

INTERNATIONAL WORKSHOP. Educational policies in Europe - Implications for equity/ equality, Örebro, October 9-11, 2003

# A Set of Equity Indicators of the European Education Systems

## A synthesis

Marc Demeuse<sup>1</sup>

Maître de Conférences (Service de Pédagogie expérimentale et théorique, Université de Liège, Belgium) and Associate Researcher (Institut de recherche sur l'éducation (Iredu), CNRS / Université de Bourgogne, France)

Coordinator of the *European Group of Research on Equity of the Educational Systems*<sup>2</sup>

Ariane Baye, Marie-Hélène Straeten and Julien Nicaise<sup>3</sup>

Researchers (Service de Pédagogie expérimentale et théorique, Université de Liège, Belgium)

### Summary

The paper is not the result of an individual work but the fruit of an international and pluridisciplinary two years research partially funded by the Directorate General of Education and Culture (European Commission) under the Socrates number SO2-61OBGE. Six teams of researchers [Universities of Liège and Louvain-la-Neuve (Belgium), Burgundy (France), Rome (Italy), Cardiff (United Kingdom) and Madrid (Spain)] were involved in the project. The present paper makes an attempt to give the flavour of a 200 pages report (*Equity of the European Education Systems. A Set of Indicators*) published in French and in English and available on the *Europa Web Site*<sup>4</sup>.

The general purpose of the project is to offer a comprehensive framework of indicators of equity in education. The report was published on July 2003. Many sources were used (mainly international surveys), including a quick survey about the 14-year old pupils' feeling of justice in five European regions (French Community of Belgium, Paris, Cardiff, Rome and Madrid). The quick survey, known as *European pilot survey on feelings of justice at school*, was built on purpose, regarding the comprehensive framework.

---

<sup>1</sup> E-mail : marc.demeuse@ulg.ac.be

<sup>2</sup> Six university teams collaborated to prepare this report. The project was coordinated by the University of Liège – Experimental Pedagogy: Marcel Crahay (Director), Ariane Baye, Marc Demeuse, Julien Nicaise and Marie-Hélène Straeten. Five other partner teams contributed to this project:

- For the University of Burgundy (Iredu de Dijon): Denis Meuret, Sophie Morlaix and Denis Maguain ;
- For the University of Rome “La Sapienza”: Luciano Benadusi, Giuseppe Ricotta and Orazio Giancola;
- For the University of Cardiff: Stephen Gorard and Emma Smith;
- For the Distance University of Madrid (INED): Alejandro Tiana-Ferrer, Noelia Alvarez, Marisa García de Cortázar and Jezabel Vico ;
- For the Catholic University of Louvain: Vincent Vandenberghe;

Two Swiss experts also played an active part in all the work: Norberto Bottani (SRED, Geneva) and Walo Hutmacher.

<sup>3</sup> Special tanks to Anne Matoul for the English version of the synthesis.

<sup>4</sup> [http://europa.eu.int/comm/education/programmes/socrates/observation/equality\\_en.pdf](http://europa.eu.int/comm/education/programmes/socrates/observation/equality_en.pdf) (English Version)

A good overview of the initial framework is the collective book from Hutmacher, Cochrane and Bottani (Eds) (2001), especially the Meuret's chapter entitled "A System of Equity Indicators for Educational Systems".

The purpose of the present paper is first of all to introduce the final framework and to give an overview of the coherent system of indicators included in it. Based on this initial framework, the European team also offers a coherent point of view in order to link the available data but the open structure of indicators could offer other readings and open a large discussion on equity in education in Europe.

