

THE «METHODOLOGY» OF COMPARATIVE EDUCATION

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*«at the present stage... it is
impossible to institute
comparison... until... the
statistics become... more uniform
and comparable».*

KANDEL (1933), p. XI

These days, and as judged by rigorous quantitative standards, the traditional methodology of comparative education appears highly simplistic. Yet it is irresistible and should be part of any analytical investigation in education. The paper discusses and illustrates the above points by means of several examples.

Looking in retrospect at a quarter century of comparative education, what has been its methodology? This is difficult to answer in a generalized way because of the variety of disciplinary hats worn by the comparative education analysts. But two groups could be clearly distinguished:

- (a) Educationists, historians, anthropologists and philosophers using a macro, case study, country-based, deductive-narrative approach; and
- (b) economists, sociologists, statisticians and econometricians using a micro, individual-observations, student-based approach.

Looking at a recent single issue of the *Comparative Education Review*, Levy (1985) typifies the first methodological group, above, while Farrell and Schiefelbein (1985) is a good example of the second.

In all cases there is a search for variation in order to differentiate outcomes and attribute them to various factors, like the adoption of policy A in country X or policy B in country Y. (1). In the simplest way, the source of such variation can be the comparison of two countries. A sample size of $N = 2$ has been the traditional methodological mode in comparative

(1) For good discussions of «methodological» issues in comparative education (although in what I call the «traditional» sense, hence the quotation marks) see Threthewey 1976, Kazamias and Massialas 1982, and Noah 1985.

education, from the inception of the field to the present. (For a typical example, see Zachariah and Hoffman, 1984). In a more sophisticated fashion, the source of variation can come from a sample of $N = 30$ countries, where the analyst might go beyond the descriptive-anecdotal-anthropological aspect of the previous case and at least attach statistical significance, (or insignificance) to the observed patterns (e.g., Heyneman and Loxley, 1983). Lastly, the variation can come from the records of a sample of $N = 14,000$ students in a number of countries, where one may be able to statistically test a wider array of educational issues (e.g., Psacharopoulos 1985a).

The field has naturally evolved from (a) to (b), above. Although (a) is still the traditional methodological mode among non-quantitative scholars in the field, (b) is gaining momentum. In fact the second type of methodology is the sine qua non of an extensive literature not normally read by comparative educators. To put it differently, plenty of other social scientists are practicing comparative education without even realizing it. And their findings may be more powerful and rigorous than those writing in the mainstream of traditional comparative education.

To illustrate the point, I conducted a survey of the latest «one-volume» issues of two leading journals in the field: *The Comparative Education Review* published in the USA and *Comparative Education* published in Europe (2). Also, I picked a number of recent articles from other journals, relating to comparative education, although neither the journal nor the author would consciously be associated with such field.

The 31 articles published in the *Comparative Education Review* could be classified into the five, more or less distinct, categories shown in Table 1. (For the individual articles within each category see the Appendix). The first dominant feature of the articles is that over one third deal with *single-country* descriptions of some aspect of the educational system. This should not be odd for a *comparative* education journal, in the sense that such descriptions could eventually help someone in drawing comparative conclusion. The second feature is that, combining categories B and C, one half of the articles are *descriptive*, i.e., no effort was made by the author to formulate hypotheses, quantify key relationships in the system, say, by means of questionnaire surveys, and statistically test such hypotheses. But quantitative-analytical articles constitute about one fourth of the table of contents of the «volume», which is a marked departure from earlier volumes of the *Comparative Education Review*.

(2) In order to focus on the latest developments, the fictitious volumes were constructed as follows: *Comparative Education Review*, 4 issues: Volume 29, Numbers 4 and 30, 1, 2 and 3. *Comparative Education*, 3 issues: Volume 21, Number 3 and Volume 22, Numbers 1 and 2.

Table 1: A Taxonomy of CER Contents, Latest Four Issues

Nature of Article	Number of articles	Percent
A. Theoretical	3	10
B. Descriptive - Single Country	11	36
C. Descriptive - Multi Country	4	13
D. Analytical-Quantitative	7	22
E. None of the Above	6	19
Total	31	100

Source: See Appendix

In fact, a similar exercise conducted on the contents of *Comparative Education* (not reported here in detail) revealed that only one of the 16 articles (by Horovitz) issued analytical techniques (in this case, a chi-squared test). Such comparison between the two journals testifies to the analytical-quantitative gap between US and European scholars in the field.

At the same time, several articles have appeared in the non-comparative education literature, or at least in journals not normally read by «comparative educators» that in my opinion are more comparative (and rigorous) than anything published in the mainstream comparative education literature. Boissiere, Knight and Sabot (1985), published in the *American Economic Review* is a good example. By means of worker surveys in Kenya and Tanzania, they draw conclusions on the role of education in economic development in tow countries that have followed differential secondary school expansion policies. Another, nearer-to-home, example is Psacharopoulos (1985b) published in the *Journal of Human Resources*. Although I have been comparing returns to education since 1972 (the latest survey covering 60 countries), it has never occurred to me that I am consciously practicing comparative education!

