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BOOK REVIEWS

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External Benefits of Women's Education
Some Evidence from Developing Countries

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Abstract

The significance of education in the development process is not only to be appreciated in terms of its direct benefits but more importantly on account of its externalities. The latter are colossal, particularly in the context of the education of women. The role of women's education in reducing fertility rates and infant and child mortality rates; in improving the health status of the family; in increasing the various freedoms; personality development and attitudinal and behavioural changes, has been borne out by significant evidences from across the developing world. The present paper is an attempt to assess and analyze the various external economies of women's education with particular reference to the developing countries. After looking at some of the possible diseconomies, as well, the external economies of women's education turn out to be overwhelming.

Introduction

The conventional estimation of the rate of return to investment in education often reveals that it is invariably lower than that obtainable from investment in physical capital. This is so, because in case of education, on the returns side, only a part of the total returns i.e. quantifiable/tangible returns are taken into account. The non-inclusion of a vast multitude of external benefits, primarily because of the quantifiability problem, in such calculations, grossly underestimates the rate of return to investments in education. As such, a question is raised in some quarters about the desirability of continuing with the heavy state subsidization of education, particularly at higher levels. There cannot be two opinions about the significance of the externalities of education; however, these happen to be colossal in the context of female education, in particular. Usually, when the rate of return to investment in female education is estimated, it is the earnings outside the home, which are taken into account, without a slight consideration, that educated women, will be productive assets even when they confine themselves to household chorus.

There are clear-cut evidences, which show that, the total benefits from education multiply when schools open their doors to girls and women. In addition to being more

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children die in infancy; and, the children who survive are healthier and better educated. Educated women are also better equipped to enter the paid labour force, which is critical to the survival of the many female-headed households in developing countries (World Bank, 1993). Women's education is also associated with quantifiable increases in home output – in the form of better health and nutrition, more attention given to each child, and so on, despite the fact that better educated women are likely to spend less time in the home. This seeming paradox is only possible if the productivity of women at home increases as their education increases, indicating that non-market returns to schooling are positive. As such, in any economic evaluation of the costs and benefits of education, these indirect and non-market benefits are to be taken into account. Once all the benefits are recognised, investment in the education of girls may be the highest return investment available in the developing world. (Summers, 1992)

The community-wide effects from education are not always separable from the non-market benefits that accrue to individuals. Using data for the United States, Haveman and Wolfe (1995) found that parents with more education have a significantly smaller chance than other parents, that their children will drop out of school, that their daughters will become unmarried teenage mothers, and that their grandchildren will become economically inactive as adults. Although parents suffer personally when their offspring fails to grow up well, the effects extend to the community as well, and substantial public programs have indeed been mounted to address these social problems.

The externalities of education can be addressed to, both from the micro as well as macro perspectives. At the micro level, the indirect benefits accrue to the individual concerned herself, her current and future family, neighbours and job related persons. From the macro viewpoint, the externalities shall accrue to the community, economy and the society at large. Besides direct economic returns, the investments in education entail certain non-market benefits that include the possible contribution of education to improving social equity, strengthening national cohesiveness, reducing environmental stress through its effect on fertility and population growth, lowering crime rates, and so on. Here, one can make a distinction between 'public good human capital' which affects incomes by influencing people's knowledge about and choice of public policies and institutions, and traditional 'marketable human capital', which increases people's personal income. To the extent education produces 'public good human capital'; it also contributes to the production of community wealth (Olson, 1996)

The role of education in the growth and development of an economy is not to be assessed in a limited time frame. These activities may transform the economies and make their growth more self-sustaining over a much longer period, which can extend to even a few generations. As such, it is not surprising then that nations with higher levels of female school enrolment in the past, today show higher levels of economic productivity, lower fertility, lower infant and maternal mortality, and longer life expectancy than countries that have not achieved as high enrolment levels for girls. (World Bank, 1993)

The External Economies

In the light of the aforementioned background, the main externalities of women's education and their role at both macro as well as micro level is analysed as under:

Reduction in Family Fertility and Increased Demand for Child Quality

There are a number of ways by which education can decrease fertility. It may change perceptions of the costs and benefits of having children, and it also influences the age at marriage and reduces the infant mortality rate. Education may also change attitudes to contraception. In the long run, it is usually the case that increasing education, especially of girls, will ultimately reduce fertility.