## Résumé

Ce texte n'est pas le résultat d'un travail individuel, mais le fruit du travail, durant deux ans, d'une équipe internationale et pluridisciplinaire, financée partiellement par la Direction générale de l'Éducation et de la Culture de la Commission européenne dans le cadre du programme Socrates (SO2-61OBGE). Six équipes [Universités de Liège et de Louvain-la-Neuve (Belgique), de Bourgogne (France), de Rome (Italie), de Cardiff (Royaume uni) et de Madrid (Espagne)] ont ainsi été impliquées dans ce projet. Le texte que nous présentons ici tente de fournir un aperçu d'un rapport de 200 pages (*L'équité des systèmes éducatifs européens. Un ensemble d'indicateurs*) publié en français et en anglais, et disponible sur le site Europa de la Commission européenne<sup>5</sup>.

L'objectif général du projet est d'offrir un cadre conceptuel et un ensemble d'indicateurs d'équité en matière d'éducation. Le rapport a été publié en juillet 2003. De nombreuses sources sont utilisées (principalement les résultats d'enquêtes internationales), y compris une enquête réalisée auprès d'élèves de 14 ans à propos de leur perception de la justice dans cinq régions d'Europe (en Communauté française de Belgique, à Paris, à Cardiff et sa région, à Rome et à Madrid). Cette enquête, baptisée « étude pilote sur le sentiment de justice à l'école », a été construite en fonction des objectifs du projet et de son cadre conceptuel.

Un aperçu du cadre conceptuel de départ peut notamment être trouvé dans l'ouvrage collectif édité par Hutmacher, Cochrane et Bottani, en 2001, plus particulièrement dans le chapitre rédigé par Meuret sous le titre « A System of Equity Indicators for Educational Systems ».

L'objectif de notre texte est avant tout de présenter le cadre conceptuel qui a été finalement adopté par l'équipe de recherche et de donner un aperçu de l'architecture du système d'indicateurs. Au départ de ce système d'indicateurs, l'équipe de recherche européenne propose également une lecture cohérente de manière à lier les différentes informations collectées, même si la structure adoptée est relativement ouverte et permet d'autres lectures, ouvrant ainsi la possibilité d'une large discussion autour du problème de l'équité éducative en Europe.

## 1. Aims of the project

The project is intended to help to measure and compare the equity of the various education systems in the European Union Member States. Thanks to it, decision-makers and users will be informed of the equity of the existing systems. This informative tool may help decision-makers to (re)define the educational politics.

---

<sup>5</sup> [http://europa.eu.int/comm/education/programmes/socrates/observation/equality\\_fr.pdf](http://europa.eu.int/comm/education/programmes/socrates/observation/equality_fr.pdf) (Version française)

## 2. Structure of the report

The report is structured into three parts. A first part, entitled “Devising indicators of equity of educational systems: why and how?”, defines the concepts of equality and equity, and presents the framework of indicators and its guiding principles. The second part, “A set of indicators on the equity of the educational system”, presents the twenty-nine indicators built in the context of this project, and organized according to the framework. The third part, “The equity of European educational systems. An interpretation of the 29 indicators”, presents an analytical interpretation of the equity indicators.

## 3. Why speak about equity ?

The first decision of our international team was to move from equality to equity. Nevertheless, anyone who talks about equity rather than equality is generally suspected of having abandoned safe territory and a clear concept for a minefield and a fuzzy concept. For many of the supporters of egalitarian views, the main appeal of this new positioning would be to justify unjustifiable inequalities for the benefit of the dominant class. Therefore, some explanation is required on this point. It is true that equity is a more difficult concept than equality, and that it allows, in its principle, inequalities; nevertheless, it is a concept that allows to go beyond a purely formal examination to perform a multidimensional analysis. In fact, the strictly egalitarian vision, which aims to give everyone the same treatment, while ignoring the characteristics of each individual at the outset, or even, the results in terms of reproduction of the initial inequalities, forces us to question its very foundations, precisely for reasons of equality. The central question, as stressed by Sen (1992), is not equality or inequality but “*Equality of what ?*”. By the way, we move from a supposed very simple question to a more complex one and from a world of certainty to a quite complex situation where differences could be legitimate and equalities could be perceived as unfair.

## 4. Keys to open minds and discussions

Adapted from Grisay (1984), the following table gives an overall vision of the five major principles of equality in terms of education, and presents the postulates and the consequences of these various principles of justice.

