

Measuring Literacy in Developing Countries from an International Perspective

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Across the world more than 860 million men and women cannot read or write [1]. That is, there are more illiterate adults than there are adults in Europe and North America combined. In developing countries, it is estimated that one person in four is illiterate – yet this figure is probably a significant underestimate.

Yet literacy has been proved to be key to peace, health, and the economic success of people and nations. The opportunity to acquire the ability to read, write and calculate as been recognised as a basic human right. Accordingly, governments, NGOs and international organisations are increasing efforts to help all people become literate and able to function effectively in literate societies. As a consequence, it has become even more crucial than before to gather better data, in order to monitor trends, assess the impact of these efforts, and guide new policy interventions.

This paper looks at the needs for literacy statistics in the context of global monitoring and of informing policy. It analyses the quality of the literacy data currently available at international level, and presents the development of new methods of measurement.

1. What needs measuring?

International literacy goals and indicators

The year 2003 marks the beginning of the United Nations Literacy Decade, which renews the commitment and efforts of the international community to improve literacy across the world. The decade takes place in the context of the Education For All (EFA) movement, which has agreed six goals for extending basic education to all children and adults worldwide. Literacy is addressed in EFA Goal 4: “achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults”. The first part of this goal is generally understood as the objective to reduce the illiteracy rate by half, and progress towards this goal is monitored through three indicators:

- (a) the youth literacy rate, based on the population aged 15 to 24;
- (b) the adult literacy rate, referring to those aged 15+;
- (c) the ratio of female to male literacy rate.

Similarly, the Millennium Development Goals (MDGs), which encompass not just education but also health, AIDS, poverty, gender equality and other basic human needs or rights, use two literacy indicators:

- (a) the youth literacy rate – as for EFA;
- (b) the ratio of literate females to males for 15-24 year olds.

In theory, these indicators refer to the concept of literacy defined as “the ability to read and write, with understanding, a short simple sentence about one’s daily life”. This definition is very limiting. It suggests a dichotomy between literates and illiterates, when it is acknowledged that in reality there exist various levels of proficiency. As an example, the definition does not take into account

various levels of literacy skills (including the speed of reading) that are fundamental in real life (it is not much use to be able to decipher the destination of a bus so slowly that it passes you by). The definition also makes no allowance for the different types of literacy skills needed for work, or for family life, nor that of numeracy.

However, the main aims of these goals and measures are to raise the profile of literacy, put pressure on governments, NGOs and other relevant agencies to ensure that literacy is given adequate resources and policy attention. In this respect, the indicators can prove useful, and help keep track of any improvement or deterioration of the situation at global, regional and country levels – to an extent that depends on the quality and the consistency over time of the measurements methods used.

Beyond international indicators

Because they are part of wider education or development frameworks, the EFA and MDG indicators on literacy are necessarily general and limited in number. They are useful in overall monitoring but somewhat less useful in building an understanding of literacy. They do not seek to answer more specific policy questions such as ‘How is the literacy rate for minorities and population sub-groups changing, compared with the overall population literacy rate in a given country?’ or ‘What is the relationship between people’s level of literacy and their schooling or non-formal education experience?’. These issues however are often of major concern to anyone developing literacy policy including national governments, international organisations, and NGOs. The small number of literacy assessment surveys that have taken place in developing countries have generally sought to investigate such issues. Labour market related questions such as ‘Are people’s skills sufficient to perform their job well?’ are explored in more advanced countries’ surveys.

Whilst some countries have made independent attempts to address the data needs raised by more specific policy questions, it is important to stress the value of conducting such efforts at international level in a comparative framework. First, it means that expertise and costs are then pooled. Second, such a coordinated approach actually helps to capture data for many countries where it would otherwise not happen. Third, careful comparisons across different countries or areas can reveal very interesting differences, leading to better-targeted interventions. Also they often serve as strong advocacy tools.

The development of new literacy surveys must take into account the needs for data on sub-groups within populations and on the relationships between literacy and other factors. At the time of writing the UIS is reviewing existing experiences of literacy assessment surveys and consulting with a wide range of literacy experts in order to list the data needs and identify those that should be addressed in its Literacy Assessment and Monitoring Programme (LAMP). Detailed discussions with policy-makers and literacy organisations will take place in pilot countries which volunteer to take part in the Programme.

Assessing literacy in all written languages across the world would be a near impossible task. However, UNESCO as well as other international organisations promotes diversity, encouraging for example the provision of several years of basic education in the mother tongue before continuation with a majority language. Despite the difficulties it is crucial to bear these policies in mind and to ensure that international data collection and interpretation do not have an adverse effect on them.

2. How to measure ‘literacy’?

Quality of current global literacy data

In practice, data used to monitor the EFA and other international goals are currently collected using a variety of different definitions. The data used for monitoring these goals sometimes originate from national censuses or, more rarely, from ad hoc household surveys. In a few countries the interviewers present a written sentence to the respondent and judge whether they read it aloud correctly. In many cases however the respondents are simply asked to assert whether they are

literate or not, or sometimes the question may quote the UNESCO definition ('Can you read and write, with understanding, a simple sentence relating to your daily life?' Yes/No), or variations on this theme. Questions like these generally lead to overestimates of literacy rates, due to a variety of reasons. Some respondents consider that they are literate because they can write their name, whilst others may be reluctant to admit that they cannot read. According to a study in rural Bangladesh, more than half of those who asserted that they could write were not recognised as able to do so according to a minimum standard [2]. Discrepancies between self-declaration and assessment can also occur the other way round, for example when an illiterate head of household incorrectly reports family members as being illiterate.

