The correlations between literacy and development are universally recognized, though not always fully understood. Since the individual is the locus of all learning as well as the agent of all developmental actions, psychological approaches to the study of the relationship between literacy and development should be promising.

The essential question in the psychology of development is: What type and quality of human psyche is relatively more amenable to generating and sustaining development, at both personal and societal levels? The essential question in the psychology of literacy is: What effect, if any, does literacy learning have on the psyche of the new literate?

At the intersection of these two research and theory traditions lies another question: What is the role of literacy in development? Formulated in practical terms, we can ask: At this historical time, during International Literacy Year, 1990, is development in the Third World possible without the universalization of literacy in the region? A model of literacy for development based on the concept of symbolic transformation of experience is the first step toward designing research questions on literacy and development as multi-level and multi-dimensional processes. Contains 19 references.

(MSE) (Adjunct ERIC Clearinghouse on Literacy Education)
The correlations between literacy and development are universally recognised, though not always fully understood. Since the individual is the locus of all learning as well as the agent of all development actions, psychological approaches to the study of the relationship between literacy and development should be promising. The essential question in the psychology of development is: What type and quality of human psyche is relatively more amenable to generating and sustaining development, both at the personal and societal levels? The essential question in the psychology of literacy is: What effect, if any, does literacy learning have on the psyche of the new literate? Finally, at the intersection of these two research and theory traditions lies another question: What is the role of literacy in development? Formulated in practical terms, we can ask the question: At this historical time, in the midst of the International Literacy Year, 1990, is development in the Third World possible without the universalisation of literacy in the region?

The Psychology of Development and the Psychology of Literacy: A Point of Intersection

Introduction

Causal connections between literacy and development may not have been definitively established, yet correlations between literacy and development have been widely observed. The world map of illiteracy and poverty is the same as also the world map of illiteracy and maternal deaths, infant mortality, and expectancy of life at birth. Neither modern technology, nor modern democratic institutions thrive in regions with high rates of illiteracy.

The illiteracy problem is of global proportions. A UNESCO document highlighting the current literacy situation in the world states:

In 1985, there were an estimated 3,203 million persons aged 15
years and over in the world: 2,314 million literates, and 889 million illiterates. The 889 million illiterate persons represented more than a quarter of the world’s adult population (27.7%). About one in five of all adult males is illiterate and more than one in three of all adult females. All but 20 million of these illiterates were to be found in the Developing Countries. When analyzed by continents, Asia with 666 million illiterates accounted for 75% of the world’s total. India and China by themselves accounted for well over half [of the world’s total] (UNESCO, 1988, p.4).

There are challenges here both for the policy-maker and the scholar. Policy-makers must act to plan and implement programmes of literacy promotion commensurate with the needs in their particular contexts. There is no need to wait for more policy research and policy data. To know everything is impossible. What is needed is political conviction and the ability to make sufficient decisions with insufficient data.

The scholar, at the same time, must continue with the tasks of theory and research, to clarify, refine and support the on-going projects, programmes and campaigns of literacy for development. Since the individual is the locus of all learning as well as the agent of all development actions, psychologists have important contributions to make in producing knowledge for utilisation by policy-makers.

**What is Development?**

Development is a normative process. Definitions of development, therefore, are themselves in a continuous process of development. The purely economic conceptions of development in the 1950s and 1960s have been rejected for being no more than the dicta of Westernisation and industrialisation, within a world system of dependencies, for most developing nations. People are talking of development leading to authentic development, protecting indigenous values and cultures, leading perhaps, to non-Western futures.

The following definition of development appearing in a UNESCO document merits close examination since it tries to reflect development
values from a variety of cultures and contexts, with marked sympathy for the non-Western nations of the Third World:

Development is integrated: it is an organic process involving a number of economic, social and cultural factors which overlap and constantly influence one another.

Development is endogenous: each country carries out its development according to its own choice, and in conformity with the real values, aspirations and motivations of the population.

Development is global: its objectives and problems are determined with relation to world problems and reflect the general nature of development. The society in which development is carried out is not isolated, but forms part of the network of relations and forces that cover the entire world, including the most economically advanced societies as well as those which, from the economic point of view, are the most deprived (UNESCO, 1982, p. 25.).

