0,90
Netherlands	0,53	0,20	2,20	3,50	37,00	39,00	-0,18	-0,44	-0,41	-0,40	-0,35	-0,35	-0,12	-0,40	0,12	-0,45	0,16	-0,85
Finland	0,68	0,46	10,40	12,00	28,00	24,00	-0,17	-0,48	0,12	-0,50	-0,46	-0,28	0,45	-0,22	-0,09	-0,45	0,26	-0,66
United Kingdom	0,73	0,16	6,20	4,90	31,00	43,00	-0,21	-0,47	-0,07	-0,48	-0,27	-0,40	0,13	-0,36	-0,06	-0,46	0,43	-0,77
Denmark	0,56	0,51	4,00	5,00	18,0	21,00	-0,05	-0,49	-0,09	-0,44	-0,26	-0,31	0,05	-0,40	-0,18	-0,52	0,46	-0,71
Spain	1,01	-0,06	9,70	20,50	58,00	60,00	-0,15	-0,49	0,17	-0,58	-0,26	-0,42	0,02	-0,58	-0,15	-0,38	-0,04	-0,91
Austria	0,56	0,44	4,80	4,60	18,00	31,00	-0,20	-0,47	0,03	-0,45	-0,24	-0,31	-0,12	-0,42	-0,17	-0,51	-0,07	-0,83
Portugal	1,31	-0,22	3,20	5,10	81,00	79,00	-0,19	-0,59	-0,10	-0,65	-0,17	-0,28	-0,01	-0,34	-0,08	-0,49	0,17	-0,80
Switzerland	0,59	0,13	2,40	3,20	10,00	24,00	-0,22	-0,48	-0,05	-0,41	-0,26	-0,31	-0,07	-0,30	-0,06	-0,58	-0,02	-0,77
Germany	0,69	0,48	7,70	8,30	13,00	21,00	-0,15	-0,50	0,02	-0,49	-0,16	-0,43	-0,22	-0,47	-0,11	-0,41	0,04	-0,75
Belgium	0,69	0,04	5,30	8,30	41,00	42,00	-0,24	-0,52	-0,37	-0,57	-0,30	-0,43	-0,22	-0,60	-0,22	-0,67	0,01	-1,00
France	0,76	0,25	8,60	12,30	33,00	39,00	-0,24	-0,45	-0,29	-0,66	-0,16	-0,26	-0,13	-0,35	-0,21	-0,52	0,12	-0,78
Italy	0,90	0,09	8,40	14,90	56,00	57,00	-0,27	-0,55	*0,50*	*-0,47*	-0,23	-0,28	0,36	-0,24	-0,42	-0,41	-0,53	-0,57
Luxemburg	0,89	0,44	1,80	3,20	42,00	53,00	-0,13	-0,57	0,09	-0,65	-0,20	-0,31	-0,37	-0,37	0,16	-0,26	0,10	-0,49

According to Table 5, France, Italy, and Luxembourg are the countries where the disparities between individuals, according to their social or national origin or their gender, are more pronounced than in other countries, whereas they are less pronounced in Sweden, Greece, Ireland, the Netherlands, and Finland. Let us look now at the extent to which educational processes deal with these categories of individuals.

It is possible to reach a better understanding of the effect of the various school mechanisms through comparisons with other education systems, like the procedure used by the IEA (International Association for the Evaluation of Educational Achievement) or the OECD, in the context of PISA. This comparative approach is that which guided the equity indicators project whose results are being presented here. It is also that position which was adopted by the team which carried out a previous study in the context of the *Socrates* III.3.1 Programme, financed by the European Commission[14] (Demeuse and Monseur, 1998). In that study, relating to the effectiveness of education systems, the authors were keen to point out the relationship between effectiveness and equity: "As the effectiveness of an education system cannot be limited to the average performance of its pupils, we considered the variability of the pupils' results and the impact of the arrangements for grouping them into classes, schools and courses of study on achievement. At this level, we emphasized particularly the importance of equity in the educational system".

This study is attempting to justify particular mechanisms used by certain systems, with the result of breaking down the school population unto teaching units (classes, schools) that are relatively homogenous. To this end, a dozen indicators were adopted to describe the segregation mechanisms which education systems may use to homogenize learning units (single-sex schools and classes, schools organized on a philosophical or religious basis, repeating a grade, separate courses of study and options, either within schools, or organized in different schools, dividing into sectors and school map, age grouping, specialized teaching organized separately, etc.). These indicators (Monseur and Demeuse, 2001) are not used just for reporting the presence or absence of certain mechanisms, but give the magnitude wherever possible. The analysis of the data collected, from the 15 EU Member States, enabled a distinction to be drawn between three groups: the Nordic countries (Denmark, Sweden and Finland), which organize very heterogeneous classes and schools and generally do not use the segregation mechanism; the countries of Southern Europe (Spain, Portugal, Italy, France and Greece); the United Kingdom, Ireland and Austria, which use certain mechanisms, and Belgium, the Netherlands and Germany, which make massive use of them. The systems that practice most segregation by creating the most homogeneous classes possible are not usually those that obtain the best results in international tests, which does not enable them to compare the effectiveness of such measures to a more comprehensive approach.

The analyse focuses now on the school processes. The indicators relative to the processes, which have been integrated into our framework, also aim to highlight the effects of segregation (B.2.3), but also the differences in learning conditions (perception of support provided by teachers, B.2.1, perception of the climate in the classroom, B.2.2).

The effects of segregated schooling were measured from data drawn from two international studies: the *Third international maths and science study* (TIMSS) by the IEA (1995) and the *Programme for International Student Assessment* (PISA) by the OECD (2002).

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[14] Convention n° 96-01-3-3PE-0406-00.

The populations in these two studies are slightly different since, in the former case, these are pupils belonging to classes selected overall in the 7th and 8th grades, while in the latter, these are 15 year-old students, at whatever point they have reached in the curriculum, who were selected in various educational establishments sampled. The latter study, apart from its more recent character, also offers the advantage of relating to three disciplines: reading in the language of instruction, maths, and science, whereas the former only relates to maths and science.

The analyses carried out on the data available for the majority of the EU Member States (all the countries in the case of PISA) highlight a gender-based segregation in countries that still have education organized on a religious basis, although this segregation is not usually associated with a segregation in terms of results (Gorard and Smith 2004). On the other hand, it appears that systems that practice little segregation at school level record low social differences and relatively similar results between institutions. Systems which segregate students between school by SES, even where (as in Germany) that is not the intention, tend to increase differences in results between social groups. From this viewpoint, and without having to sacrifice effectiveness for equity (quite the contrary) it appears that Finland, whose average results are high and not very dispersed, can be compared with those of Germany, where the average results are relatively poorer and their dispersion much more pronounced (B.2.3). These results also concur with those of the study already mentioned (Demeuse and Monseur, 1998) in the field of organization of educational systems in Europe.

The examination of differences in the process can also be continued in the field of education spending. It is usually rather difficult, at least in the industrialized countries, to find a simple relationship between overall education spending and academic achievement. However, it is interesting, in the field that concerns us, to consider the relative allocation of resources within each of the systems: who actually benefits from them? Is the priority basic education that is compulsory for everyone, or tertiary education? (B.1.2).