A large number of countries do not collect data on literacy at national level at all and instead use educational attainment as a proxy. For example, some consider that all those who have attended school (perhaps for a specific number of years or reaching a particular grade) are literate. Such proxy measures however are not satisfactory, since it is not uncommon in some poorer countries to have attended school without having acquired sustainable literacy skills. For example, an analysis by the World Bank showed that both in Togo and Niger only 60 per cent of the adults who had attained grade 5 could 'read and write easily' [3].

These few examples illustrate the diversity of the definitions and measurements in use which contributes to the difficulties in making comparisons and drawing conclusions about the state of literacy globally.

Another difficulty arises simply from the lack of any literacy data. There are no data available for more than 1 in 5 countries since 1975, and for more than 2 in 5 since 1985. Estimates and projections are compiled for all countries for all years based on the data available and usable. A model has been applied to use the observed literacy data by 5-years age group and by gender, attempting to fit a logistic curve. Although the resulting estimates usually prove reasonably close to any new data received subsequently, this is not surprising given that literacy rates change slowly, and that countries tend to apply the same methodology for data collection over time.

Developing literacy measurement tools

It is the case however that many countries are gradually seeking to produce better literacy data through assessment surveys. The IALS is the probably the literacy assessment survey the most developed technically. However it was conceived by and for more developed countries, and has taken place primarily in OECD nations. On the other hand, recent national initiatives such as in Lao or in Cambodia undertook full literacy assessment but without a strong theoretical foundation. The aim now is to progress towards literacy assessment surveys that can satisfy the needs outlined above, that give comparable results across socio-cultural and linguistic backgrounds, and which rely on a robust and technically sound methodology.

This requires identifying data collection instruments that are particularly sensitive at the lower end of the proficiency scale. Indeed whilst the IALS method could in principle be adapted to assess populations anywhere, by itself it is relevant only to societies which are already relatively literate. This is partly due to the fact that its lowest level would cover a wide range of people in less literate societies. For instance, it categorises in single group the respondents who are unable to decipher anything, with others who are clearly able to read and write with some understanding but who fail to grasp the text or the test question well enough to provide the complete answer required. In many developing countries, a very significant percentage of the population would be judged to have limited literacy skills. Therefore, in order to build a meaningful picture of the literacy situation and to obtain better information on those who have limited proficiency in literacy, it is necessary to distinguish various levels or components of literacy skills at the lower end of the scale.

How can this be done? Cognitive research has identified the following aspects that play a key role in the development of sustainable literacy skills [4]. First, to become able to decipher code and thus

to read, learners need to understand that spoken language is made of discrete sounds (phonological or phonemic awareness). They also must be able to associate sounds to symbols (graphophonemic knowledge). This is true of any language and alphabetic or syllabic writing system, though less so for scripts based on ideograms (which concern mainly Chinese and its derivative Japanese kanji). Secondly, speed is essential to the reader's understanding. The working memory (about 12 seconds in educated people) soon fills up if the reader takes too long, and so the start of a sentence is forgotten by the time the end is reached. Therefore, automatic reading of words and syllables (rather than letter by letter) is necessary in order to reach sufficient speed and read with comprehension. Other building blocks in the development of literacy skills can include print awareness, word reasoning, understanding the language structure and vocabulary. Also, at the lower end it is often desirable to test reading and writing separately.

Reading diagnoses have been built around these cognitive and other test components. They help assess a learner's status and make it possible to give them tailored exercises for improving their skills. In the context of international surveys however, it might not be useful to assess all these cognitive aspects. There are advantages in having a test which is not too long or complex. It must therefore include only components for which the percentage of the population that fails or succeeds in them is valuable information, or for which it would be useful to analyse the relationship between the respondents' success with socio-economic or other characteristics.

It is clear that issues of comparability across languages and cultures arise at all levels of proficiency. These might be more acute for the lowest levels, partly because this area is still very much in development, with very few cross-linguistic experiences to learn from. Also, the lower levels are more closely affected by the nature of each language. As an example, once phonetic awareness is acquired, other things being equal, a learner in a language where the relationship between sound and symbol is stable (such as Italian) will be closer to achieving basic literacy than a learner in a language with irregular spelling (such as English). Thus, although it remains useful for countries to collect data on the lower literacy skills in a comparable way, when interpreting data not all types of comparisons will be possible. The UIS is undertaking research in order to select the appropriate components and build a lower level assessment module.

3. Conclusion

There is an urgent need to improve measures of literacy in developing countries. Various tests and surveys have been designed and implemented which offered partial answers. Current developments at UIS are concerned particularly with putting together the relevant elements of such efforts, coupled with new UIS initiatives and theoretical studies on the developments of skills. We hope that this will deliver a truly cross-national survey that takes into account the varied stages of developments in literacy, the multitude of linguistic and socio-cultural contexts, and the changing priorities for education policies.

REFERENCES

- [1] UNESCO, EFA Global Monitoring Report 2002
- [2] Greaney, Khandker, and Alam, Bangladesh: Assessing Basic Learning Skills, by 1999
- [3] Mingat, communication to the UIS, November 2002
- [4] Abadzi, Improving Adult Literacy Outcomes: Lessons from Cognitive Research for Developing Countries, 2003

RESUME

Ce papier traite des besoins statistiques à échelle globale dans le cadre du suivi et de la formulation de politiques sur l'alphabétisation. Il analyse la qualité des données disponibles au niveau international, et présente le développement de nouvelles méthodes d'évaluation.