

# **Some Methodological Issues in Cross-National Educational Research —Quality and Equity in Student Achievement\***

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## **Abstract**

This article offers a critical review of measurement, analysis, and interpretation of international comparative data on socio-economic status and science achievement, as reported in the 2006 round of PISA, the Programme for International Student Assessment carried out by OECD, the

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Organization for Economic Cooperation and Development. The OECD analysis overreaches by offering highly specific policy-related interpretations of correlations among socio-economic status and science achievement within and between schools among the large number of nations participating in PISA. The PISA measure of socio-economic status has no interpretable metric, and it is not strictly comparable across nations or years. The OECD analysis failed to identify independent effects of the components of socio-economic status or differences in those effects among nations or among areas of academic achievement. There were notable failures to identify and compensate for international differences in the reliability of the socio-economic data and to address the implications of international differences in the variability of socio-economic status. A primitive analysis of socio-economic effects on academic achievement, on between- and within-school differences in achievement, and differences in those effects among nations led to unwarranted inferences about national differences in academic achievement and factors affecting those differences. The article offers practical suggestions about ways to improve the analysis of the highly valuable PISA data.

**Key Words:** Academic achievement, contextual effects, Programme for International Student Assessment, school effects, socio-economic status