Schultz (1993) calls the strong link between women's education and fertility 'one of the most important discoveries in research on non-market returns to women's education,' documenting in his survey that the women with 7 or more years of schooling have substantially lower fertility than women with zero years of schooling in all parts of the world. Rosenzweig and Schultz (1985) indicated that better educated women have fewer unwanted births. The negative relationship between schooling and realized fertility is not simply due to increased ability to control fertility, however, the data on fertility preferences indicates negative effects of women's education on desired family size in all parts of the world (Schultz, 1993).

Education of females decreases their fertility because (i) Educated women, being themselves somewhat economically independent, do not need many children as an old age support; (ii) Because of education and economic independence, they do not entertain a perception, that more children shall ensure them, a secure position in their husband's house; (iii) The educated women are conscious of the costs involved in the bearing and rearing of more children; and (iv) The educated women do not want more children for the purpose of child labour and as a source of family income. Furthermore, in the case of educated mothers, there occurs a preference shift from quantity to quality of children, in spite of the fact that the latter involves higher economic costs. The importance of schooling costs, both direct and indirect, has been recognised both in sociological and economic formulations of the fertility transition. Educated women are more willing to forsake numbers of children for the improved quality of fewer of them. They are more likely to prefer private over public schools, have higher educational aspirations for their children, and more expensive standards for recreation, feeding and other needs, thereby making their children much costlier than those of less educated parents. Educated mothers have a better motivating influence on the child to go to school; can provide better pre-school education at home; prefer better quality schooling for their children and the choice of careers for them.

Sociologists have emphasized the relationship between women's education and their status. They argue that women's education increases female autonomy, leading to later marriage, increased contraceptive use, and lower fertility and that wife's education has a more negative effect on fertility than does husband's education (see, Mason, 1986; Cochrane, 1983; and Cleland and Rodriguez, 1988).

Women's emancipation in the form of basic education and economic independence tends to have quite a strong impact on fertility rates. This linkage has been widely observed in international comparisons. It is consistent in the Indian context also, as is borne out by Kerala's remarkable reduction in fertility rates and, to some extent, with Tamil Nadu's recent success in that direction. On the other side the low position of women in the Northern heartland clearly does contribute not a little, to the high fertility rates that are found in such states as Uttar Pradesh, Madhya Pradesh Rajasthan, and Bihar (Dreze and Sen, 1995).

Econometric studies within individual countries, looking at the effects of education on fertility, find that an extra year of female schooling reduces female fertility by 5-10 per cent. This is partly a consequence of education lowering poverty, as the latter is associated with high fertility rates (World Bank, 1993). Better-educated women also marry later. In Africa, women with 7 or more years of schooling tend to marry five years later than women with no schooling; in Latin America and Asia, the differential is about three years, with significant implications for the fertility rate. Desired fertility, like actual fertility, falls monotonically with women's education. Subtracting desired fertility from current total fertility suggests that the potential for increased contraception to reduce fertility towards desired levels is concentrated in Latin America, among women with less than four years of schooling and in Asia, among women with less than seven years of schooling. Among better-educated women in Latin America and Asia, total fertility rates are already approaching desired fertility levels. This reflects the fact, that women's education substitutes for family planning by helping women reach their desired reproductive goal (Schultz, 1993).

Merrick and Berquo (1983) and Lam et. al. (1992), used Brazilian data to demonstrate strong negative effects of women's education on fertility over the first eight years of schooling. Increase in schooling both for men and women appears to play an important role in explaining Brazil's rapid fertility decline, a decline that took place in the absence of a significant family planning effort. They suggest that increase in schooling, especially for women, plays a major role in explaining the decline. An increase in wife's schooling from zero years to four years is associated with a decline of almost one full birth in fertility up to age 30. Lam and Duryea (1998) studied 100,000 Brazilian women and documented the strong negative relationship between fertility and schooling. They demonstrated that improvements in schooling could account for around 70% of Brazil's fertility decline during the 1960s and 1970s. Analysing the mechanisms through which schooling affects fertility, they showed that declines in fertility are only weakly associated with increases in women's labour force participation, especially at the low levels of schooling. The effects of parental schooling on fertility work primarily through their increasing investment in child quality in response to increased productivity in dimensions, such as child health and child schooling. Effects working through the labour market appear to play a relatively minor role in explaining the effect of schooling on fertility.

According to Schultz (1989), parents choose higher levels of child quality and reduce the number of children. The investment of parents in the 'quality' of children can be measured, by two outcomes – health, and the schooling of the children. Child mortality is the least ambiguous indicator of the child health. Schooling of the children is another non-market outcome of the family, and one in which education of the mother often appears more important than that of the father (Woodhall, 1973).