In theory as well as in practice, development will be no more than empty rhetoric unless it promotes both modernisation and democratisation in societies. Without modernisation of some kind, it would be impossible to produce the surplus needed to pull the poor out of the pit of starvation or raise them above the levels of mere subsistence. Democratisation is essential to ensure distributive justice; it must be pursued to offer a choice to the people and provide them with opportunities to participate in decisions about their own lives. David Apter (1987) has correctly posited a connection between development and democracy. Thus, he has seen development to be, at the same time, an on-going material process as well as a continuous intellectual project.

The Psychology of Development

The dictionary defines psychology as, "the science of the human mind, the systematic investigation of mental phenomena, especially those associated with consciousness, behaviour, and problems of adjustment to the environment". Psychology today has expanded its scope considerably beyond the individual. Psychologists are studying group psychology (Paulus, 1979), organisational psychology (Schein,
1980), psychology of cultural phenomena (Erikson, 1970; Lambley, 1981) and, of course, the psychology of development (Riegel, 1976).

The essential question in the psychology of development is: What type and quality of the human psyche (the aggregate of the mental components of an individual) will be conducive to generating and sustaining development processes at the personal, group, institutional, and community and cultural levels? The complexity of the question should be quite clear, since the twin processes of development—modernisation and democratisation—involves a whole array of manual and mental processes that include imagining, learning, reasoning, decision-making, motivating, persuading, informing, planning, producing, creating, administering, managing, sharing, cooperating, leading and following. All these processes have been studied by psychologists, directly or indirectly, and available theory and research in all these areas of study could be brought to bear on the study of the psychology of development. In psychological literature, however, the psychology of development has followed some particular strands which will be discussed briefly in the following:

**Research on Innovator Characteristics**

Researchers interested in the innovation diffusion process have paid considerable attention to the study of innovators' psychological characteristics. Rogers (1983, pp. 257–258) in listing personality characteristics of innovators suggests that in comparison to later adopters of innovations, innovators have greater empathy, less dogmatism, greater ability to deal with abstractions, greater rationality, higher intelligence, more favourable attitudes toward change, better ability to cope with uncertainty and risk, more favourable attitudes toward science, less fatalism, higher levels of achievement motivation and higher aspirations for education and occupation.

In their communication behaviour, Rogers (1983, pp. 258–259) lists innovators as having more social participation, being more highly interconnected in the social system; more cosmopolitan, having more networks outside, than within, their social systems; having greater contact with change agents; greater exposure to mass media as well as to interpersonal communication channels; seeking information more actively and coming to have greater knowledge of
innovations; enjoying a higher degree of opinion leadership; and being more likely to belong to highly interconnected social systems.

Characteristics of Individual Modernity

In a classic study, Inkeles and Smith (1974) identified the psychological make-up, i.e., the attitudinal, value, and behavioural mix of the traditional and modern man. The characteristics of the traditional man were:

Passive acceptance of fate and a general lack of efficacy; fear of innovation and distrust of the new; isolation from the outside world and lack of interest in what goes on in it; dependence on traditional authority and the received wisdom of elders and religious and customary leaders; preoccupation with personal and especially family affairs to the exclusion of community concerns; exclusive identification with purely local and parochial primary groups, coupled with feelings of isolation from and fear of larger regional and national entities; the shaping and damping of ambition to fit narrow goals, and the cultivation of humble sentiments of gratitude for what little one has; rigid, hierarchical relations with subordinates and others of low social status; and undervaluing of education, learning, research, and other concerns not obviously related to the practical business of earning one's daily bread (p.315).

On the other hand, Inkeles and Smith (1974) spoke of a definite syndrome of individual modernity, empirically established by their research that included:

Keeping informed about the world and taking an active role as a citizen; valuing education and technical skill; aspiring to advance oneself economically; stressing individual responsibility and seeing the virtues of planning, including family planning; approving social change and being open to new experience, including the experience of urban living and industrial employment; manifesting a sense of personal efficacy; freedom from absolute submission to received authority in family, tribe, and sect, and the development
of newer nonparochial loyalties; and the concomitant granting of more autonomy and rights to those of lesser status and power, such as minority groups and women (p.109).

The characteristics of traditionalism and modernity listed above are all individual characteristics. There is, however, the implication that developing countries require individuals with these characteristics to run the technical and political institutions of the modern nation state.