Another approach consists of analysing the sharing-out of resources for a given level of schooling, and in particular, for compulsory education. PISA also allows this to be done. It emerges from the study that Austria stands out due to a pronounced dispersion of teacher-pupil ratios between the various institutions attended by 15 year-old pupils. France, Italy, Portugal and even more so the United Kingdom, Sweden, and Switzerland are characterized by a more equal distribution.

The consideration of class sizes leads to a slightly different classification. This parameter is particularly variable in Austria, as well as in Spain, France, and Portugal, while this is not the case in Denmark or in Finland. In this field, the tendency in all European countries to teach pupils of disadvantaged social origin in smaller classes should be pointed out. This situation is particularly pronounced in Belgium, Austria and in France. Positive discrimination policies certainly have some influence on this observation. In the majority of countries, except in Finland, Ireland, Italy, and the United Kingdom, students whose parents were born abroad also tend to be taught in smaller classes. The weakest pupils are also taught in classes whose size does not exceed that of classes attended by the strongest pupils, in all the countries of the Union (2001). Austria, Belgium, and the Netherlands are the countries where the classes attended by the weakest students are smallest.

Besides the material conditions, the climate in the classroom also constitutes a factor that is often quoted among the variables that influence school results. It is via the questionnaire sent to students themselves that this factor was studied through the PISA results (B.2.2). A series

of questions was sent to the students in the sample. These questions generally relate to the possibility of working properly, in a relatively calm environment, without wasted time or negative behaviour by the pupils. Boys rather than girls report a climate relatively conducive to work, even if it is difficult to distinguish between their possibly lesser sensitivity to random events and the fact, which is surprising in systems that are in principle mixed, of attending classes that really are less disrupted. Where significant differences exist, they also lead (in 4 cases out of 5) to the conclusion that the most socio-economically disadvantaged students benefit from a more favourable climate. Only Greek students of modest origins, including those coming from families where the parents were born abroad, indicate that they are in a less favourable situation than other pupils are. In 10 of the 15 EU Member States, and in Switzerland, the weakest students also point to a less favourable disciplinary climate than do pupils whose performance is better. The weakest pupils state significantly more than the others that they are in classes where the learning environment is disrupted by noise or misbehaviour by pupils.

The support provided by teachers, at least as perceived by students (B.2.1.), can also constitute an important element. Students in the Benelux countries and their Italian, German, and Austrian colleagues state, on average, that they receive the least support. At the other extreme, we find Denmark and Sweden as well as Greece, Ireland and Portugal. In 10 out of 15 EU Member States, girls are more positive than boys are. Students of modest origins or whose parents were born abroad are generally more positive than other pupils about the support received. On the other hand, in the majority of EU Member States, the weakest students consider that they do not receive support that is significantly superior to that of stronger pupils. In Denmark and the United Kingdom, they even record a more negative opinion.

It appeared useful to add to these indicators information about the pupils' perception of being treated fairly (B.2.4). Via a specific survey, organized in the 5 countries associated with our study (see methodological annex[15] devoted to the *European Pilot Study on Perceptions of Equity at School*), questions were asked of a sample of 8th grade students, to find out their perception of fairness in the treatment of pupils. Overall, the pupils claim to be treated fairly ("*the teachers treat me fairly*") and their scores are awarded in the same way. On the other hand, they are more critical when asked to assess teachers' behaviour towards certain groups: so they do not consider that everyone is equal when it comes to rewards or punishments. While there are few differences between girls and boys, it is mainly pupils who claim to receive the lowest marks who are the most critical, as are those whose parents have the most prestigious professions.

A synthesis devoted to the indicators of processes is presented here after. To ensure at best the legibility of the data, it is shown in two tables (6a and 6b). The first one concerns the indicators reflecting the quantity of education received, the second the ones reflecting the quality of education received. The ranking of the countries is based on the average of the indices of the two tables.

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[15] http://www.ulg.ac.be/pedaexpe/equite/

Table 6a : Inequalities in the education process (Quantity of education received).. *Countries were classified in ascending order, depending on the number of contextual criteria on which they stand out negatively*

Countries	Quantity of the education received					
	Basic / tertiary education	Teachers / pupils ratio	Class size	Schooling in small classes		
				Disadvantaged social origin	National origin	Week pupils
	(1)	*(2)*	*(3)*	*(4)*		
Sweden	248	2.9	4.6	97	93	89
Switzerland	270	2.9	4.6	90	91	82
Netherlands	295	_	4.9	92	88	73
Denmark	159	4.6	3.6	98	98	98
Luxemburg	_	_	4.5	91	91	89
Germany	272	4.6	4.5	94	97	86
Finland	196	4.5	3.2	97	100	90
France	190	3.7	5.9	90	97	78
Portugal	138	3.9	5.8	96	96	95
Italy	141	3.5	4.3	98	102	98
Greece	196	5.1	5.0	94	95	92
Belgium	246	5.5	5.6	85	86	71
United Kingdom	263	2.5	5.2	98	100	85
Ireland	320	5.9	5.5	92	101	78
Austria	184	8.1	6.7	89	91	76
Spain	157	4.8	6.2	93	95	94
Norway	204	5.1	5.4	95	104	97

Table 6b : Inequalities in the education process (Quality of education received). *Countries were classified in ascending order, depending on the number of contextual criteria on which they stand out negatively.*

Countries	Segregation					Disciplinary climate in the classes					Support provided by teachers				
	Reading	Parental occupation	Gender	Linguistic origin	National origin	Dispersion	Weak pupils	Gender	Social origin	National origin	Dispersion	Weak pupils	Gender	Social origin	National origin
	5					6					7				
Sweden	29.2	26,7	8,5	51,6	29,2	0,85	0,3	0,01	0,06	-0,02	0,90	-0,04	-0,05	-0,04	0,12
Switzerland						1,01	0,17	0,04	0,01	0	0,96	0,19	-0,04	0,22	0,24
Netherlands	66.0	30,3	10,2	57,8	32,5	0,90	-0,04	-0,01	-0,03	-0,04	0,81	0	-0,03	0,02	0,18
Denmark	38.9	32,9	9,5	51,1	36,6	0,77	0,15	-0,02	0,04	-0,1	0,84	-0,23	-0,02	-0,09	0,13
Luxemburg	40.8	23,7	12,3	25,4	12,6	1,11	0,03	0,14	-0,01	0,05	1,13	0,1	-0,15	0,12	0,16
Germany	60.8	35,6	11,2	53,2	35,9	1,02	0,17	0,07	0,07	0	0,97	0,25	-0,03	0,11	0,16
Finland	27.4	35,8	7,3	74,7	50,2	0,91	0,31	0,03	0,02	0,17	0,87	-0,05	-0,12	0,02	0,48
France	56.3	30,5	11,9	59,7	29,1	1,05	0,04	0,05	-0,05	0,05	0,97	0	-0,09	0,09	0,08
Portugal	48.1	39,7	7,5	70	35,6	0,83	0,18	0,13	0,02	0,15	0,93	-0,03	-0,17	0,06	0,06
Italy	58.2	30	23,1	84,3	37,4	0,97	0,28	0,24	0,1	0,42	0,86	0,24	-0,02	0,15	-0,33
Greece	58.4	43,3	12,5	68,2	33,8	0,89	0,03	0,12	-0,11	-0,28	0,97	-0,06	-0,23	0,06	0,03
Belgium	66.2	36,1	21,9	60,9	35,9	1,01	-0,03	-0,03	-0,05	0,03	0,93	0,11	-0,17	0,02	0,13
United Kingdom	42.8	30,8	16	71,3	38,2	1,03	0,39	0,08	0,11	0,08	0,98	-0,2	-0,09	0	-0,03
Ireland	39.0	28,8	29,7	79,7	27,9	1,12	0,38	0,18	0,08	0,05	1,04	-0,02	-0,2	0,04	0,03
Austria	61.8	36,4	28,4	53,3	38,9	1,11	0,14	0,06	0,04	0,01	1,03	0,03	-0,09	0,06	0,07
Spain	40.0	31,6	9,9	75,4	41,2	0,98	0,3	0,13	0,08	-0,07	1,05	-0,09	-0,29	0,13	0,05
Norway															