The first concept, not specified by Grisay, and marked “A” refers to a “natural”, or Libertarian concept. Only concepts B to E really draw on the principles of equality (see also Demeuse, Crahay, Monseur, 2001).

Whether we talk about equal opportunities (B), equal treatment (C), equal achievement (D) or equal results, we stumble over the practical or theoretical limitations connected with the adoption of a particular theory.

So, in the first case (B), the wish is that the social background does not influence success at school, but this is subject to criticism by those who claim that this leaves the possibility open to give better educational conditions to those with greater ability, which is traditionally known as the “Matthew effect”<sup>6</sup>.

In the second case (C), the same educational conditions are given to all, but this is open to criticism from those who think that some people, because they suffer from a handicap of one kind or another, need better educational conditions.

---

<sup>6</sup> " For to him who has will more be given, and he will have abundance; but from him who has not, even what he has will be taken away". (Matthew, Ch. 13:12)

In the third case (D), equality of results is desired, at least for a certain level of knowledge, but this comes up against those who claim that by pursuing this objective, the best pupils are deprived of the possibility of progressing as far as possible, which is referred to as the “Robin Hood effect”.



**Table 1.** *Five principles of equality in education* (adapted from Grisay, 1984, p. 7).

Assumed	Admitted	Criticized	Recommended
<b>A – No interest in equity: “natural” and “libertarian” positions</b>			
Birth, strength or belonging to a particular group determine rights. Liberty can only suffer from forced redistribution.	Reproduction and maintenance of the "natural" order and differences based on fair acquisition.	Possibly, inequalities in groups of peers. Interventions contrary to liberty.	A stable order, a sharing of functions (society of castes, orders, etc.) or a system based on liberty of the actors.
<b>B – Equality of access or opportunities</b>			
The existence of talents, of potential or natural aptitudes. These define the level or threshold that the individual may hope to achieve.	Unequal results, provided that they are proportional to aptitudes at the start. Existence of courses of study of unequal value. Inequality of treatment.	The fact that merit is not the only criterion for access to the most highly-regarded courses. Socio-cultural bias affecting guidance tests. Imperfections in the evaluations responsible for the fact that, despite equal competence, one pupil succeeds and another fails.	Objective and scientific detection of talents, and scientific methods of orientation. Equality of access to long courses of study, for children of equal aptitude from advantaged and disadvantaged backgrounds. A school made to measure, i.e. a varied system of options and courses of education adapted to the ability of students. Aid to gifted pupils from disadvantaged backgrounds (scholarships, etc.).
<b>C – Equality of treatment</b>			
The capacity of all to undertake basic learning, and therefore benefit from basic education.	The existence of natural talents, potential or aptitudes. Unequal results, on the condition that pupils were able to benefit from learning conditions of equivalent quality.	Unequal quality of teaching, responsible for unequal achievement. Elite schools, ghetto schools, streamed classes, explicit and implicit courses of study that engender unequal quality of education.	The Single-level or Comprehensive school, and particularly, the common core for lower secondary education.
<b>D – Equality of achievement or academic success</b>			
Potential for extended learning. Individual characteristics (cognitive or affective) can be modified. Differences in learning styles.	Differences in results beyond the essential skills.	The ideology of talents. Negative discrimination (including streamed classes, courses, elite schools and ghetto schools), i.e. all the situations where unequal quality of teaching amplifies the inequalities at the outset.	Equality of achievement for the essential skills. Positive discrimination, mastery learning, formative assessment, as well as all the support mechanisms aimed at reducing the initial inequalities.
<b>E – Equality of actualisation (social output)</b>			
Different individual, motivational and cultural characteristics, but without any hierarchy existing between them.	Differences in profile of the results.	The existence of a single standard for excellence. An “elite” culture and a “sub-culture”.	Individualized instruction.