There has been strong criticism of the work of Inkeles and Smith; both in terms of substance and method. Third World scholars have suggested that the list of individual modernity is ethnocentric and that individual modernity so described may be nothing else than Westernisation. Such criticism may not be misplaced but needs to be placed in perspective. The following points should be kept in mind. First, all Western values and behaviours are not ipso facto bad, as all traditional values and behaviours are not ipso facto good. Second, many of the human values and behaviours listed as characteristics of individual modernity are above the categories of Westernisation and non-Westernisation, and are simply a set of rational values and behaviours necessary for conceiving, planning, and implementing social interventions leading to development, howsoever defined.

The implication in the Inkeles and Smith study is that these individuals with high individual modernity, through their participation in groups, institutions and communities, will influence the goals and functions of these collectivities. There is, as we have mentioned earlier, considerable research available on the psychology of groups, institutions and cultures but it is not possible, within the scope of this paper, to expand our focus from the psychology of development at the individual level.

What is Literacy?

A recent UNESCO document (1988, p.8) defines a literate person as one, “who can with understanding both read and write a short simple statement on his everyday life.”

A functionally-literate person is defined as one, “who can engage in all those activities in which literacy is required for effective
functioning of his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development."

While both of the UNESCO definitions are "workable", they do not by any means solve the definitional problems in the area of literacy. Problems of relativity remain, i.e., what level of skills, and in what geographical and cultural contexts? Indeed literacy, like development, is also a value enterprise. Therefore, the definitions of the functionality of literacy have been changing as well.

Within UNESCO's Experimental World Literacy Program, functional literacy was to be selective and intensive. It would be offered to select groups within the formal economy, with intensive work-orientation, tied directly to training for higher productivity (UNESCO, 1965). It was to be based on the "psychology of man at work". Ten years later, the Persepolis conference asked that literacy be "a contribution to the liberation of man and to his full development". It demanded that literacy teach "critical consciousness" making people capable of "acting upon the world, of transforming it" for "authentic human development". (Bataille, 1976).

A reconciliation of the two extreme positions on functionality, of "the well fed, in bondage" and "the free, but hungry", should be attempted. A generalised concept of functionality based on the triangulation of the economic, social and political should be given an honest chance.

The Psychology of Literacy

Literacy—as the skill to codify and decodify written text—cannot, of course, be separated from its content and its implications for a sense of organisation and solidarity among learners. People do not just read, they read something; some text with content. In the very process of coming together, participants in literacy programmes develop a sense of solidarity and learn skills of organisation and management. While it is impossible to separate the skills of codification and decodification from the other two dividends just mentioned, the conventional question of the psychology of literacy has been: What, if at all, is the mutual relationship between literacy and the human psyche, particularly, the cognitive skills of the new literate?
The psychology of the reading act (Downing, 1982; Hartley, 1980) are important concerns for a literacy practitioner, but in the larger context of literacy for development, the focus has remained fixed on the question of literacy and its cognitive effects.

The Cognitive Effects of Literacy

Discussions of the relationship between literacy and cognition in literature often begin with Jack Goody’s (1968) colourfully stated “technology of intellect” hypothesis. This hypothesis posits that literacy (as written language) shapes the human mind and, consequently, moulds human cultures by promoting generalised cognitive skills of abstract thinking, analytical reasoning, new ways of categorising, and logical approaches to language at the individual level and, the emergence of history, modern political and economic systems, bureaucracy and mass education, at the cultural level.

The above assertions, as Scribner and Cole (1981) point out, are based on anthropological and comparative macro-studies, not micro-psychological studies. They acknowledge the good work done on the subject by Russian psychologists Lev S. Vygotsky and Alexander R. Luria; and by North American psychologists, P.M. Greenfield, J.S. Bruner and David Olson. But they conclude that, “the attribution of literacy to causal significance in cognitive development remained ... on the hypothetical level” (p. 12).

Scribner and Cole (1981) tested the hypothesised effects of literacy on cognition among the Vai people of Liberia who offered a situation of an indigenous literacy, without schooling, and thus an opportunity for conducting a psychological study of the topic in a naturalistic setting. On the basis of five years of field work, the study concluded that literacy did have “identifiable cognitive consequences” (p.251), but these consequences were not generalised cognitive effects. What they were able to claim was that, “literacy makes some difference to some skills in some contexts” (p.234).