Is one methodological approach better than another? The answer depends upon the hypothesis to be tested and, of course, upon the background of the researcher and the means at his or her disposal. The issue in all cases is that of holding other things constant while observing variation in some criterion variable. Expecting two countries to be even remotely similar in all respects other than the item under investigation is utopia. But country variation in other respects could help in the «testing» of a particular hypothesis. For example, if a particular educational policy fails in countries as different as China and India (as in the case of combining education whith production described by Zachariah and Hoffman, 1984) or Colombia and Tanzania (as in the case of diversified secondary

schools analyzed by Psacharopoulos, 1985a) one might be led to the conclusion that such policies are not good, no matter what the country circumstances.

The tradeoff and complementarity between the two types of methodology (micro and macro) can be illustrated by means of the example per excellence in this field, namely the role of education in economic development. The historical, macro, non-quantitative approach is to compare different countries on a series of indicators, like the extent of literacy in the population and an index of economic development, like the per capita income. As a result, statements are made as to whether education precedes or lags economic development (e.g., see Easterlin, 1981). On the other hand, the more analytical or quantitative approach, would be to formulate a theory of what factors contribute to economic growth, like the growth, like the growth of labor, physical capital, land and education, and test the model using a growth accounting equation (e.g., E. Denison, 1967):

$$Y = f(K, L_r, L_d, E_d, Z)$$

where Y is a country's gross national product, K the amount of physical capital, L_r the number of workers, L_d the amount of land, E_d some measure of the stock of human capital or education and Z other, residual, factors contributing to production.

Where I believe the two approaches are complementary, is that unexplained residuals or outlier countries under the second approach, could be explained by the intricate knowledge of specific country conditions, something that typically escapes the quantitative micro-analyst. Consider as an example the case illustrated in Figure 1, where Surlandia and Ruritania started from the same conditions after independence (1960), i.e., both countries had a mean educational attainment of the population equal to 3 years of schooling and a per capita income of \$200. By 1980, both countries trebled the educational attainment of the population to 9 years of schooling. Yet, after all possible statistical controls, Surlandia's per capita income exceeds that of Ruritania by \$200. What is the reason? It is here that knowledge of non-easily measurable, qualitative differences between the two countries could provide an explanation. For example, it could be that Surlandia has followed a free market system, where individuals were able to capitalize on the human capital they have acquired, whereas Ruritania has adopted a socialist policy of «equal pay» and thereby incentives were dampened and productivity growth was impaired.

Clearly, interdisciplinary treatment of a given phenomenon provides richer interpretation and explanation. This is the reason that traditional-descriptive comparative education will be with us forever, although I see — and welcome — an increasing tendency in the use of more quantitative-analytical techniques and methodologie, especially on the West side of the Atlantic. The field has gone a long way since Jullien's (1817), Sadler's (1902) and even Kandel's (1933) times.

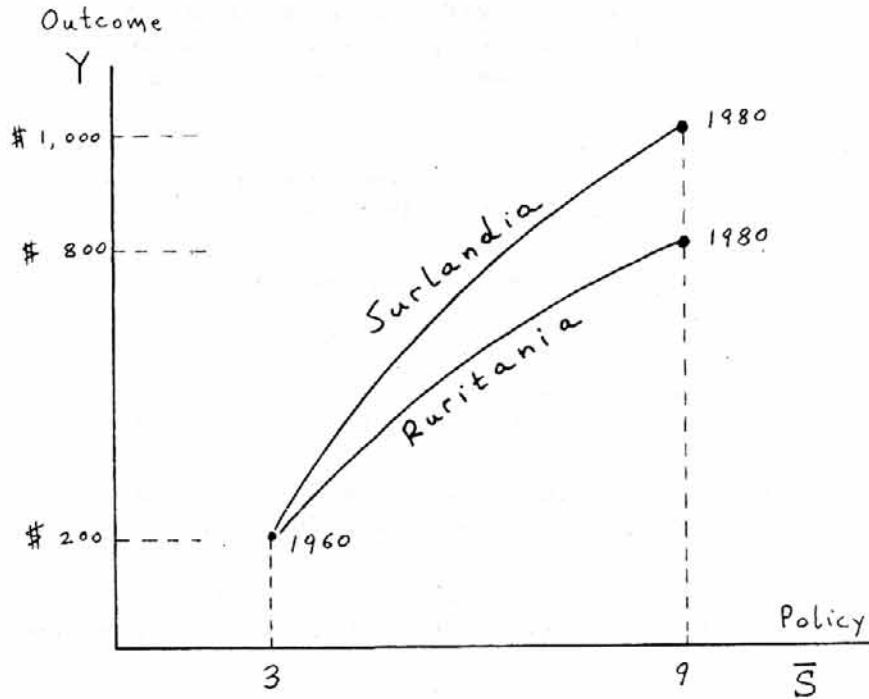


Figure 1. A two-Country comparison between Policy and Outcome
 \bar{S} = Mean years of schooling of the labor force
 Y = Per capita income