While each principle of educational justice has its own limits, the adoption of one principle or another poses an even more fundamental problem: this is that it places educational fairness in the sphere of “local” justice. Education is considered as an “asset” in itself, whether it is situated in relation to other more basic assets and in relation to more general principles, that is why the last level (E), proposed by Grisay, broadens the perspective by putting school back into its societal context. Nevertheless, beyond this refocused perspective, to borrow Rawls’ term, educational fairness is often considered in the context of “intuitionist” theories. According to Rawls, these theories have two types of drawback: they rely on several principles that could prove to be incompatible, and they offer no priority rules that would enable these priorities to be ordered by priority (Rawls, 1971). Therefore, one could conclude that it is not worth measuring inequalities because the relevance of any indicator could be challenged by the supporters of another principle of justice.

Since the publication of *A Theory of Justice* by Rawls in 1971, a debate has been ongoing within political philosophy, from which several general theories have been developed, in which it is possible to imagine justice in education while avoiding “local” and “intuitionist” approaches. However, these fascinating debates do not provide a universally-acknowledged theory of justice that would enable us to devise an unchallenged measurement of educational equity, but do enable a discussion to be held on education in the context of a general debate about justice. In other words, the existence of several principles does not lead them to invalidate each other, but to consider the issue of justice within the framework of the discussion they provoke. There are many principles of justice that can be invoked to justify actions, practices, or situations, and the theories help us to find our bearings among them.

Once there is a discussion between the concepts of justice, rather than the juxtaposition of contradictory principles, as can be seen from the table above, a system of indicators is useful, because it provides input from reasoned comparisons and probative facts. The indicators presented here are intended to provide input to the debate on justice in education, by offering some elements of responses to the following questions proposed by Meuret during our works:

To what extent do individual educational inequalities have major social consequences for the individuals? What is the importance of those inequalities? Are they due mainly to the context, or rather to the process of the educational system? Are they used to help the disadvantaged?

What is the importance of educational inequalities between girls and boys or between groups of different social, economic or national origins? To what extent are they due to the societal context or rather due to the process of the educational system? To what extent are they aggravated by the society or the labour market?

To what extent does being below a minimum skills threshold have important consequences for the individuals in and outside the school context? What is the proportion of individuals who find themselves below that threshold? What proportion of each group is beneath that threshold? Is the fact of being below the threshold due mainly to the socio-economic context or rather to the educational system itself?

## **5. A coherent set of indicators**

### **5.1. Why a set of indicators of equity?**

Indicators measuring inequalities have been appearing for a long time in international publications dealing with education, particularly in the OECD *Education at a Glance*, and in *Key data on education in Europe*, the regular publication of the European Commission prepared by Eurydice. The various reports produced as a result of international evaluations of students achievement (for instance, OECD, 2001; Beaton *et al.*, 1996a and b) also contain indicators on inequalities. In addition, several international education research programmes have proposed comparisons (Shavit and Blossfeld, 1993; Müller and Karle, 1993) in important fields like social inequalities in school careers. Other international surveys (*European Households Panel*, *European Value Survey*, *Luxembourg Income Study*, etc.) also provide interesting information, as do certain national surveys. However, the latter do pose sizeable compatibility issues.

A publication by the *ad hoc group on equity issues* (OECD) convened in Geneva by Norberto Bottani and Walo Hutmacher (Hutmacher, Cochrane and Bottani, 2001) provided a first theoretical framework of indicators (Meuret, 2001) on which basis the current project took shape. The new feature of this work is its systematic – we tried to determine the principles to give us some points of reference in a vast and relatively new field – and comparative approach of the equity of European educational systems.

We need now to have indications about efficiency and equity, since we can no longer settle for indicators about the former (*Education at a Glance*, for example) and pious wishes about the second. It is for this reason that it is essential to publish indicators about the equity of educational systems with the intention of providing useful information to the citizens as well as those responsible for the educational system. These indicators are intended to provide a needed supplement to the information already available about costs and results.

