

What makes a country get better results? — Analysis using Frame Theory

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This thesis proposes a new approach to analyzing SACMEQ and other international assessments using “GNI per capita”, “SES”, and “Scores” to clarify the relationship of the country’s economic background and educational achievement. Frames are constructed with countries in order of the size of the indicators (e.g. GNI per capita), in which the piled graph of each answers are located. The graphs are expected to show similar shapes if they have correlations, with the indicators’ logical shapes: Logarithm for “GNI per capita”, and a Function for “SES” and “Scores” with a liner in the middle and rapid inverted curbs at the ends. The major advantage of this frame analysis is to enable the handling of raw data as qualitative information, compared with regular regression analysis in which the data should sometimes be reformed.

This has resulted in some interesting findings, such as the following:

1. Seychelles and Mauritius which are shown to have sharp and long socio-economic lines (Ross et al., EFA Global Monitoring Report 2007) turned out to have a fair distribution in students’ scores in each level of SES, while some other countries hold tight links between students’ SES and their Scores.
2. The country’s GNI per capita does not necessarily link with the scores. Kenya, Tanzania, and Mozambique have better performances than would be expected from their economic status.
3. Teachers’ scores are rather higher in some lower GNI per capita countries but not fully reflected to student’s scores.
4. Material supports are better than none but not absolute.
5. Speaking English at home is a great advantage, but sometimes less effective.
6. The most powerful key to breaking through the economic barrier is “Home interest”, which is related to Parents’ education, but does not need to be high. “Graduate of elementary school” parents have a higher interest than lower or higher educated parents. Therefore, long term international support is needed in order to encourage children who are presently at school to graduate, so they can support their future children.