

CRACKING THE ILLITERACY KERNEL: NEED FOR NEW MODEL

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Introduction

The importance of literacy for the nation can hardly be over-stressed. Literacy helps people to acquire knowledge and to communicate with others, to be effective as members of a society, workers and citizens. The economic value of a literate work-force is generally recognized. And to the individual, it helps in daily life- Balancing a checkbook, paying the telephone bill, following directions on a prescription medicine, consulting a bus schedule, and using a voting machine. The link between basic education and development efforts is taken into account in all national planning. In cultural participation and family life, the place of literacy is essential especially in developing countries, where women are primarily responsible for rearing the children. Measures to improve family health reduce infant and child mortality by simple "do-able" actions, and ultimately to lower fertility rates, all rest on the capacity of women to understand the issues and follow advice that is usually recorded in written form. Politically literate members of a community are better endowed for co-operation and participation, and are thus empowered by their skills to become the agents of local development.

Literacy rate of a national population is taken by all international agencies as one of the basic indicators of national progress. Literacy is a measure of the well-being of the citizens of a given society. Organized efforts to achieve literacy for all make up a massive enterprise that absorbs a large part of public expenditure. Both the importance and the cost of national literacy make it essential to consider how to measure progress in this direction. To measure the extent of literacy in the national population is one step in assessing the effectiveness of current programmes and offering accurate data for shaping future programmes in the educational and social fields.

While only a little over 5 percent of the Indian population was literate in 1901 and 16 percent in 1950, the latest census conducted in 2001 indicates that the literacy rate is 65.4 percent. The decadal growth rate in literacy during the last century shows substantial progress, especially during the periods 1931-41, 1951-61 and 1991-2001. The number of illiterates has declined substantially during the last decade. However, we still have approximately 302 million non-literate adults today, and over 40 million children are not in school.

The context of this paper: A study on effectiveness of (Jyothirgamaya) Adult literacy programme in Nilampur Grama Panchayat of Kerala

Nilambur Panchayat is accredited as the first Panchayat with 100 percent primary literacy. The success behind the achievement is accredited to Jyothirgamaya programme organised by the panchayat in the year 2006-07. The urgency of giving literacy and primary education was felt as the first step towards achieving eradication of the backwardness among the rural people, especially the Scheduled Caste, Scheduled Tribes and Other Backward Classes in the society. There are three continuing education centres of Kerala State Literacy Mission in this Panchayat. Within their limitations, they were conducting continuing education programmes including the equivalency classes. But it was not enough. The Grama Panchayat consulted the Kerala State Literacy Mission and jointly they gave shape to the literacy programme 'Jyothirgamaya' (means "leading from darkness to light") - the total primary education programme.

A socio-educational survey was conducted in January 2006 as part of the Jyothirgamaya programme in a planned and systematic way. The survey revealed that more than 1500 people of the Grama Panchayat were either illiterate or educated below 4th standard. 'Jyothirgamaya' intended to cover the illiterates and dropouts at lower primary level at the age group of 15 to 50, with a stated purpose of providing all members in the age group education at least up to the 4th standard. Specifically it sought to achieve the following:

1. To achieve education with the level of 4th standard for all the people in the age group 15-50 years in the Panchayat.
2. To create conducive atmosphere for the overall progress in the socio-cultural status of the people in the Grama Panchayat.
3. To promote backward classes especially scheduled communities in their social, educational and economic field.
4. To start income generation activities for the selected group who successfully complete the training.
5. To conduct awareness and training programmes to the learners.
6. To bring out qualitative life improvement among the rural people.

To assess the programme two evaluation studies has been conducted in the same year itself. The present paper is a bye product of the authors' attempt to know how far the learners really

retained the benefits from the programme. The text book of the programme included the following topics- Malayalam, Mathematics, Environmental studies and English.

Based on this content the investigators decided to examine the following areas. A sub-test was planned with focus on the following aspect of reading Malayalam language.

- Letter identification
- Identification of vowels
- Identify symbols, glides
- Word recognition
- Combining words (read sentences)

The second sub-test was planned with focus on the following aspect of Malayalam language.

- Skill of writing letters symbols, glides.
- Dictation of words, sentences.

The third sub-test was planned with focus on the following aspects of arithmetic.