## **5.2. How to read our set of indicators ?**

Our set of indicators is structured according to two dimensions or axes (see table 2). The first dimension is related to the nature of the observed differences or relative positions: (1) differences between individuals, (2) differences between groups and (3) threshold beneath which fairness dictates that nobody should be situated. We have privileged, in our analyses, the “natural groups”, i.e. those to which the individual belongs whether he/she wants to or does not want to : gender, nationality and social origin. The second dimension takes of course into account inequalities in the education processes (B) and inequalities of education as the internal results of schooling (e.g., diplomas) (C), but also the context of inequalities in education (A) and social and political effects of inequalities in education (D) as external results of schooling.

Taking into account the available data, we operationalised the theoretical framework for devising equity indicators into twenty-nine indicators. Their chronological organization follows the vertical axis of our framework (context, process, internal results, external results), while the horizontal axis can be felt in the comments and the graphs presented (inequalities between individuals, between categories and thresholds of equity).

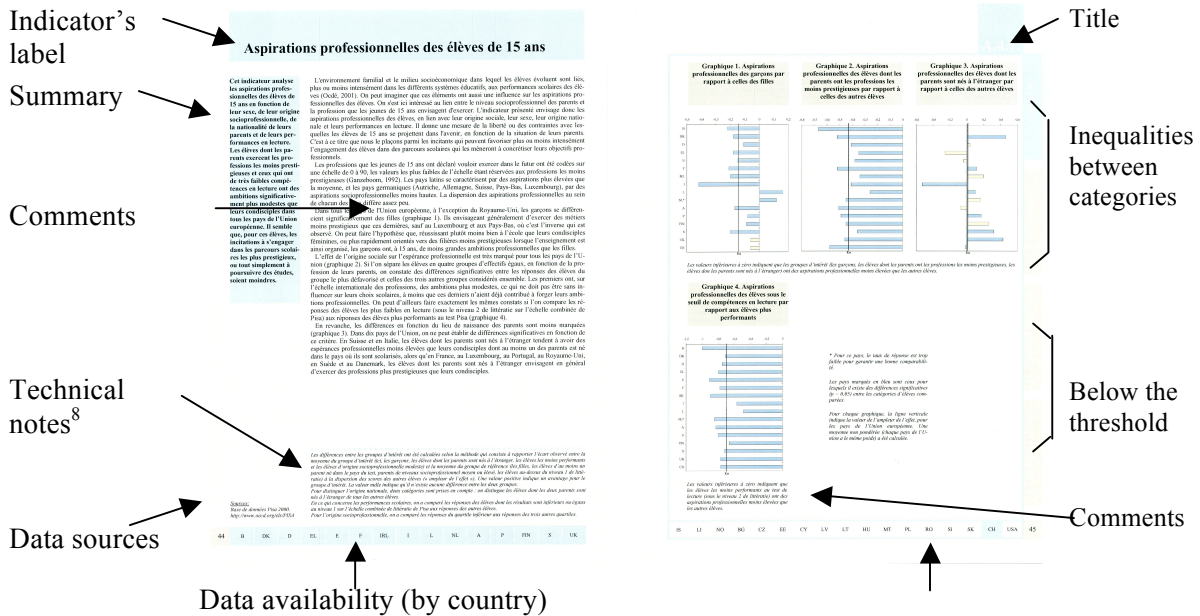
**Table 2.** *The theoretical framework of indicators on the equity of educational systems*

<i>A system of indicators on the equity of educational system</i>			
	<i>(1) Inequalities between individuals</i>	<i>(2) Inequalities between groups</i>	<i>(3) Individuals below the threshold</i>
<b>A. Context of inequalities in education</b> A.1. Individual consequences of education A.2. Economic and social inequalities A.3. Cultural resources A.4. Aspirations and perceptions			
<b>B. Inequalities in the education process</b> B.1. Quantity of education received B.2. Quality of education received			
<b>C. Internal results– Inequalities in education</b> C.1. Skills C.2. Personal development C.3. School careers			
<b>D. External results – Social and political effects of inequalities in education</b> D.1. Education and social mobility D.2. Benefits of education for the disadvantaged D.3. Collective effects of inequalities			