The figure 5 shows the ranking of the European countries about the inequalities of the school processes. This map is based on the ranking of the countries presented in tables 6a and 6b. It concerns only the EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

The countries belonging to the group of the most equitable countries are the countries which are on the first four ranks; the countries considered as the less equitable countries are the one situated on the last four ranks. However, a rank could be occupied by several countries. If it was the case, the number of equitable or less equitable countries could be higher than 4.

The most equitable countries are represented in yellow – Sweden, Denmark and The Netherlands – and the less equitable countries, according to the inequalities in the school processes, are in pink.

**Figure 5: Inequalities of the school processes**
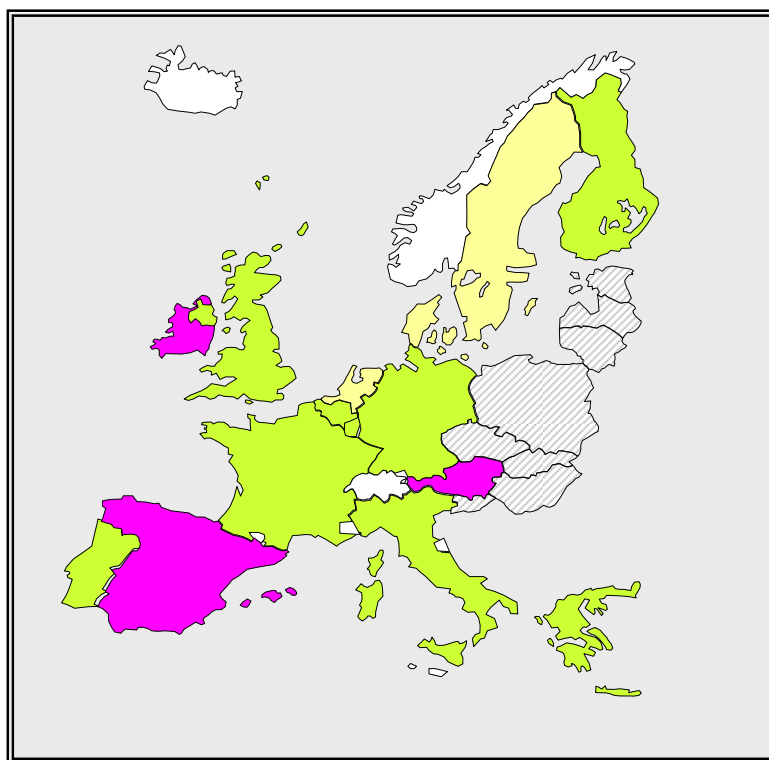
To try to answer to the question to know if the education systems are amplifying or reducing the contextual inequalities, two additional maps have been carried out.

The figures 6 and 7 try indeed to offer a general overview of the relative position of each country, when, on the one hand, the differences between the results of the education and the general context, and on the other hand, the differences between the results of the education and the school processes are taken into account. It only concerns EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

These maps are based on the following general idea: a country could obtain a better relative position for the results (figure 1) than for the context (figure 4), the same position or a worse one. The same situation could occur if the results are compared to the school processes.

Then, if the inequalities of results are less important than the contextual inequalities, it is supposed that school decreases inequalities (if a country has a better relative position for results than for context[16], this country is in yellow on the map). On the opposite, if the results are more unequal than the context, school is supposed to increase inequalities (if a country has a worse relative position for results than for context[17], this country is in pink on the map).

Figure 6: Differences between the results of education and the context of the society
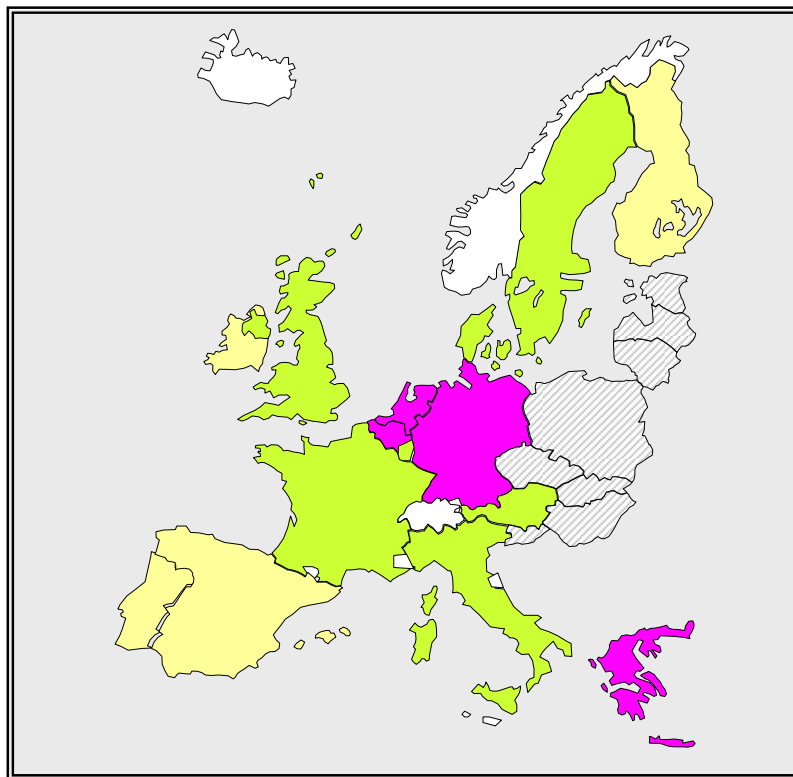

From this first comparison *Results – Context,* it appears that Belgium, The Netherlands, Germany and Greece are in worst position at the results level than on the context level (pink). On the opposite (yellow), Spain; Ireland, Portugal and Finland obtain a better position.

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[16] with a difference of at least 3 ranks.
[17] with a difference of at least 3 ranks.