Lam and Duryea (1999) also suggest a strong link between fertility and investments in children by using Brazil as evidence. They hypothesize that increase in schooling at low levels leads to increase in productivity both of mothers and fathers in producing healthier and better-educated children. Parents choose higher levels of child quality and reduce the number of children. Increases in home productivity are large enough to offset large increases in market wages up to about eight years of schooling, with the result that wives do not increase their labour supply in spite of large decline in fertility.

There is strong influence of mother's education on the subsequent educational and occupational performance of her children. The children of educated mothers are likely to do well in school, continue their education beyond the minimum school leaving-age and enter high-income occupations. The children of educated mothers are less likely to drop out of school, so that one indirect benefit of women's education may be reduction in the high rates of wastage that increases per pupil cost of education.

Willis (1973), Becker and Lewis (1973), and Becker (1991) provide a framework for thinking about the way the increase in parental schooling might affect choices about the quality and quantity of children. The quality chosen for one child is related to quality chosen for other child; the choice of child quality will affect the opportunity cost of adjusting child quantity and vice-versa. An increase in schooling will lower the relative price of child quality leading parents to increase the average quality of children and decrease their quantity. Becker (1991) argues that the empirical relationship between quality and quantity of children from virtually all populations implies that parents rapidly increase child quality in response to increases in income, with associated decreases in the quantity of children.

Improvement in the Health Status

Education has a positive impact on the health status of the person concerned, and other members of the family. This can be more pronounced in the context of the education of women -- their education contributes in the form of improvement in the nutritional level, better sanitation, cleanliness of home and neighbourhood, knowledge and use of available health care facilities, and increase in the immunisation/vaccination for children against various communicable diseases.

Better-educated women are more aware of good health practices and the ways to prevent, recognise, and treat illness than are other women. They are more aware of (i) Nutrition; (ii) danger of unsafe water and contaminated foods; (iii) Personal hygiene, household and courtyard sanitation and cleanliness; (iv) health benefits of a more

equitable distribution of food in the household; and (v) need for rest during sickness, and the need for speedy treatment of illness and injuries (Jejeebhoy, 1995).

The most important deliverer of health care to a child is the mother. How well she performs this task depends 'on her schooling, which equips her with general and specific knowledge, and the means and confidence to seek new ideas' (see, Schultz, 1989). Educated parents, particularly mothers, have better nourished children who are less likely to die in infancy than the children of uneducated parents. On an average, one additional year of schooling for a mother results in a reduction of 9 per 1,000 in child or infant mortality. (World Bank, 1993). Educated women are also less fatalistic about illness, more skilled in interpreting symptoms in children, and more aware of modern rather than traditional or indigenous remedies for illness. This is so because:

i) They are more likely to have accurate information on preventive therapies, such as oral rehydration therapy and immunization/vaccination. Caldwell (1979) hypothesized that in West Africa a mother's education enabled her to exploit local public health care more effectively. For example, the impact of diarrhoea on child health can be reduced by oral rehydration therapy (ORT), which can be taught even in primary schools (see, Cash, 1983).

ii) Educated women are more knowledgeable about the location of health facilities and more convinced of the value of seeking health care. They are also more likely to take immediate action for sick children and more likely to report back to the failure of the treatment.

iii) Better educated women become more sensitive to modern health messages and give them more faith in good health practices, even without a full understanding of the scientific roots of those practices. For example, in rural Bangladesh, better-educated women are distinctly more likely to pay attention to personal hygiene and household cleanliness, and are less likely to use contaminated water than uneducated women are. Other evidence from Bangladesh also suggests a strong link between women's education and awareness that regular hand-washing and boiled water have health benefits, as well as the association of education to the knowledge of the link between newborn tetanus and the use of un-sterile instruments (Jejeebhoy, 1995).