- Identification of numerals
- Ability to write numerals
- Identify values of numeral
- Addition and subtraction of numbers

Two subtests were planned on life skills tested via Awareness in the Thrust areas viz,

- Awareness of cleanliness
- Awareness of water conservation

Subtest 1

The first task is based on the area of reading skill. It is in the form of invitation letter in order to check the learner's ability to read Malayalam letters, glides, words and sentences. The administrator of the test has to mark the responses in the score sheet; i.e. whether the adult learners are able to read and identify letters, words and sentences or not. If the adult learners fail to read sentences, the administrator should listen to words and letters. This task includes almost all the alphabets in Malayalam.

Subtest 2

This task is in the form of a diary entry. This is intended to measure the ability to write Malayalam. The administrator should read the sentence and should allow proper time for writing the sentences. Scoring should be done separately for letters, words and sentences.

Subtest 3

This task is based on the simple arithmetic of use in the day-to-day life. The test is to be given to the adult learners those who completed the first subtest easily and the administrator should help others to read the questions. This subtest is arranged in the order decreasing difficulty; so the respondents who answer the first item can be presumed to know the entire task given here. It is not necessary to attend the whole task those who completed the first two subtests easily. Those who failed to answer the first level should attend the second level. If they again fail to answer the second level, they are required to answer questions up to fourth level. If they again fail, they should attend the 13th level. Those who fail to answer 13th level are considered as illiterate in simple mathematics. If they answer 13th level, they should answer the question in descending order up to 5th level.

Sample

A sample of 100 from the adult learners from among 1500 learners was selected from 12 wards out of 22 wards. The wards were selected by using stratified random sampling technique. The strata considered during the selection of sample were locale (urban and rural) and number of adult learners who participated the programme from each ward.

What did we find?

I. Extent of Reading Ability of Adult Learners

1. Thirty four percent of adult learners who attended Jyothirgamaya programme are able to read Malayalam words and sentences, of whom 3/4rd of learners had underwent primary education during their childhood. In the remaining 66 percent of adult learners are not able to read, of whom 2/3 rd of learners had underwent primary education.
2. There is no significant relation between the ability to read Malayalam and experience in primary schooling during their childhood among the adult learners who attended the Jyothirgamaya programme ($\chi^2=0.17$, $df=1$; $p>.05$)

II. Extent of Writing Ability of Adult Learners

1. Ninety eight percent of learners are able to write their name and address, of whom 72.42 percent of learners had undergone primary education during their childhood days.
2. 22 percent of the learners have achieved expertise in writing Malayalam words and sentences, of which, above 90 percent had underwent primary education during their childhood days. The remaining 78 percent of adult learners are not able to write Malayalam

words and sentences, though Majority of them had underwent primary education during their childhood days.

3. There is significant relation between the ability to write Malayalam and experience in primary schooling during their childhood among the adult learners who attended the Jyothirgamaya programme ($\chi^2=8.19$, $df=1$; $p<.01$)

III. Extent of Mathematical Ability of Adult Learners

1. 10 percent of adult learners have the ability for addition and subtraction using 2 digit numbers. All of them had underwent primary education during their childhood days.
2. 2/3 rd of learners are ignorant of Mathematics.
3. 7 percent of learners capable of writing numerical values composing of 3, 2 and 1 digit number.
4. There is significant relation between the ability in arithmetic and experience in primary schooling during their childhood among the adult learners who attended the Jyothirgamaya programme ($\chi^2=4.53$, $df=1$; $p<.05$).

IV. Awareness

1. 2/3 rd of adult learners who attended Jyothirgamaya programme have good awareness on cleanliness. 1/4th of adult learners have average awareness on cleanliness. Only 9 percent have low awareness on cleanliness.
2. 3/4 th of adult learners who attended Jyothirgamaya Programme have high awareness on water conservation, 15 percent of learners fall under the category of low awareness, below 10 percent of learners have average awareness on water conservation.

In Summary we followed the following steps:

1. Framework -Blueprint for design of tasks and scales
2. Task Development-Familiar, “everyday” tasks and scoring rules assess range of skills without disadvantage to any group
3. Field Testing: “Dress rehearsal” improves tasks and procedures, checks for bias
4. Data Collection- Sample design and collection procedures produce dependable results
5. Scoring- Extensive scoring and checks conducted for reliable, reproducible results
6. Analysis- Data analyzed to produce estimates of literacy performance and skills

What the authors learnt during and after the study

1. Census is a crude method for literacy assessment

Countries, typically rely on a national population census model, which most often determine literacy ability by self-assessment questionnaires and these same statistics over decades has provided a statistically robust way monitoring literacy levels on a national, regional and international basis. The traditional method of monitoring international literacy levels was clearly very limited since few countries bothered to actually measure individual skills in a large or broad enough population sample to assure that literacy levels were valid and reliable. Many specialists now agree that exclusive reliance on traditional indirect measures of literacy may be flawed, there is renewed discussion of the utility of proxy measures (Desjardins & Murray, 2004).