Figure 7: Differences between the results of education and the educational processes
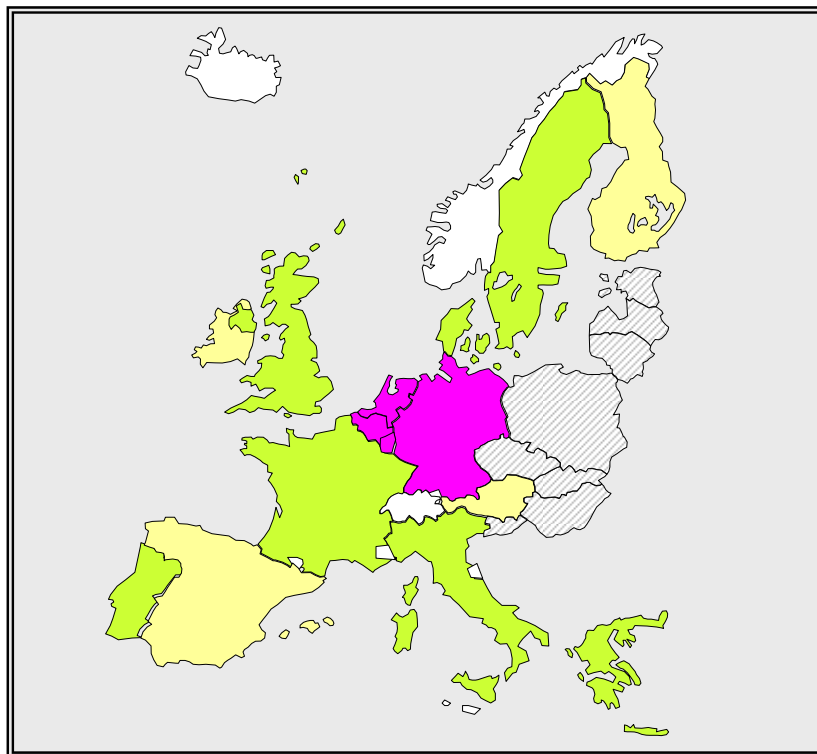
This second comparison *Results – Processes* is similar to the former. It is not favourable to Belgium, Germany and The Netherlands ; Luxemburg, Greece and Italy can be added to this first group. The group of countries where the results of education are less inequitable than the processes is composed by more or less the same countries than in the first exercise : Spain, Ireland, Finland. Austria and United Kingdom take place here too.

4. To what extent do educational inequalities benefit the disadvantaged and encourage social mobility?

According to prevailing practice, we use the term "disadvantaged" to refer to those who have fewer social resources than others or belong to a social category that is subject to discrimination that handicaps them in using their resources[18].

Education can benefit the disadvantaged in two ways. On the one hand, by giving them educational resources that can be used in the real world. That is what is at issue here, transcending the equality of educational opportunities, the social return of qualifications obtained by the disadvantaged, whether that return is expressed in terms of access to employment, in salaries, in access to higher and middle social classes, to residential districts, etc. Furthermore, by putting the skills of the more educated at their disposal. Let us consider these two modalities.

Benefits associated with educating the disadvantaged

As we saw earlier (Question 2. Benefits associated with education in the various European countries), the return of a qualification may vary with the group to which the holder belongs. If it is less for the disadvantaged, it has a direct consequence from the viewpoint of fairness: that means that social conditions are preventing the benefits of education from being distributed proportionally to contributions, in this case qualifications[19]. That also has an indirect consequence: young people of disadvantaged categories are less encouraged to obtain higher qualifications than other young people are, because for them, the return of these diplomas is lower. That harms equality of educational opportunities.

In terms of social mobility, Checchi, Ichino and Rustichini (1999) showed that the return on higher education for the most disadvantaged was lower in Italy than in the United States. In France, in 2001, for all categories of qualifications, those leaving the education system whose parents were teachers or executives more often entered a higher or intermediate profession[20] (MEN-DPD, 2002). Along the same lines Goux and Maurin (1997) show that in France, the "reproduction coefficient" is positive: with equivalent qualifications, children from two different social categories have more chances of reproducing the situation of their fathers than reversing it, a situation which is obviously unfavourable to the disadvantaged.

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[18] This definition rules out, for example, physical disabilities, where the arrangements for taking this into account have been widely debated by theoreticians of justice. Rawls, for example, considers that policies for them do not reflect the basic structure of society, for which he was criticized. Without making this into a question of principle, we preferred to concentrate on the handicaps that derive from the functioning of society, and which this has a direct role to regulate.

[19] One could argue that this inequality may not be unfair if it is the effect of the wish of the disadvantaged, for example, to remain in the social environment in which they grew up. However, one may find it strange that a child from a disadvantaged background who has invested in education then decides not to use the result of that investment. Mingat and Eicher (1982) advanced the hypothesis that the poorest chose, among the courses of study in higher education, the least risky, which are also the least profitable. In our opinion, this interpretation, like those based on the idea that children of less-favoured categories have a lower social capital than others, explain this situation, but do not justify it from the viewpoint of fairness.

[20] However, this advantage reduces with the level of the diploma. The population is that of young people who have left the education system between two and nine years ago.

For inequalities in income associated with education, the results vary depending on the country. Houle and Lémelin (2001) calculated that in Quebec, the return on education reduced with the level of qualifications of the father. The review of the literature that they provided with the results shows similar results in the United Kingdom, but the opposite in Greece, Israel, France, and the United States, countries where the return of education increases with social origin.

We only found internationally comparable data for one of the advantages associated with education – access to a higher social category than that of one's parents – and for three countries: Spain, Italy and the United Kingdom. Taken from the *European Community Household Panel*, they reflect the current situation and social origin of individuals aged from 16 to 30 years in 1998, and provides information about the influence of the educational system during the periods when that population was educated. It compares the social status of these individuals according to whether the highest qualification that they obtained was a higher education degree or the higher cycle of secondary education, or a qualification at a lower level.

In these three countries, it is the United Kingdom where social mobility is greatest, whether for the population as a whole, or for children of the disadvantaged classes. Nevertheless, it is not in these countries that the contribution of education to this process is the highest.

For a young person belonging to a disadvantaged category, holding a higher education degree increases the chances of belonging to a higher category than one's parents do, and this applies in the three countries. The increase is most marked in Italy: a young person in a disadvantaged category has a 7 in 100 chance of belonging to a higher social category than his parents if he has a low level of education, and a 40 out of 100 chance if he has a degree. The degree multiplies his chances by 5.5, compared with 4.9 in Spain and only 1.4 in the United Kingdom, where poorly educated young people are much more likely to be upwardly mobile than in the other countries. That result, with regard to the respective positions of Italy and the United Kingdom, is coherent with previous research (for example, Müller and Schavit, 1998).

However, this external benefit must be weighted by the internal equality (in the education systems themselves) of chances: if children of manual workers have almost no chance of entering higher education, the fact that the external benefit of this level of education is very high for them does not mean that the benefit that they derive from education is very great. One approach to measuring this benefit is to consider that it would be high in a country where the following were observed simultaneously:

- a strong link between social origin and level of education;
- a direct link between low social origin and low social destination;
- a strong link between education and social destination.

Which is where we get the idea that one can measure the benefits that the disadvantaged can expect from education through the ratio of the third link to the first two.

The table 7 presents the increase in chances of being in a high position according to the second term of the link (social destination or education) if we are in high position according to the first term of the link (social origin or education.