In order to facilitate the reading of our indicators we have adopted an identical way to report each of them (see Figure 1). Each indicator is then presented on double sheets: the graphics and tables are found on the right-hand page, while the comments and technical notes are opposite, on the left page. At the bottom of the left hand page, the coloured boxes indicate the EU States Members for which indicators have been built<sup>7</sup>. In the upper right-hand corner, a letter and two numbers identify the indicators. According to Table 2, the letter refers to one of the four main domains (see our second dimension of the framework) while the two numbers refers to subcategories (for example, *A. context of inequalities in education > 1. individual consequences of education > 1. Disparities in income and access to employment*). The indicators drawn from the *European pilot survey on feelings of justice at school* are distinguished from the other indicators by a coloured page background, due to their experimental nature.

<sup>7</sup> The same kind of information related to non-EU States is available on the bottom of each the right page.

Figure 1. A common layout for each indicator.



5.3. Data sources

We had to find some data sources which would enable to cross each field (second dimension) with different situations of inequality (first dimension). The goal of the authors was to identify international data in which at least three countries of the European Union are represented ; this explains why some surveys conducted at a national level have not been taken into account. The authors also wanted to diversify the information sources, meanwhile these had to be valid and well-documented. These sources are mentioned in the Table 3.

Finally, in the case of some of the retained fields, the authors could only notice the lack of information at the international level. They thus organized a pilot survey in the five partner countries in order to supply indicators (with exploratory purposes) about feelings of justice at school<sup>9</sup>.

<sup>8</sup> If needed, a more complete technical note is available in annex.

<sup>9</sup> 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 critically lacking data, in our opinion, could be obtained from the following information systems:

- a poll on judgements and criteria of fairness with regard to education on the scale of the European Union taken among citizens;
- a test which would enable to check whether, when young Europeans leave initial education, they possess the minimum skills to live an independent and responsible life;
- a system allowing to measure and compare, on the same scale, the skills of students who leave the education system earliest and latest;
- a test that would enable to measure the basic skills of adults who have left the education system, in relation to their personal characteristics, including fields not yet investigated.
- data on the inequalities of economic, physical and social insecurity, to the extent that in certain countries, gains in security of the working classes encouraged the reduction of social inequalities in education (Shavit and Blossfeld, 1993);
- data on certain social benefits of education, such as effects on health;
- data on inequalities in expectations of parents or teachers, to the extent that these are powerful predictors of the effectiveness of teaching;

halshs-00596590, version 1 - 27 May 2011



The data collected through the different mentioned sources have been statistically processed in order to support the way on which we had decided to develop the indicators. The definition of categories and thresholds can have suffered some differences because of the distinct available information sources. For instance, all the studies do not enable to compare the pupils according to their social origin. In the same way, it is sometimes possible to determine some qualitative thresholds (for instance, a level of competence), whereas it may be better to use a quantitative threshold (for instance, the 10% of the lowest pupils).

Finally, it seemed essential to propose to the possible readers an analysis of the assessed data. That analysis is presented as a synthetic comment which helps the citizen who wants to grasp the information, to understand better the presented diagrams and tables. Our definition of what an indicator is can be resumed as follows: a piece of statistical information, reliable and readable, which supplies a clear indication to the policy makers and actors of the education systems. Comments, tables and diagrams have been designed to answer that demand. When needed, the information has been completed in a technical and more accurate appendix, which supplies data about the methods of assessment which have been used.

In conclusion, three key words have been guiding our methodological approach : quality of the collected data, relevance of the selected information in relationship with the framework, and readability of the presented data, for the citizens as well as for the persons who wish more technical information.

Table 3. Data sources of the 29 European indicators of equity.