2. There are levels of literacy

Literacy is not a single skill or quality that one either possesses or lacks. Rather, it encompasses various types of skills that different individuals possess to varying degrees. There are different levels and types of literacy, which reflect the ability to perform a wide variety of tasks using written materials that differ in nature and complexity. Literacy in this connection can be seen as a continuous variable, ranging from the most elementary and mechanical ability to read and write a few words with great difficulty and no or little understanding to well-developed reading and writing skills that can be utilized for the most advanced purposes of communication. A person who can, for example, write only his name and some numerals and/or read just a few very simple words such as "yes", "no", "good" or "bad, is not literate in any meaningful sense. Wagner (2005), in an international context, divided these basic learning skills of reading, writing and numeracy in four categories and named these as **non level**, prerequisite level, basic level and advance level. NAAL and IALS follows different levels of literacy assessment.

3. Literacy is more than writing one's name or mere reading

As Resnick and Resnick (1977) point out, literacy in its earliest form consisted of signing one's name. It was not until much later that fluent oral reading became important, and not until the 20th century that reading to gain information was given primary emphasis. Standardized tests became fashionable and reading-grade-level scores became the focus of attention. Through the use of these instruments the term *literacy* has implied the acquisition of intellectual skills associated with basic academic competencies associated with reading and writing. Standards for literacy increased over the decades, from being able to read at a fourth-grade level, to reading at an eighth-grade level, and then by the early '70s, to a 12th-grade level. These measures came

under increasing criticism, however, because they did not provide specific information about the kinds of competencies that given levels of literacy imply.

4. *Literacy involves life skills*

Dakar Framework for Action (UNESCO, 2000), reinforce three of the six main stated Dakar EFA goals, namely: Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy, and essential life skills.

5. *Literacy has a variety of indicators*

Literacy rates currently draw on a variety of indicators, many of them serving as proxies for levels of actual literacy use.

6. *Adult education programmes require more robust evaluation practices*

Little progress could be made in our knowledge of the use, distribution, acquisition and programming of adult literacy without significantly improved assessment processes (Robinson, 2005) . This is especially important for building information systems to support policies and management of non-formal education among agencies, programmes, learners and educators; and Establishing long-term tracking systems of new literates for studying the impact of literacy on the quality of life.

7. *Functional definition of literacy needs to be practiced in evaluation as well*

Today most countries use a 'functional definition' of literacy in national assessments - one that captures the ability of people to use literacy to carry out everyday tasks. However, these common tasks vary according to local context, culture and requirements. Literacy must be seen as a tool for communication and for learning, not as a technique or skill valuable for its own sake. Literacy has no meaning apart from what it enables communities and individuals to do better. Literacy is about promoting relevant and meaningful learning for social transformation, justice, and personal and collective freedom. It is part of a broad debate about learning, education, diversity, development and power. While the theory of literacy has moved to a social view of literacy, policies of literacy promotion have lagged far behind.

8. *Functional definition are contextual*

Many official policies continue to deliver literacy as a functional and standardized skill, with little attention to differences of social context and scant regard for dominating or liberating effects.

9. *Numeracy is part and parcel of true literacy*

Generally, in adult literacy programmes, basic components of reading, writing and numeracy skills are included with different levels of difficulty.

10. *There are different emerging patterns of literacy assessment*

The decennial census estimates remain the most widely accepted and frequently quoted estimates of literacy. **The National Sample Survey Organization (NSSO)** conducts periodical sample surveys in which data on literacy status is collected along with a number of other socio-economic characteristics. Occasional reports published by the NSSO on literacy are based on the survey data and follow the Census definition. One report in 1991, however, adopted a slightly different approach. A literacy test was administered to a sample of those persons who said they were 'literate'. A number of **non-governmental initiatives** where literacy assessments are done in a more participative, innovative manner and are integrated into the learning process itself. **Coordinated decentralization (Total Literacy Campaign)** is a program unique in India, which operates according to a coordinated, decentralized approach. In order to make an objective assessment of literacy acquisition and to have a uniform yardstick for assessment of the success of the campaign, a committee was constituted in 1992 by the Government of India under the Chairmanship of Prof. R.H.Dave, an eminent educationist and former Director of UNESCO, Institute of Education, Hamburg. This committee laid down the principles for literacy assessment, possibly for the first time on such a systematic basis (Mathur, R.S., 1992). These are now uniformly followed throughout the country in all external evaluation of the campaigns. **The fourth set of literacy assessment practices** relate to the two other literacy mission programs, viz. Post Literacy and Continuing Education Program. In each of these programs, the norms have been laid down, and the competencies expected to be achieved by the learners spelt out. Tests have been designed and administered within a larger national framework.