Table 7: Role of education in social mobility in three European countries (Source: European Community Households Panel, 1998). *The coefficients indicated in the first three lines are odd ratios. The reference population is all adults from 16 to 30 years.*

	Spain	Italy	United Kingdom
(a) Social origin → Social destination	2	6	1
(b) Social origin → Education	2	5	1
(c) Education → Social destination	7	12	3
(c) / (a) + (b)	1.8	1.1	1,5

According to this analysis, education plays the greatest role in social mobility in Spain, in particular because the inequality of educational opportunities is lower there than in Italy, just as the direct link between social origin and destination and the effect of education on the destination class is greater than in the United Kingdom.

The contribution by the educational system to the expectations of the disadvantaged

Rawls' theory endeavours to define the conditions for fair cooperation and benefits for all between individuals who have different concepts of what is "good". To do that, it imagines a fictional situation in which individuals deliberate, behind a "veil of ignorance" – while not knowing their own characteristics, nor their social position, nor their conception of what is "good" – of the institutions and rules that form the "basic structure" of society.

According to him, when placed in such a situation, individuals will only be able to agree on the following three principles:

1. Each person has a right to a completely adequate system of basic liberties that are equal for all, which are compatible with a single system of liberties for all (principle of equal liberty).

2. Social and economic equalities must meet two conditions:
    a. They must be attached to functions and positions that are open to all, under conditions of fair and equal opportunities (principle of fair equality of opportunities).
    b. They must provide the greatest possible benefit to the most disadvantaged members of society (principle of difference).

These principles are presented hierarchically. The first takes priority over the other two, and "2a" takes precedence over "2b".

One of the reasons why individuals choose these principles is that they apply the criterion of the "maximin": they seek, out of prudence, to *max*imize their benefits in case they might find themselves among the disadvantaged with *min*imum.

If we apply, as Rawls himself invites us to do[21], the principle of difference to education, it follows that differences in education between individuals are justified if they are placed at the service "of long term expectations" of the most disadvantaged. It must be added that, again

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[21]" The difference principle […] does not require society to try to even out handicaps as if all were expected to compete on a fair basis on the same race. But the difference principle would allocate resources in education, say, so as to improve the log term expectations of the least favored. If this end is attained by giving more attention to the better endowed, it is permissible; otherwise, not. (...) We see then that the difference principle represents, in effect, an agreement to regard the distribution of natural talents as a common asset and to share in the benefits of this distribution whatever it turns out to be" (Rawls, 1971, 17, paperback edition, p 101)

according to Rawls, it is illusory to hope to obtain perfect equal opportunities, unless one does away with the family, with the consequence that the inequalities between social groups that remain even if one endeavours to attain as fully as possible the principle of fair equality of opportunities have the same status as inequalities of "natural talents", and therefore, are only justified if they are put at the service of the disadvantaged. In fact, the basic structure of society should not "eliminate" the "contingent" inequalities that it inherits (inequalities of natural abilities or initial position in society), but turn them to the benefit of the disadvantaged.

For Rawls, the principle of difference is not dictated in any way by charity or pity for the victims, which takes the place of a moral conscience. It is a political principle, adapted to a world where wealth grows incessantly and where, left to themselves, inequalities can but grow and equality of opportunities becomes more and more remote, to the point where the very objective of fairness is threatened: social cooperation on an equal footing and the political system that arises from that cooperation: democracy. The principle of difference must be understood in its relationship with the principle of equal opportunities: it must compensate what remains of unequal opportunities, and in doing so, guarantee that, since the situation of the poor and the rich remains commensurable, the principle of equal opportunities still has a chance to apply. That is why, according to Rawls, the system of democratic equality (his) is more stable than "liberal equality", which shares with it the principle of fair equality of opportunities, but replaces the principle of difference by the (Pareto) principle of effectiveness.

We attempted to make the principle of difference operational, although it is disputed. According to Nozick (1974), "using a talented individual, using his talents for the common good or for the good of the most disadvantaged […] is totally illegitimate for someone who takes liberty and therefore the inviolability of persons seriously" (Van Parijs, 1991). For others, the danger is, on the other hand, in relation to the scale of inequalities that this principle might allow. It seems to us that, both due to the central role of Rawls in the philosophy of justice, and through the response that the principle finds in the common conscience, one should try to find clues to the extent to which, in various countries, the most educated serve "the long-term expectations of the disadvantaged".

How to decide whether the action by the educational system is favourable to the long-term expectations of the most disadvantaged? The data used to answer to this question is presented in table 8.

The first index reflects the skills of weakest pupils. We try to know here if the educational system leads its weakest pupils till the end of the compulsory education with a rather good level. The countries which distinguish themselves positively are Finland, Denmark and Belgium ; those which distinguish themselves more negatively are Greece, Portugal and Luxemburg

The second indice we used try to identify if the educational system contributes to the national wealth growth. Here, that is France, Spain and Italy that distinguish themselves favourably. On the other extreme, we find Denmark, Switzerland and Norway[22].

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[22] Fahey (2004) shows, by a composite approach using 19 criteria, that the quality of life of the poorest quarter of the population of the richest countries of Europe of 25 is higher that the quality of life of the richest quarter of the population of the poorest contries of Europe of 25. (Fahey (2004). Who is disadvantaged in the enlarged EU ? A comparison of the regional and social exlusion perspectives using quality of life indicators. The Economic

Initially, we tried to measure whether, in certain countries more than in others, professional activity by the most educated was to the benefit of the poorest. This indicator relies on the following principle: all other things being equal, in particular the inequality of equal opportunities, an education system is fairer if the most qualified put the skills that they have acquired at the service of the most disadvantaged. However, this attempt failed. On the one hand, collecting relevant data appeared to be a job that was beyond the possibilities of this project, and on the other hand, this venture comes up against conceptual problems, related to the fact that, while there are very clear-cut cases, where one could decide to limit an indicator, and which generally relate to certain "professions" (lawyers, architects, doctors, teachers), others are less clear: a corporate lawyer who works for a car manufacturer is also working for that manufacturer's poorest customers. More generally, anyone working in a business that contributes to growth could claim, admittedly with varying degrees of justification, that the fruits of that growth always spread in the end, and that therefore his work benefits the most disadvantaged.

We also took an interest in living side by side: if the most educated people live in the same districts as the poorest, they show more of their shared humanity, they raise the aspirations of young people in those districts, and are more equal. In France, for example, the population census allows a calculation of segregation within zones of about 2000 inhabitants, and it is probable that the same applies in many European countries, but we were unable to complete this job in the context of this project. So we are interested in two aspects of living side by side for which data is more easily accessible[23]: the fact of the "most educated" and "disadvantaged" having children together, and the fact of sending their children to the same schools. The results are very polarized from a geographical viewpoint. The most educated live with the most disadvantaged more in Ireland, Norway and Switzerland) than in Portugal, Austria and Luxemburg.

We also considered the values of the most educated. The idea is that the more the most educated people claim to share the values of solidarity, the more they should support solidarity mechanisms or participate in solidarity actions. For example, gifted young girls from poor backgrounds who received grants to attend a prestigious "college" in the USA, and whose discourse demonstrates an intention to become "agents of change and lawyers serving the disadvantaged" are evidence of a fairer education system than if they had just declared their satisfaction at having the hope of joining the upper classes (Marantz-Cohen, 1998).

