

A relationship stuck in the past—  
Contributions of demography to educational  
planning

EXTENDED ABSTRACT

submitted to Stream 1704 ‘Using demography in business and public sectors’ of the XXVI. Int’l Population Conference in Marrakech 2009

Bilal F. Barakat  
Vienna Institute of Demography

September 12, 2008

Public planning is ultimately directed at benefiting society; as such the demographic profile of the society in question is crucial. This review article examines the use of demography in planning and policy-making in the public education sector. At a previous point in time, some characterised educational planning as essentially ‘an exercise in applied demography’. During the 1960s, when educational planning in developing countries was mainly concerned with keeping pace with explosive growth in the school-age population, and was beginning to apply demographic techniques to student cohorts and flows, this was manifestly true. But to what extent, if at all, have changes in demographic concerns since that time — from ‘population explosion’ to ageing, regional imbalances, and uncertainty — been reflected in parallel changes in educational planning and policy?

This study provides a comprehensive review of demography in educational planning, in pursuit of three interrelated goals. Firstly to analyse the overlapping substantive and methodological concerns, secondly to document the varying extent to which such exchange has in fact taken place, and thirdly to argue in favour of increasing the application of demographic insights and techniques to the public education sector.

In terms of methods, this study is based on an analysis of educational planning and policy documents and manuals between the 1960s and the present drawn from the documentation centre of the International Institute for Educational Planning (IIEP) and other sources and a supplementary review of state-of-the-art education simulation models. The latter comprehensively covers customised models in use in developing and industrialised

countries, proposed by research institutions, and those developed by UNESCO, the World Bank and other international organisations.

The study's results indicate a divergence over time of the methods, techniques and topical concerns of the two disciplines has led to a state of unproductive disconnect. Public decision-making in education tends to ignore important demographic insights and there is little demographic research capacity in the educational research community, even though many areas of overlapping interest and potential for cross-fertilisation are evident. It is argued that it is therefore time to reinvigorate the link.

Such overlaps and interdependencies can be identified both at the substantive and methodological level.

At the substantive level, demographic processes and transitions affect both the quantitative, qualitative and political aspects of public schooling.

In an age of targets of universal enrolment, the direct link is evident between population growth and school expansion on the one hand, and population decline and managed educational contraction on the other. Debates about the supply and demand of teachers and school leaders are incomplete without considering the age-sex profile of the teaching force.

In terms of qualitative change, typically higher birth rates among migrants (due to both higher fertility and younger age structure) imply that schools are more affected than society at large by the challenges of migrant integration, and lifelong learners need to be catered for such as non-traditional audiences incl. retirees increasingly seeking access to universities and other training institutions.

The socio-political interaction includes the question to what extent biological and social/educational reproduction coincide, as well as the question of how changes in the relative size of constituencies at different stages in the life cycle affect the political economy of education spending.

In addition to these substantive overlaps, demographic *techniques* are an important part of the methodological toolkit of educational planning. Both are modelling-intensive disciplines. However, again this potential is not fully exploited. Education simulation models tend to use projections of the school-age population strictly as a single-value input, and advances in demographic modelling, such as probabilistic or agent-based approaches, have not been mirrored in education models. The standard definition of 'school life expectancy' differ from the demographic definition of 'life expectancy' in a way that limits its utility as a period measure.

This is true even in planning environments suffering from HIV/AIDS pandemics that have provoked innovative approaches to demographic modelling, and where the size of the school-age population is no longer the only demographic factor affecting the education sector directly, as other effects, notably adult mortality as applied to teachers and parents, make their impact felt. Innovative approaches to educational planning are needed in this area, such as explicitly accounting for uncertainty, as the implications are complex.

It is not even always clear, for instance, whether the disease increases or decreases demand-supply gaps in schooling, as it can lower both demand (through lowered fertility and survival to childhood) and supply (through increased teacher attrition) in non-linear ways.

Education is intrinsically a very long-term process, where we attempt to prepare individuals for a world of life and work that may be decades in the future. Educational policy changes take a long time to implement and to bear fruit. At the same time, demographic processes are one of the few areas with respect to which fairly confident statements can be made over a time horizon of several decades. Demography is therefore a prime candidate to provide policy information for the education sector.

Reinvigorating the linkage between demography and educational planning and policy would be very timely.

The insight is gaining hold among researchers and policy-makers that the above educational challenges of demographic change can no longer be ignored and that the social organisation of schooling needs to adapt. In international development co-operation, the difficulty in achieving education-related and other development targets such as the Millennium Development Goals (MDG) and Education for All (EFA) have highlighted the need to pay greater attention to linkages between different development dimensions, incl. population. Accordingly, in ensuring that the next set of international targets are achievable, demographic analysis can play an important role.