

The Rise of Data in Education Systems: Collection, visualization and use, edited by Martin Lawn, Oxford, Symposium Books, 2013, 160pp., £28 (paperback), ISBN 978-1-873927-32-8

This edited collection makes a timely contribution to the comparative and historical study of education and will be of interest to a wider audience through its focus on the development and use of quantitative data in different education systems. The discussion is to some extent framed with reference to the current role of data from the Programme for International Student Assessment (PISA) in shaping the development of an evaluative language for education with the power to impact on what individual countries do. But this collection also raises new questions about the creation and flow of quantitative data in education, how they arise in particular forms at different points in time to serve particular purposes, and how and when they disappear too.

PISA is data collection on a grand scale. Collected by the Organisation for Economic Co-operation and Development (OECD) on a three-yearly cycle, PISA data generate single number points of comparison between countries that are designed to provoke policy discussion about winners and losers, and about the necessary policy prescriptions to do well. This is a historically specific turn of events, in part dependent upon the speed and ease of processing of the modern computer to perform the depth of statistical calculations required. The findings interact with conceptions of human capital and system efficiency that have become dominant metaphors within the economics of education and education management, and that help determine the particular set of variables plugged into the statistical modelling. Education within PISA is treated as a system of *inputs*, variously defined in terms of money, cultural capital, teacher quality, and the structural features governing the organization of schools nationally and locally, and *outputs*, represented by student test performance data expressed in national averages and dispersions round the mean. The model seeks to explain cross-national variation in outputs in terms of the inputs measured.

The articles written for *The Rise of Data in Education Systems* throw into relief the peculiarity of what PISA does and the specificity of the lens it brings to bear on schooling by describing the form and use of quantitative data in education at other times and in other places. The diversity of examples makes for a very thought-provoking read. They include:

- explorations of earlier attempts to compare national education systems through the collection and presentation of data in quantitative form (Martin Lawn, 'The internationalisation of education data: Exhibitions, tests, standards and associations'; Noah W. Sobe, 'Educational data at late nineteenth- and early twentieth-century international expositions: "Accomplished results" and "instruments and apparatuses"'); Joyce Goodman, 'Visualising girls' secondary education in interwar Europe: Amelie Arato's *L'Enseignement secondaire des jeunes filles en Europe*')
- the design and analysis of administrative data, and its use in monitoring education-system health and functioning at national and regional levels (Marcelo Caruso, 'Policing validity and reliability: Expertise, data accumulation and data parallelisation in Bavaria, 1873–1919'; Ian Grosvenor and Sian Roberts, 'Systems and subjects: Ordering, differentiating and institutionalising the modern urban child'; Ines Dussel, 'Counting, describing, interpreting: A study on early school census in Argentina, 1880–1900')
- the creation and application of different assessment tools for measuring pupil attainment and categorizing different segments of the pupil population (Joakim Landahl and Christian Lundahl, '(Mis-)Trust in Numbers: Shape shifting and directions in the modern history of data in Swedish educational reform'; Romuald Normand, 'Governing population: The

emergence of a political arithmetic of inequalities in education. A comparison between the United Kingdom and France’).

These accounts do much to break up a monolithic view of numbers and the work they do, reminding the reader of the very different ways they can be mobilized. There are points of tension and challenge that beset those generating and using quantitative data. Sobe documents the difficulties the early national exhibitors experienced in knowing how to present their own education systems at scale and in the best light, through the objects and categories they constructed for display. Caruso explores how a parallel system of inspection grew up in Bavaria in the late nineteenth and early twentieth centuries as civil and religious inspectors passed more or less generous judgements on the same schools, leading to competition and distrust over the legitimacy of the data and their respective claims to expertise. Categories are not fixed but emerge in use, and can be deployed for rhetorical purposes. Dussel records how the nineteenth-century Argentinean administrator, Francisco Latzina, himself an immigrant from Italy, meticulously recorded school buildings, benches, and desks, as well as instructional equipment – wallcharts, globes, and geometry sets – the subjects taught, the numbers of pupils, recorded by gender, and the numbers of teachers and their salaries. Regional variations were highlighted, yet in a country with diverse immigrant and indigenous populations, heritage and ethnicity were obscured. Nevertheless, “Raw data” was [sic] mobilized within narratives that were inscribed into a politics of pity and indignation, and that were helpful in rallying support for specific policies (112), and Latzina used the data to successfully argue for reform. Lawn and Normand explore the formation of new networks of data specialists, who apply, borrow, and adapt each other’s analytic techniques, with Lawn focusing on the comparative aspects of data collection and management used to explain educational costs, organization, and progress; and Normand recording the different trajectories to the quantification of educational inequalities in psychology and sociology in France and the UK as they interacted with dominant conceptions of population growth, decline, and social reproduction.

The diversity of the quantitative data considered, the different working hypotheses that underpin their design, analyses, and modes of display, and the varied uses to which such data are put stimulate a range of necessary and vital questions. The careful analysis of the rise, fall, and recent return of standardized testing in Swedish schools is a particularly interesting case study, in which Landahl and Lundahl contrast the concepts of panoptical and synoptical power, glossed as the one watching the many and the many watching the few, in their account of the inherent uncertainties associated with placing the judgements formed through standardized testing in the public domain. They argue that the shift from normative to competence-based assessment systems has been crucial in making failure visible under new terms which have yet to be fully disrupted. ‘They have created data that speaks the language of crisis. Paradoxically, they have also fed dreams of high performance ... In this sense the gap between visions and perceived reality has dramatically increased’ (73). Their emphasis on the conflicts embedded in legitimizing numbers is an important contribution to debate.

The range of references the articles draw on is impressive and signposts some of the most interesting discussions developing in the contemporary literature on quantification as a social process. The case studies presented here are far from being a minor detour round distant points in the past, but rather help undo the logic to much action in the present.

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