To do this, we used data drawn from the *European Value Survey* (EVS) of 1999. This reveals a discrepancy between declared values and practices, at least those which are measured by the EVS. We used three criteria showing acceptance of values of solidarity: considering "eliminating the serious inequalities of income between citizens" as an important characteristic of a fair society; considering "guaranteeing that the basic requirements are satisfied for all" as an important characteristic of a fair society; considering that social injustice explains the presence of the poor.

From the values point of view, France, Greece and Spain are in the leading group, while Austria, Finland and Luxemburg are among the back markers. On the other hand, when it is a matter of finding out whether the most educated are members of associations promoting solidarity, the highest proportions are to be found in The Netherlands, Sweden and Luxemburg, and the lowest are in Germany, Spain and Greece.

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and Social Research Institute, Dublin. Présentation au colloque du réseau européen Changequal. Paris, 2004.
[23] In the PISA data, which means that it relates to parents of 15 year-old young people.

One possible interpretation is that in the countries that are fairer according to values than according to their practices, subscribing to the values of solidarity would be mainly rhetoric. Another possible interpretation is that in these countries, there is more reliance on action by the State, possibly guided by the social movement, rather than on one's own practice and behaviour to move towards a fairer society.

The indirect effects involve financial redistribution mechanisms[24]. We used an indicator on the measurement in which, in each country, social transfers reduce the proportion of people on low incomes – supposing that the most educated are among the contributors to these transfers, because they have the best salaries. The effect of such transfers is highest in Denmark, the Netherlands, and Luxembourg, while in Greece, Italy, and Portugal, it is lower. The classification of the countries on these various effects is shown in Table 8.

The table 8 synthesises the contribution of the educational system to the situation of the most disadvantaged. The yellow indicates a more favourable situation towards the most disadvantaged than in the other countries; the pink a less favourable situation. The Green refers to an intermediary situation and blank boxes show where date is not available.

To summarize and than, try to catch the contribution of the educational system to the situation of the most disadvantaged, a score has been calculated for each country, depending on the number of times where indices were high (1), moderate (2) or low (3). The lower the score, the greater is the contribution of the educational system to the situation of the most disadvantaged.

Obviously, these scores have to be taken not as genuine measurements that enable countries to be ranked, but as a convenient method of aggregating measurements that are, on the one hand, imperfect and, on the other hand, partial according to two senses of the term: first of all, for certain countries, not all the data is available (e.g. there are only two columns for Norway); then, data shown here only partially represents the dimensions that would have to have been recorded to really measure the effects of relations between the educated and disadvantaged. For example, we have no measurement of the feeling of superiority that may affect the former in relation to the latter, or the feeling of inferiority that may affect the latter in relation to the former and from which the latter might suffer. As we have seen, we have no measurement of urban segregation, and neither do we have any measurement of the political proximity of the former and the latter, etc.

The ranking we obtained shows that Sweden, The Netherlands, France, Belgium and Denmark serve the expectations of the most disadvantaged more particularly than Luxembourg, Germany, Greece and Portugal.

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[24] We decided not to consider the "fiscal rate of return" of education as such (see the discussion of this indicator in the technical annex D.2.1 : http://www.ulg.ac.be/pedaexpe/equite/).

Table 8: Contribution of the educational system to the situation of the poorest people[25]

Countries	Skills of the weakest	Contribution to the economical growth (1990-97 vs 1980-89)	Social transfers	To live together (2000)		Solidarity values and practices of the most educated people (1999).	
	Mean of the bottom deciles in mathematics and reading literacy	Contribution of education to GDP per inhabitant growth from one decade to another	Percentage of poor people decrease by social transfers	% of young people whom parent is very educated and the other disadvantaged	Extra chances to attend an advantaged school when one's parents are educated	Proportion of answers indicating feeling of solidarity	Are members of solidarity associations
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sweden	370	0,42	_	29,00	1,10	44	65,00
Netherlands	_	0,43	50,00	22,00	1,10	38	70,00
France	372	0,65	41,00	21,00	1,30	56	19,00
Belgium	404	0,45	39,00	25,00	1,30	_	_
Denmark	384	0,20	63,00	25,00	1,10	_	_
Ireland	377	0,54	46,00	27,00	1,10	49	11,00
Sain	334	0,90	31,00	14,00	1,40	62	19,00
Finland	412	0,44	_	17,00	1,20	34	33,00
United Kingdom	382	0,44	41,00	21,00	1,20	_	_
Switzerland	357	0,26	_	27,00	1,20	_	_
Norway	350	0,27	_	17,00	1,10	_	_
Italy	335	0,84	10,00	16,00	1,40	47	18,00
Austria	387	0,31	46,00	16,00	1,30	37	21,00
Luxemburg	298	_	50,00	9,00	1,20	35	54,00
Germany	342	_	30,00	18,00	1,20	50	5,00
Greece	323	0,57	8,00	19,00	1,30	53	16,00
Portugal	316	0,32	19,00	16,00	1,30	50	22,00

[25] The table is based on the data presented in indicator D.2.1.

The figure 8 is based on the ranking presented in table 8. It concerns only the EU countries (EU-15, 2001) for which data were available. We did not take care of the ranking of Norway and Switzerland to build this map. These two countries are not presented in colour.

The countries belonging to the group of the most equitable countries are the countries which are on the first four ranks; the countries considered as the less equitable countries are the one situated on the last four ranks. However, a rank could be occupied by several countries. If it was the case, the number of equitable or less equitable countries could be higher than 4.

Figure 8: Contribution of the educational system to the situation of the most disadvantaged

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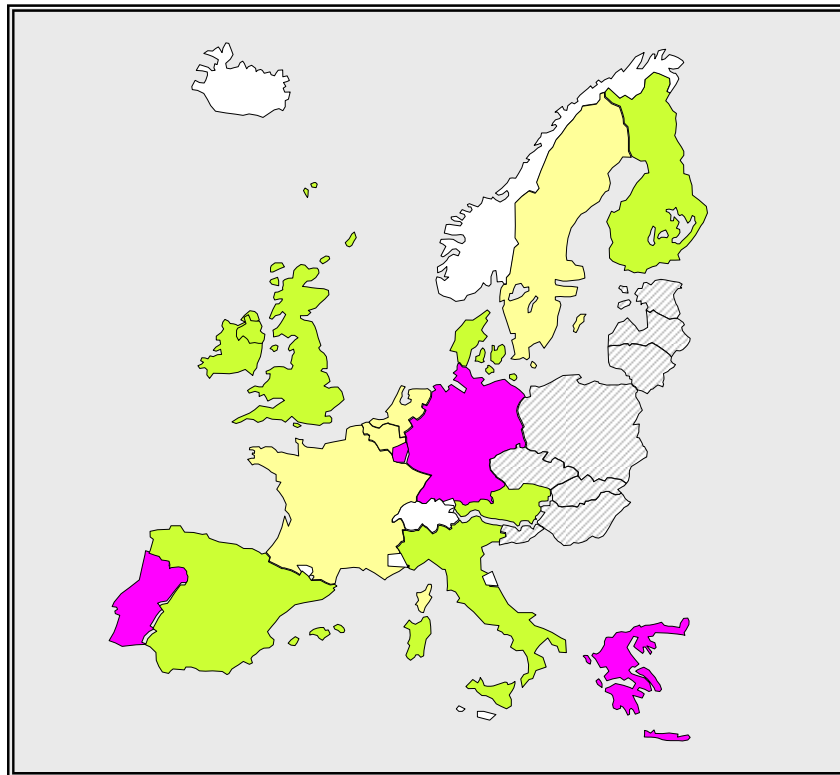
Conclusions