Schultz (1984) argues that mother's education can influence child health in five ways: (i) Education may lead to a more efficient mix of health goods used to produce child health; (ii) Better educated mothers may be more effective at producing child health for a given amount and mix of health goods; (iii) Schooling can affect parents' preferences in systematic ways – for example, educated mothers tends to opt for fewer but healthier children; (iv) More schooling should raise family incomes, either through higher wages or increased productivity in self-employment, which should improve child health status; and (v) Education raises the opportunity cost of time, which tends to increase the time mothers spend working outside the home and thus have lesser time for child care – this

effect of schooling could reduce child health by reducing both maternal time devoted to child care and duration of breastfeeding. Breastfeeding is beneficial to child health primarily when it is supplemented by other foods before the end of the baby's first year. Child health is the key indicator of the quality of life in developing countries. In Barrera's rural Philippines population, a mother's education shortened only the duration of unsupplemented breastfeeding (Barrera, 1988). Moreover, Barrera estimated that unsupplemented breastfeeding was beneficial only upto six months. The better-educated mother is likely to replace her milk with sanitary substitutes. For less-educated mother, Barrera hypothesized that supplementing breastfeeding before the baby is six months old was harmful. The optimal duration of breastfeeding and the optimal time to introduce supplementary foods in the child's diet depended on the education of the mother, who had to provide sanitary substitute for her own milk. In sum, maternal education and the duration of unsupplemented breastfeeding and education appear to be substitutes in their effect on child health and the fact was shown that although mother's with more education breastfeed less, their children's health is better.

Mother's years of education is often positively associated with improved child health and nutritional status (Behrman, 1990). There are a variety of mechanisms through which mother's education could raise child health: (1) Direct acquisition of basic health knowledge in school may provide future mothers with information useful for diagnosing and treating child health problems; (2) Literacy and numeracy skills learned in school may enhance mother's abilities to treat child illnesses, conditional on health knowledge, and should also help mothers increase their stock of health knowledge after leaving school; and (3) Exposure to modern society in general via schooling may change women's attitudes toward traditional methods of raising children and treating their health problems (Glewwe, 1999).

In a study of rural India, it has been found that the effect of mother's education in improving nutritional level is strongest for children upto 2 years of age. As far as the level of mother's education is concerned, it appears that there are two thresholds. One is at the level of below primary education and the other starts after 10 years or so of schooling. At a higher level, maternal education has a similar influence both on boys and girls, while below primary education or just the fact that the woman has attended school, causes a very large and highly significant improvement in the girls' nutritional status. For young children upto 24 months of age, maternal education has a greater impact than father's education. This is true for all educational qualifications. A 'below primary' education of the mother reduces under nutrition by about 38% among girls and 22% among boys, when compared with mothers who are illiterate. With the successive increase in the educational attainment of mother at the 'completed primary', 'completed middle' and 'matric and above' levels, this improvement has been 33%, 28% and 24% respectively for girls and 10%, 33% and 22% respectively for boys. But in case of the father, only below primary education helps in improving the child nutrition in this age group and the estimate is significant only in case of girls (Shariff, 1999).

Schooling can influence child health inputs through cognitive skills imparted, such as literacy and numeracy. Literate mothers are better able to read written instructions for treating of childhood diseases, and numeracy enables mothers to better monitor illnesses and apply treatments. Also, the interaction between a mother's education and the local public health infrastructure is complementary and positive – better educated mothers gained most from local public health clinics (Cladwell, 1979).

Education also increases the willingness to seek medical care and improves sanitation practices. Barrera (1988) studied the households of the Bicol province of the Philippines. He assumed that the water and sanitary facilities of households were endogenous choice variables that may be correlated with unexplained variations in child health. He first analysed the relation between maternal education and child health, conditional on the community's average levels of water and sanitation but not on the household's actual variables, which are assumed to be spuriously correlated with the family's other choices. He found that a mother's schooling had a larger protective effect on her children's health in unsanitary environments, where signs of excreta were visible and in areas that were more distant from outpatient health care facilities. In a community, where piped water was the predominant source of supply, the impact of a mother's education diminished; but in a community where water sealed toilets were more prevalent, the impact of mother's education increased. At the same time Barrera showed that higher income and the mother's education increased the chances that a household had acquired piped water and water-sealed toilets. Other studies have examined the relationship between a mother's choice of health inputs and environmental constraints on child survival. Among households in Malaysia with poor sanitation facilities, breastfeeding was associated with reductions in child mortality (Butz, et al., 1984).

Estrey and Habicht (1987) found that the mother's education had more influence in the role of safe water supplies in reducing child mortality than that of access to toilets in the households. Haines and Avery (1982) found that in Cost Rica an additional year of schooling for the mother reduced her children's mortality by 6 to 7% when household sanitation, quality of the dwelling, child mortality rates in the community, and health care facilities were held constant.