To bring together the relativities of context, of uses of literacy and of effects on cognitive skills, Scribner and Cole (1981) proposed a framework that they called, “a practice account of literacy” (p.235). Any practice of literacy was seen to have three components — technology, knowledge and skills.
In later work, Scribner (1987) suggested that literacy "is always profoundly and pervasively social in nature" and that in literacy "psychological processes are integrated with sociocultural processes" (p.22). Thus, she expands the focus for the study of literacy and cognition from the psychological to the social-psychological point of view and asks for theories that do not consider literacy "as either psychological or social but as particular integrations of processes operating on both the levels". She also said, that, "to examine the integration of these processes, we need to pursue the analysis, not with respect to some particular units or aspects of literacy 'in general', but with respect to some particular unit or aspect of literacy" (pp. 20-21). She went on to suggest that the "Theory of Activity" might serve the foundation for such a theory.

Using these comments as a point of departure, we suggest below a psychological-ecological model of literacy for development that provides a method of combining the psychological and the social aspects in literacy as well as combining literacy promotion with the planning of social change. The "literacy for development" theme is, of course, a specific case of the general "cognition and culture" theme. The move from earlier discussions of theory and research to the model now presented is, therefore, continuous.

A Psychological-Ecological Model of Literacy for Development

The model presented below is based on the seminal concept of the symbolic transformation of experience, a theory of mind, proposed by Susanne K. Langer (1957). Susanne K. Langer suggests that human beings make culture in all its aspects through symbolic transformations of experience using language and symbolisms. Literacy, we now propose, extends the skills of symbolic transformations as well as the range of what is experienced, through reading records of other people's experiences. That, of course, changes the scope and quality of symbolic transformations as well as the resulting patterns and networks of symbol systems. Thus, literacy extends the symbolic transformation skills along the two dimensions of the spoken and the written; the voiced and the coded. At the cultural level, literacy enables cultures to accumulate, store, and retrieve symbolic systems called knowledge.
The second important characteristic of the model is its historical-dialectical nature. Cultures as well as our conceptions of literacy—from a literacy of alphabets to a literacy of marks, for example—go through a process of evolution over historical time. The two concepts, literacy and culture are also in dialectical relationships, each defining the other in an ongoing mutual process, in particular contexts.

The model accommodates the theoretical insights provided by Scribner and Cole ( 1981) that the effects of literacy on cognitions are not general but particular and contextual; since these effects are mediated by patterns of social and literacy practices. The taxonomy of social configurations—individual, group, institution (organisation) and sub-cultures or communities—link this model with a well-tested model of innovation diffusion, planned-change and development (Bhola, 1989).

The new capacities in symbolic transformations made possible by literacy are shown in the model to manifest at the level of the individual in modes of thinking which were not possible without literacy. These new modes of thinking appear both in the individual's clarification of values and attainment level of skills. The hope is that the triangulation among them will lead to the individual's actualisation as well as to invention and innovation to promote social praxis.

At the cultural level, the new capacities for symbolic transformations manifest most significantly in acquiring collective memory and thereby a sense of history; and an acquisition of knowledge capital, not possible to imagine before the advent of print (and the electronic technology). At the same time, it has been possible both to formulate ideologies and to sanctify them as constitutions and manifestos as well as to extend technologies, both hard and soft. Once again, the hope is that the triangulation among the three: ideology, technology and history, will lead to modernisation and democratisation.

Concluding Remarks

The preceding discussion of theory and research on cognition and culture points out that the cognitive effects of literacy are not "anthropological folklore". These effects are not generalised but they are important. What is more important to note is the speculation that
with the increased complexity of social practices, the practice of literacy would also become complex and the cognitive effects of literacy may indeed become what we now define as "generalised".

Again, the effect of literacy on cultures is not a "myth". The effects of literacy at the societal level are, of course, not deterministic, but they do create potential for changes in systems and structures, possible in the context of a particular political culture and a particular set of commitments.

The model proposed here is the first step towards conceptualising literacy as a social process and development as an act of both courage and commitment. It may not fully explain the mechanisms by which social factors effect cognitive variations, but it does offer a way of viewing these relationships and to design research questions on literacy and development as multi-level and multi-dimensional processes.

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