BIBLIOGRAPHY

- BOISSIERE, M., KNIGHT, J.B. and SABOT, R.H., «Earnings, Schooling, Ability and Cognitive Skills», *American Economic Review*, 75, 5 (December 1985): 1016-1030.
- DENISON, E., *Why Growth Rates Differ: Post-War Experience in Nine Western Countries*, Washington, D.C.: The Brookings Institution, 1967.
- EASTERLIN, R., «Why Isn't the Whole World Developed?» *The Journal of Economic History* 41, no. 1 (March 1-19), 1981.
- FARRELL, J.P., «The Necessity of Comparisons in the Study of Education: The Salience of Science and the Problem of Comparability», *Comparative Education Review*, (February 1979): 3-16.

- FARRELL, J.P., and SCHIEFELBEIN, E., «Education and Status Attainment in Chile: A Comparative Challenge to the Wisconsin Model of Status Attainment», *Comparative Education Review*, 29, 4 (November 1985): 490-506.
- HEYNEMAN, S. and LOXLEY, W., «The Distribution of Primary School Quality within High- and Low-Income Countries», *Comparative Education Review*, 27, 1 (February 1983): 108-118.
- JULIEN M.-A., Esquisse et Vues Préliminaires d'un Ouvrage sur l'Éducation Comparée (1817), *International Bureau of Education*, Geneva, 1962.
- KANDEL, I.L., *Comparative Education*, Houghton Mifflin, 1933.
- KAZAMIAS, A. and MASSIALAS, B., «Comparative Education», in *Encyclopedia of Educational Research*, 5th Edition, McMillan, 1982: 309-317.
- LEVY, D.C., «Latin America's Private Universities: How Successful are they?» *Comparative Education Review*, 29, 4 (November 1985): 440-459.
- NOAH, H., «Comparative Education: Methods», in T. Husén and N. Postlethwaite, eds. *International Encyclopedia of Education*, Pergamon, 1985: 869-872.
- PSACHAROPOULOS, G., «Curriculum Diversification in Colombia and Tanzania: An Evaluation», *Comparative Education Review*, 29, 4 (November 1985a): 507-525.
- PSACHAROPOULOS, G., «Returns to Education: A Further International Update and Implications», *Journal of Human Resources*, XX, 4 Fall 1985b: 583-604.
- SADLER M.E., *The unrest in Secondary Education in Germany and Elsewhere*, Board of Education Special Reports on Education Subjects, Vol. 9, Education in Germany. His Majesty's Stationery Office, London, 1902.
- THRETHEWEY, A.R., *Introducing Comparative Education*, Pergamon 1976.
- ZACHARIAH, M. AND HOFFAMAN, A., «Ghandhi and Mao on Manual Labor in the School: A Retrospective Analysis», *International Review of Education*, vol XXXI, 1985: 265-282.

APPENDIX

Classification of CER Articles, Latest Four Issues

A. *Theoretical*

1. Lê Thành Khôi on education theory
2. Kelly and Altbach on comparative education
3. Thomas on educational theory and practice

B. *Descriptive-Single Country*

4. Hawkins on higher education in China
5. McKenna on university reform in Spain
6. Fujimura-Fanselow on women in Japan
7. Robinson on people-run schools in China
8. Katriel and Neshet on Israeli school culture
9. Eirsemom, Hallett and Maundu on folktales in Kenya
10. Teese on private school in France
11. Szekely on educational reform in the Soviet Union
12. Lee on Soviet adult education
13. Epstein on children's rights in China
14. Brown on primary schools in China

C. *Descriptive-Multicountry*

15. Levy on Latin American Universities
16. Grubb on vocationalism in developing countries
17. Torney-Purta and Schwille on civic values
18. Limage on adult literacy

D. *Analytical-Quantitative*

19. Farrell and Schiefelbein on status attainment in Chile
20. Psacharopoulos on diversified schools in Colombia and Tanzania
21. Halpern on early childhood in Latin America
22. Mingat and Tan on public funding in education
23. Obradovic on educational reforms in Yugoslavia
24. Kinmoth on engineers in the US and Japan
25. Chung on Japanese universities

E. *None of the Above*

26. Altbach on Unesco
27. Sack on Unesco

28. Hufner and Naumann on Unesco
 29. Weiler on Unesco
 30. Finn on Unesco
 31. Farnham on Unesco
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