The best available estimates suggest that each year of schooling reduces under five mortality by up to 10 per cent. The interaction between health and education is complex. Schooling increases the efficiency of household health production. Educating women yields high returns in terms of healthier children. Women channel more of their income to expenditures on children than their husbands. Better-educated mothers may generate higher incomes and therefore the household may find itself with improvements in nutrition and other factors (World Bank, 1993).

By increasing knowledge about health care practices and reducing the average pregnancies of women, female education increases the use of maternal health care and significantly reduces the risk of maternal mortality. One can calculate that an additional year of schooling for 1000 women will prevent 3 maternal deaths. Access to maternal health care, in turn, is highly correlated to infant mortality. Women who receive qualified

professional pre-natal health care or assistance at birth have lower levels of infant mortality (World Bank, 1993). Further, the health care used by pregnant women has been analysed to evaluate the effect of this input on the production of child health (Schultz, 1984).

Reduction in Infant and Child Mortality

The decline in infant and child mortality is a resultant offshoot of development and is a function of many explanatory variables like income, food and nutritional security, urbanisation, private and public expenditure on health etc. However, many studies have come up with the conclusion that mother's education has the most significant role in the mortality decline among young ones. There is enough evidence documenting the strong positive association of mother's education with child survival in developing countries. (See, for example, Strauss and Thomas, 1995; Jeejebhoy, 1995). The effect of father's education also tends to be positive, although generally smaller than that of mother's education (Mensch et al., 1986). In addition to the effects of parental schooling on child health, it is also associated with positive effects on other child outcomes, especially schooling (Strauss and Thomas, 1995; Barros and Lam, 1996).

Women's empowerment can positively influence the lives not only of women themselves but also of men, and, of course, those of children. There is much evidence, for instance, that women's education tends to reduce child mortality rates, for both boys and girls. In fact, there is a good reason to relate the remarkably high life expectancy levels of Kerala in India to its educational achievement, particularly of women, and on the other side, to relate the low life expectancies of some of the northern states to backwardness in female education (Dreze and Sen, 1995)

Recent analysis by Behrman et al. (1997) for India suggests that the effects of mother's education on the schooling of children result from real productivity returns to her human capital. Murthi, et. al. (1995) present an analysis of variations in under-five mortality rates between different districts of India in 1981. One aspect of this analysis is an examination of the relationship between an index of female disadvantage in child survival (0-4 age group at the district level) and a number of other district level variables such as the female literacy rate, female labour participation, the incidence of poverty, the level of urbanisation, the availability of medical facilities and the proportion of schedule castes and schedule tribes in the population. Keeping other variables constant, an increase in the crude female literacy from say 22% (the actual 1981 figure) to 75% reduces the predicted values of under five mortality for males and females (combined) from 156 per thousand (again, the actual 1981 figures) to 110 per thousand. The powerful effect of female literacy contrasts with the comparatively ineffective role of, say, male literacy or general poverty reduction as instruments of child mortality reduction. An increase in male literacy over the same range (from 22 to 75%) only reduces under-5 mortality from 167 per thousand to 141 per thousand. And a 50% reduction in the incidence of poverty (from the actual 1981 figure) only reduces the predicted value of under-5 mortality from 156 per thousand to 153 per thousand.

In Latin America the infant mortality rate was 3-5 times higher for mothers with no education than those with some university education. On an average, mothers with only 1-4 years of education often experienced infant mortality rates 30 per cent lower than those without education. The drop in the infant mortality rate for women with 1-4 years of education was greater than 30 per cent in Brazil, Colombia, Ecuador and Peru. Child malnutrition also decreases, as mothers' level of education increased. Guatemala and Paraguay experienced 400 per cent reductions in child malnutrition between mothers with no education and those with some post-secondary education. For mothers with only 1-4 years of education, child malnutrition dropped by 30 per cent when compared to mothers with no education in Bolivia, Brazil, Guatemala and Peru (World Bank, 1993). The puzzle that remains is why a mother's education explains more of the variation in child mortality than do other variables, such as, access to health care, cost of health care or even family income available for health care. Three competing hypotheses have been proposed: (a) the better-educated mother uses a different mix of observable health inputs than does the less-educated mother; (b) she uses these inputs more effectively; and (c) her education is positively correlated with the use of many minor health inputs that are not observed and is credited with the effect of these inputs on child health (Schultz, 1984).

An added year of maternal schooling tends to be associated with a relatively constant percentage change in child mortality rates. Although mortality tends to be higher in rural than in urban areas in many low income countries, the proportionate reduction in child mortality associated with an additional year of mother's schooling is about the same – 5-10% (Schultz, 1989).