11. *Assessment in adult education too needs to be formative*

Formative assessment (FA) is 'assessment **for** learning' as distinct from 'assessment **of** learning'. 'Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting students' learning. It thus differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence. An assessment activity can help learning if it provides information to be used as

feedback, by teachers, and by their students, in assessing themselves and each other, to modify the teaching and learning activities in which they are engaged. Such assessment becomes ‘formative assessment’ when the evidence is actually used to adapt the teaching work to meet learning need’ (Black et al 2002).

12. Formative evaluation of adult literacy provides better feedback

Improving our literacy information base is important for development efforts. First, the positive relationship often found between “education” and a number of development outcomes are in need of more detailed information and analysis. To what extent is this relationship due to the socialization experience education provides? To what degree is it due specifically to the reading and writing skills imparted by the school? Do numeracy skills or other knowledge acquired at school have particular roles to play in the relationship? With information on literacy and other skills available in greater detail, analysis can better identify particular skills and education factors that appear to contribute most to desired development outcomes. Accurate, reliable, and meaningful literacy statistics are also essential to successful literacy programs, as they can be used to better identify and target communities and population groups in need.

13. Practitioners of adult education needs to get better acquainted with better evaluation practices

UNESCO Institute for Statistics (UIS) has launched an initiative called LAMP (Literacy Assessment and Monitoring Programme), where they are planning to build on some of the tools developed through the IALS, but refocused on literacy assessment in developing countries (Terry, 2003). Evaluations of literacy programmes in developing countries are numerous. In developing countries especially, such evaluations have only rarely included psychometrically appropriate tests for measuring learning achievement. Typically what is measured are the inputs in human and infrastructural resources, the pedagogical methods employed, and the outcomes in terms of attendance and ‘successful program completion.’ A lack of skill assessment is typically a very serious gap in the current programme evaluation knowledge base (Wagner 2005).

LAMP also proposes five levels of literacy skills, with emphasis on what it calls the ‘lower levels of the literacy scale’, corresponding to an expansion of the IALS Level 1. This was felt necessary to allow for greater differentiation at this level for developing countries. However, IALS level 1 gives rise to some methodological problems, since it is defined above as a negative concept, in terms of what a person can hardly do. This level, like the others, could only be tested

by assessing how well a subject can cope with a literacy task, such as the example quoted. Thus, again, it is the use of literacy which is in focus, even at this level. The five LAMP levels are as follows: Component 1: listening comprehension (in the language of assessment) - comprehension of vocabulary in context and comprehension of the overall text; Component 2: recognition of grapheme (letter, syllable, word component symbol or other depending on the writing system) - speed and accuracy; Component 3: word recognition - speed and accuracy; Component 4: sentence reading - speed and accuracy; Component 5: passage reading - speed, accuracy and comprehension.

14. Emic approaches to literacy has to be developed

Defining literacy as an individual cognitive ability was once thought to be simple: it entailed the testing of reading and writing skills (Wagner, 2004). Furthermore, when considered as a cultural—as opposed to a cognitive—phenomenon, literacy is even less well defined, since its meanings, functions, and methods of transmission may vary greatly from one cultural group to the next. Emic concepts are those that can be understood only within a single cultural system or society, and are measured only according to criteria relevant to and understood within that single system. Etic concepts are those which are deduced or derived from a position outside of any particular system, and have as a primary goal the analysis of more than a single social system or society. For example, an etic perspective on literacy assumes that skills such as decoding, word-picture-matching, and reading a bus schedule ought to have substantially the same meaning to different individuals and across different cultural groups. An emic perspective on literacy would encompass skills and meanings associated with literacy within cultural groups, such as “script recognition” skills in different orthographies, as well as the knowledge about the values, meanings, uses, and even attitudes of/about print in everyday social contexts. Simply put, emic literacy skills are those which can only be adequately understood within a given society; etic skills are those that have developed out of the heuristic convenience of those who desire a common frame of reference or system of measurement. IALS methodology, like most large-scale surveys, employs a primarily etic approach to the study of literacy.