The approach that we have proposed in the third part of this report relied mainly on four questions:

1. *Considering that the greater the benefits linked to education, the more important it is that education should be shared out fairly, what are the benefits associated with education in the countries of Europe?*
2. *What is the importance of inequalities of education? These inequalities are measured according to three principles of justice: inequalities between individuals which do not hinder social cooperation; inequalities between groups which do not contradict the principle of equal opportunities; the lowest possible proportion of individuals without the minimum skills to lead a worthy and responsible life in modern society;*
3. *Considering that the more inequalities arise from unfair sharing-out of educational resources, the more unfair they are, what is the role of the education system itself in creating these inequalities?*
4. *Starting from the idea that the inequalities are less unfair if they are turned to the advantage of the disadvantaged, to what extent are the inequalities of education turned to the benefit of the disadvantaged?*

We will check here briefly the answer given to this four question in part 3. First, let us look if the European countries are at a similar position (a favourable one in yellow, an intermediary in green and in unfavourable one in pink) throughout the context, the processes and the internal results ?

The table 9 presents the position of each country for the different ranking made in part 3. The countries are in pink, green or yellow depending on their unfavourable, intermediary or favourable position.

Table 9 : Synthesis of the different positions occupied by the EU countries for context, processes and internal results

	Context	Processes	Internal results
Belgium	9	11	16
Denmark	2	4	4
Germany	7	6	15
Greece	9	11	14
Spain	15	15	4
France	9	8	8
Ireland	7	13	3
Italy	15	9	13
Luxemburg	15	5	17
The Netherlands	3	3	-
Austria	9	16	7
Portugal	14	9	10
Finland	4	6	1
Sweden	4	1	2
United Kingdom	13	13	10

Some countries are each time at the intermediary position. That is the case of Greece, France and Portugal.

Only Sweden presents a favourable situation from the context point of view, the school processes and the internal results. Some are in the group of countries where inequalities of

education are the less important for at least two criteria, like Finland, The Netherlands and Denmark.

Two countries present a unfavourable situation for 2 criteria : Spain, where the context and the processes seem to be particularly unfair and Luxemburg where the context is more unfavourable than in the other countries.

And finally, a group of countries are situated sometimes negatively, sometimes positively and even in a intermediary position.

A general overview of all the figure presented in part 3 allows a synthesis of the equity in the European educational systems.

The figure 8 presents 5 of the 7 figures build in part 3 (figures 1, 2, 6, 7 and 8). The countries are in a particular colour, depending on the more equitable, the intermediary or the less equitable position they occupy.

1. inequalities of results (Skills and school careers)

3a. Difference between results and context

LEGEND

Favourable situation

Intermediary situation

Unfavourable situation

2. benefits related to education

3b. Difference between results and processes

4. Contribution of the educational system to the situation of the disadvantaged
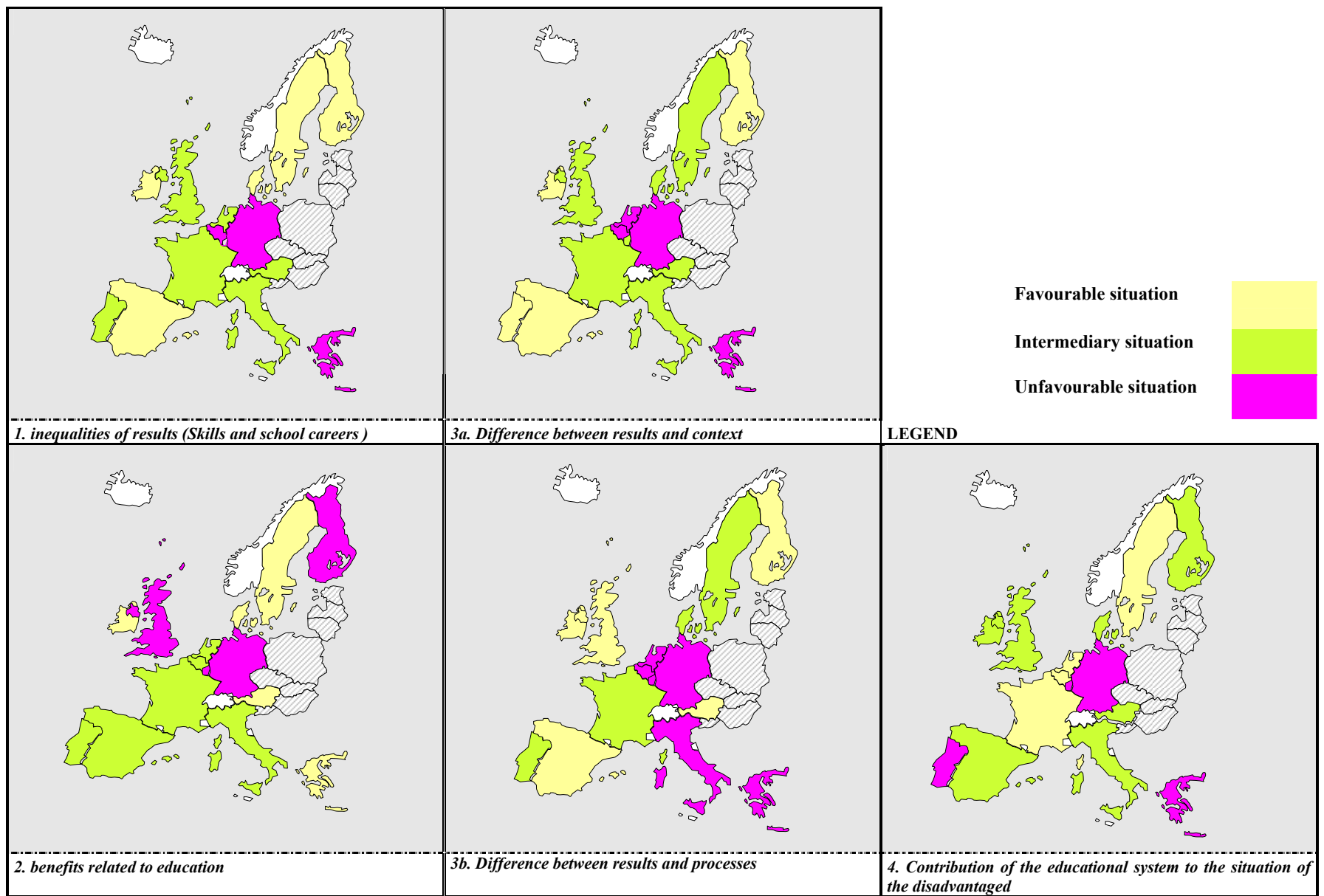
Figure 8: Synthesis on the equity of the educational systems

Three groups of countries appear from this general view of all the rankings obtained at the end of the four questions.

This first group includes the countries where inequalities of education seem to be the most important : Germany, Belgium, Greece and, to a lesser extent, The Netherlands. Germany appears, for each question, in pink – the colour of an unfair or less fair situation. Belgium and Greece present important inequalities of results. Moreover, the Belgian and Dutch educational systems seem to play an amplifying role of contextual inequalities.