<b><i>A system of indicators on the equity of educational system</i></b>	
	<i>Inequalities between individuals</i>
	<i>Inequalities between groups</i>
	<i>Individuals below the threshold</i>
<b>A. Context of inequalities in education</b>	
<b>1. Individual consequences of education</b>	
1. Disparities in income and access to employment	Luxembourg Income Study Public Funding and Private Return to Education
2. Social advantages of education	Shavit et Müller Labour Force Survey Pisa 2000 IALS
<b>2. Economic and social inequalities</b>	
1. Inequalities in income and poverty	Luxembourg Income Study OECD / Pisa 2000
2. Economic security inequalities	Labour Force Survey
<b>3. Cultural resources</b>	
1. Level of education of adults	UOE
2. Cultural resources of 15 year-old students	OECD / Pisa 2000
3. Cultural practices of 15 year-old students	OECD / Pisa 2000
<b>4. Aspirations and perceptions</b>	
1. Professional aspirations of 15 year-old students	OECD / Pisa 2000
2. Students' criteria of fairness	<i>European pilot survey on sentiments of fairness at school</i>
3. Students' general opinions about fairness	<i>European pilot survey on sentiments of fairness at school</i>

- data 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.

<b>B. Inequalities in the education process</b>	
<b>1.. Quantity of education received</b>	
1. Inequalities in schooling expectancy	UOE
2. Inequalities in education spending	UOE OECD / Pisa 2000
<b>2. Quality of education received</b>	
1. Perception of support from teachers according to 15 year-old students	OECD / Pisa 2000
2. Perception of the disciplinary climate according to 15 year-old students	OECD / Pisa 2000
3. Segregation	OECD / Pisa 2000 IEA TIMSS 1995
4. Students' perception of being treated fairly	<i>European pilot survey on sentiments of fairness at school</i>
<b>C. Inequalities in education</b>	
<b>1. Skills</b>	
1. Inequalities in results/skills	OECD / Pisa 2000
2. Weakness and excellence at school	OECD / Pisa 2000
<b>2. Personal development</b>	
1. Civic knowledge of students	IEA CIVIC
<b>3. School careers</b>	
1. Inequalities in school careers	Labour Force Survey
<b>D. Social and political effects of inequalities in education</b>	
<b>1. Education and social mobility</b>	
1. Occupational attainment by educational level	Labour Force Survey European Household Panel
2. Influence of social origin on occupational status	Labour Force Survey European Household Panel
<b>2. Benefits of education for the disadvantaged</b>	
1. Contribution by the most educated to the most disadvantaged	European Household Panel OECD / Pisa 2000 European value survey
<b>3. Collective effects of inequalities</b>	
1. Students' judgements on the equity of the educational system	<i>European pilot survey on sentiments of fairness at school</i>
2. Students' expectations towards the educational system	<i>European pilot survey on sentiments of fairness at school</i>
3. Students' feelings towards justice in the educational system	<i>European pilot survey on sentiments of fairness at school</i>
4. Index of tolerance / intolerance	World values survey 1997
5. Index of socio-political participation	World values survey 1997
6. Index of trust in institutions	World values survey 1997

## 6. Conclusions

Despite its relevance and the diversity of its subjects, the report, developed around 29 indicators, does not enable yet to fulfil the whole of the formerly designed framework. Those indicators do not always clearly answer all the questions related to the equity of the educational systems. If our indicators do not exhaust that very large research theme, the reason is that, despite all the information sources underlying them, a number of these sources are still useless, unavailable, or even non existing. The available data which were supplied by organisations depending on the European Union (Eurydice, Eurostat, etc.) as well as by other sources (OECD, International Association for the Evaluation of Educational Achievement -



IEA, national organizations, research teams, etc. ) were invaluable, but we have to admit they are not yet sufficient to exhaust the theme of educational equity.