15. Literate Environment is an Alternative Concept of adult education

A different way of conceiving the domains of literacy use is to develop the notion of the literate environment. A literate environment is a context (or set of contexts) within which written communication is used, and so it situates literacy within the wider context of communication,

including oral and non-verbal practices; It focuses on production of text as much as on consumption; It sets the acquisition and use of literacy by individuals and communities in the context of patterns of existing use of text; It facilitates an understanding of the opportunities and constraints which literacy users face: It links local contexts dynamically with broader contexts (and eventually global contexts), since literate environments overlap and lead into one another.

Conclusion

Literacy assessment, like literacy itself, is a complex and multi-faceted process, with connections to many other aspects of society and of life. This should not deter us. People continue to be excluded from using literacy as one of their communication and learning tools - we need to know where and why, so that everyone may enjoy the opportunities literacy may offer in each situation. There is a natural and essential tension between 'emic' and 'etic' approaches to literacy measurement (Wagner, 2004b). In general, literacy assessment requires both quantitative and qualitative methods. The aim of quantitative measurement is to establish standard levels of literacy, at least for a particular context, if not for a whole country or, eventually, for the whole world. On the other hand, qualitative data focuses on the use of literacy in context-what it enables people to do, how it impacts their lives and how literacy use connects with other aspects of the social fabric.

References

- Black P and William D 1998: Assessment and classroom learning, Principles, Policy and Practice, *Assessment in education* 5(1) 1-78.
- Black P, Harrison C., Lee C., Marshall B. and William D (2005), *Assessment for Learning: putting it into practice*, Open University Press, Buckingham.
- Black, P., McCormick, R., James, M. and Pedder, D. (2006) Learning how to learn and assessment for learning: a theoretical inquiry, *Research Papers in Education*, 21, 2, 119-132
- Desjardins, R. & Murray, R.S. (2004. in press). Introduction to special issue on *Literacy Proficiency: Investigations Using Direct Measures Of Skills*. International Journal of Educational Research.
- IALS. n.d. Highlights from the Final Report of the International Adult Literacy Survey: Literacy in the Information Age - Skills for the Twenty-First Century Conference on Adult Education. Paris: UNESCO.

- Robinson, C. (2005) Aspect of Literacy Assessment: Paris: UNESCO UNESCO (2000). The Dakar Framework for Action: Education for All: Meeting our Collective Commitments. Adopted by the World Education Forum, Dakar, Senegal, 26 – 28 April 2000. Paris. UNESCO
- Subha Rao, I V 2002 Literacy Assessment Practices (Lap) In Selected Developing Countries India Case Study Discussion Document Prepared For Ili/Unesco Lap 2nd Experts' Meeting Unesco Paris, 7-8 March, 2002
- Subba Rao, I.V. 2003. Learning tools and learning contents: texts, contexts and assessment Paper presented to the Expert Meeting on Literacy Assessment, Paris, 10 - 12 June 2003.
- Terryn , B. (2003). The Literacy Assessment and Monitoring Programme (LAMP): Background and Approach. Paper presented at ANLCI Conference in Lyon, France, (November).
- Unesco (2005) Aspect of Literacy Assessment Topics and Issues from the UNESCO Expert Meeting IO-12 June 1 Paris
- UNESCO. 2000. The Dakar Framework for Action. Wagner, D. A. (2004a). *Smaller, quicker, cheaper: alternative strategies for literacy assessment in the UN Literacy Decade* International Journal of Educational Research 39 (2003) 293–309
- Wagner, D. A. (2004b). Literacy in time and space: Issues, concepts and definitions. T. Nunes & P. Bryant (Eds.). *Handbook of Children's Literacy*. Pps. 499-511. Lancaster, UK: Kluwer Academic Press.
- Wagner 2005 Monitoring and measuring literacy “Paper commissioned for the *EFA Global Monitoring Report 2006, Literacy for Life*”. Paris Unesco
- Wagner A., 1990. Literacy Assessment in the Third World: An Overview and Proposed Schema for Survey Use. *Comparative Education Review*, Vol. 34, No.1, Special Issue on Adult Literacy, pp. 112-138.
- Wagner A., 2005. Monitoring and Measuring Adult Literacy: Different Models for Different Purposes, International Literacy Institute University of Pennsylvania.
- White, S., and Dillow, S. (2005). *Key Concepts and Features of the 2003 National Assessment of Adult Literacy* (NCES 2006-471). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- United Nations 1989 National Household Survey Capability Programme Measuring Literacy Through Household Surveys: A Technical Study On Literacy Assessment And Related

Education Topics Through Household Surveys New York, United Nations Department Of
Technical Co-Operation For Development And Statistical Office