The second group is composed by the countries which, for at least three aspects, are in the intermediary position : Italy, France, United Kingdom and, to a lesser extent, Portugal and Denmark. However, Denmark is one of the countries where inequalities of results are the less important and it is also one of the countries where benefits related to education are not so strong.

Finally, a third group of countries emerges. This group includes the countries which seems the more equitable ones, for each or at least three aspects : Sweden – which is in Yellow for each question –, Ireland, Spain and Finland.

Throughout all the analyses presented in the report, we can see that, in some countries, the inequalities in education are homogenous, in that they are pronounced (Germany and to a lesser extent Belgium) or small (Finland, Sweden, and to a less marked extent, Spain and Ireland) according to the three criteria at the same time: inequalities between individuals, between groups, proportion below the threshold. However, it also happens that the three criteria give divergent results, which shows that it actually concerns different dimensions:

In general, we observe that inequalities can be low in countries where education has pronounced external effects, which is the case for Ireland, while they can be relatively low in countries where the effects of education are low. Therefore, our data do not confirm the premise according to which inequalities are low in countries where education has few external rewards.

Inequalities of results have been considered through the cognitive skills and the school careers. A quantitative measure of three of the main conceptions of equity has been produced, by exploiting the distribution of levels of learnings in mathematics, reading and sciences and variables as gender or socioprofessional status of parents. Strong inequalities appear from this comparison : important gaps of achievement are observed between the countries.

Analysis of the education processes enables us to have an idea of the importance of the systems themselves in the creation of inequalities. The chosen approach has been to calculate a score that measures three types of inequality in the distribution of resources: disparities between individuals, inequalities between groups, resources allocated to the weakest pupils. The resources taken into account are spending per student, class sizes, teacher-student ratios, the disciplinary climate, the support received from teachers, and the absence of academic or social segregation. According to this approach, the more egalitarian system is Sweden and the less one is Austria.

One could consider using other indicators than those presented here. Above all, one could conceive other methods of reading these indicators, for example more focused on consistencies, whereas we opted for a comparative and distinctive approach, pursuing a single principle of equity in the labyrinth of indicators, comparing equity, effectiveness and efficiency, etc. Two overall results appear to us to emerge from this analysis: there are definite differences in equity between education systems; there are definitely some education systems that seem more (or less) fair than others on a large majority of the criteria, but for many the judgement of their fairness varies, sometimes considerably, depending on how we read the data.

The next steps

The lack of available data prevented us from calculating indicators that we nevertheless considered important. Therefore, one must consider these deficiencies not as a lack of interest by the authors, but as evidence of a genuine lack of available or useable data.

The most cruelly lacking data, in our opinion, could be obtained from the following information systems:

- A poll on judgments and criteria of fairness with regard to education on the scale of the European Union taken among citizens, of the type that Hutmacher (2001) presented for Switzerland ;

- A test which would enable to check wether, when young Europeans leave initial education, they possess the minimum skills to live an independent and responsible life. In the absence of such a test, we had to settle for measuring, using PISA, the proportion of 15 years-old student who had skills below a given threshold – but some of these students will remain in the system and acquire additional skills;

- A system allowing to measure and compare, on the same scale, the skills of students who leave the education system earlier and latest. Here too, we had to settle for measuring the discrepancy in performance between the poorest and best performers at the age of 15, using this as an approximate predictor for that gap at the time when they will all leave initial education;

- A test that would enable to measure the basic skills of adults who have left the education system, in relation to their personal characteristics[26] ; in not yet investigated field[27]

- A system allowing to measure the equality of access and results, in terms of skills and personal well-being at the end of a continuing training, like Baye, Mainguet et Mossoux (2005) suggest it.

We were missing other data :

- On the inequalities of economic, physical and social insecurity, to the extend that in certain countries, gains in security of the working classes encouraged the reduction of social inequalities (Shavit and Blossfeld, 1993).

- On social mobility : the education is indeed one of the factors allowing the access to a better social position that the one of parents.

- The question of the equity is asked to the extend where education leads to a certain number of advantages. If its market advantages (salary, employment, ..) are well documented, its non-market advantages are not so much documented. We have not found international comparisons on the effect of the education on health, work conditions, satisfaction at work, the conjugality, for instance.

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[26] Such a type of test is currently under way. This is the Adult Literacy and Lifeskills survey (Statistique Canada, Educational Testing Service, OECD), which measures adults'skills in literacy, numeracy and problem-solving, in association with individual, economic and social characteristics of respondents, but few European countries have found the sources of funding to take part so far. OECE is now examining the possibility to organize an International program for adults skills achievement (PIAAC).

[27] As far instance the field of foreign languages, because it is an important issue inside the European Union.

- One of the most prime social goods, according to Rawls, corresponds to « social basis of self respect ». It is probable that certain educational systems are really better than others in avoiding that the one who have had less success at school feel themselves humiliated or devaluated to their own eyes. Because of the lack of data, it was impossible to investigate this important dimension.

- Always because of the lack of data, our study eludes all references on the efforts made by the pupils. It is nevertheless a fundamental variable in regards to the theory of the responsibility. Indeed, according to these theories the fair inequalities are the ones which reflect the efforts of the pupils but not their talent (a concept that regroups all the factors which are not from their responsibility). These inequalities must be compensated by the inequality of the resources. (see the contribution of Le Clainche, C et Trannoy, A. in D. Meuret (éd.)(1999). *La justice des systèmes éducatifs*. Bruxelles : De Boeck).

- On inequalities in expectations of parents or teachers, to the extend that these are powerfull predictors of the effectiveness of teaching

- On the personal and social development of pupils outside the field of civic education, for which we were able to use the IEA study " Civic Education" in a limited number of countries.

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Partners responsible for each indicator:

A. *Context of inequalities in education*

1. Individual consequences of education

1. Catholic University of Louvain & University of Liège
2. University of Burgundy

2. Economic and social inequalities

1. Catholic University of Louvain & University of Liège
2. University of Liège

3. Cultural ressources

1. University of Liège
2. University of Liège
3. University of Liège

4. Aspirations and perceptions

1. University of Liège
2. Université de Cardiff
3. Distance University of Madrid

B. *Inequalities in the education process*

1. Quantity of education received

1. University of Burgundy
2. University of Burgundy

2. Quality of education received

1. University of Liège
2. University of Liège
3. Université de Cardiff
4. Distance University of Madrid

C. *Results inequalities in education*

1. Skills

1. Catholic University of Louvain & University of Liège
2. University of Burgundy

2. Personal development

1. Distance University of Madrid

3. School careers

1. University of Burgundy

D. *Social and political effects of inequalities in education*

1. Education and social mobility

1. University of Roma 1
2. University of Roma 1

2. Benefits of education for the desadvantaged

1. University of Burgundy

3. Collective effects of inequalities

1. University of Cardiff
2. Distance University of Madrid
3. University of Cardiff
4. University of Roma 11
5. University of Roma 1
6. University of Roma 1

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To ensure an as large as possible diffusion of the EGREES works, a website has been created. This website, besides the aims of the project, places a set of productions derived from this project at disposal. The website address is the following one : http://www.ulg.ac.be/pedaexpe/equite/