As an example, the authors could not investigate enough the particular structures of the European school systems (level of autonomy of the schools, level of freedom in the choice of the school for the parents of pupils, diversity of the school training tracks, frequency of the grade retention, position of the private schools in relationship with the public schools, etc.) nor the particular means implemented to compensate for the various types of identified inequalities (system of positive discriminations, financial supporting grants for the pupils and their parents, etc.). At the European Union level, those topics are over all in the domain of the units of Eurydice but, in the future, it will not be superfluous to take into account more systematically those subjects from the specific angle of educational equity and of school justice as a whole. Furthermore, far from pretending to self-sufficiency, even if the 29 indicators propose an original and completely new reflection and work foundation, they also widen significantly the perspective by supplying a relatively easy anchoring for the processing of future new data.

In prospective terms, it seems useful to ensure the reproduction and the continuity of such a work, because the complex issue of equity of educational and training systems in Europe is only beginning to emerge for their managers and their users. Indeed, whatever it is at the level of each of the European education systems or from the point of view of the several international organizations involved in education and teaching, issues about the equity of the system haven't stopped increasing these last years. That is why it seems so important to rapidly secure the repetition of that work of developing indicators rather than to be satisfied only with the first results supplied by a "one-shot" action. The continuity of that work could not only take a systematic and totally innovative form, but also be integrated in some European structures already existing (specific work groups, Eurydice, etc.). Harmonized and well-thought data collections will have to be organized to this end, and they will be the result of a multi-collaborative work.

The authors of the present report did not want to adopt here a prescriptive perspective faced with the collected data. As a proof of the objectivity and the rigour of such a work, a descriptive analysis of the European educational systems running has been preferred, rather than a refined interpretation of the results and the building of recommendations which would unavoidably go over the strict frame of education research and development. Each member state is fully responsible for the content and for the organization of its own educational and training system(s), it is thus the privilege and the duty of each one to agree and respond to the various presented findings.

Lastly, even if the development of a pool of indicators aiming at managing and controlling an education system in relationship with verified information rather than with some unfounded perceptions or myths is a more democratic process and goes on increasing rapidly in the European educational systems, it is still important to make sure that every citizen can have an easy and complete knowledge of the collected information and of the way they are interpreted by their governments. Whatever they are teachers, parents, or pupils, it is essential that all of them can have access to them, even if the full understanding of the data requires a certain experience and sometimes an important investment. That is the reason why it seems important that the European institutions and the member states make sure together that the various indicators are available for a wide audience. The diffusion via the internet can represent a good solution, which has been adopted by the Commission.

## Bibliography

- Beaton, A.E. *et al.* (1996a). *Mathematic Achievement in the Middle school years: IEA's Third international Mathematics and Science Study*. Chesnut Hill, Ma. : Boston College.
- Beaton, A.E. *et al.* (1996b). *Science Achievement in the Middle school years: IEA's Third international Mathematics and Science Study*. Chesnut Hill, Ma. : Boston College.
- Demeuse, M., Crahay, M., Monseur, C. (2001). Efficiency and Equity. In W. Hutmacher, D. Cochrane, N. Bottani (Eds) *In Pursuit of Equity in Education*. Dordrecht: Kluwer Academic Publishers.
- Grisay, A. (1984). Les mirages de l'évaluation scolaire. *Revue de la Direction Générale de l'Organisation des Études*, XIX, 8.
- Hutmacher, W., Cochrane, D., Bottani, N. (eds) (2001). *In Pursuit of equity in Education*. Dordrecht: Kluwer Academic Publishers.
- Meuret, D. (2001). A system of equity indicators for educational systems. In W. Hutmacher, D. Cochrane, N. Bottani (Eds) *In Pursuit of Equity in Education*. Dordrecht: Kluwer Academic Publishers.
- Muller, W., Karle, W. (1993). Social selection in Educational systems in Europe, *European Sociological review*, 9.
- Oecd (2001). *Education at a Glance: OECD Indicators*. Paris: Oecd.
- Rawls, J. (1971). *A theory of justice*. Oxford : University press.
- Sen, A. (1992). *Inequality re-examined*. Oxford: Oxford university Press.
- Shavit, Y., Blossfeld, H.P. (1993). *Persistent Inequality*. Westview Press, Boulder, Co.