It may be simpler to examine directly the impact on child health of maternal education, health care facilities, and interactions between mother's education and her constraints in caring for her children's health. Estimates of the health effects of these interactions document how maternal education exerts its elusive effect on child health. For example, Caldwell (1979) argues that educated mothers are in a better position to exploit local public health care more effectively. He suggests that the interaction between mothers and local public health infrastructure was complementary and positive: the more educated mother gained most from local public health clinics. According to his hypothesis, differentials in child health or mortality by mother's education should increase in communities served more intensively by the public health system. Rosenzweig and Schultz (1982), however, found the opposite pattern of negative interactions or substitution in Colombia: differences in maternal education had a smaller impact on child mortality in urban populations that received more public and private hospital and clinic services per capita. Studies in Latin America have also noted that the differentials in child mortality associated with maternal education were more moderate in Costa Rica and Cuba. The hypothesis for these deviations is that these countries' strong public health programs have improved access to health care even among the least-educated mothers (Behm, 1980).

Increased Freedom and Personality Development

Education increases the chances of getting various freedoms – freedom from subjugation, freedom from suppression and freedom to exercise various options and to be an active partner in family decision-making. It helps in better development of the personality of the person concerned, and her children by inculcating virtues like honesty, moral values and character building, sense of confidence, willingness to experiment and show a sense of adventure and drive, scientific outlook and change in attitudes. Education can affect people's lives through several channels. It affects access to knowledge, information and new ideas. It enhances overall efficiency, market opportunities and social status. It also changes attitudes and behaviours, among other things, bringing about openness to new ideas and experiences, an increasing independence from traditional authority, and a questioning of passivity and fatalism. These effects apply generally to both sexes. However, young adult men are exposed to new ideas through their wider contacts with the world outside, family and local community, as well as through formal schooling. In contrast, many women in the developing world have few contacts with the outside world; for them, formal schooling remains perhaps the primary channel for transmission of new ideas (Jejeebhoy, 1995).

The process of schooling has benefits even aside from its explicitly aimed objectives, namely formal education. For example, the incidence of child labour is intimately concerned with non-schooling of children, and the expansion of schooling can reduce the distressing phenomenon of child labour so prevalent in India. Schooling also brings young people in touch with others and thereby broadens their horizons, and can be particularly important for young girls (Murthi et. al., 1995).

Other effects of education are uniquely applicable to women. Education enables women to assume more autonomy or power in both traditional gender-stratified family settings and in more egalitarian ones. This enhanced autonomy takes the form of, (i) knowledge autonomy and exposure to the outside world; (ii) decision-making autonomy within the home; (iii) physical autonomy in interacting with the outside world; (iv) emotional autonomy – the ability to forge close conjugal bonds; and, (v) economic and social autonomy and self-reliance; These aspects of autonomy are acquired by men, in contrast, irrespective of their formal education, largely as a matter of course by virtue of their gender. The aforementioned autonomies are analysed as under:

i) Education enhances women's knowledge of and exposure to the outside world. It has powerful indirect effects on values and outlooks which results not necessarily from the curriculum itself but from the act of attending schools and interacting with teachers and peers. These changes in values and outlooks include, both for women and men, a shift away from fatalism and superstition, brought about by the acquisition of the greater reasoning powers and reliance on scientific explanation on every day phenomena (Jejeebhoy, 1995).

Education exposes women to new ideas which may be incompatible with having many children and which may lead them, more generally, to question the old ways of life. Better-educated women have more skills in expressing ideas and asking questions. They are also more exposed to television and reading materials. In Mexico, for example, better educated women are morasses likely to read and to watch educational programmes on television than uneducated women are; they are also more likely to keep up with current affairs and have better sense of geography. The interest of better-educated women tends to extend beyond home. In rural India, for example, educated adolescent girls are more likely to have non-domestic hobbies than uneducated girls (Vlassoff, 1980).

It has been argued that in contexts in which overall education levels are low or women's movement is curtailed, a small amount of education improves knowledge of more modern ways of life, in general, rather than of scientific explanations for everyday phenomena or of the outside world. Possibly, a small amount of education can enhance women's knowledge of good health behaviour – the importance of clean water, for example, even without enhancing knowledge of the scientific rationales underlying these changes in behaviour (Jejeebhoy, 1995).

In Bangladesh, for example, there is little difference in the health-related knowledge of uneducated and primary-schooled women. Those with a small amount of education tend to be more aware, than are uneducated women, of the importance of personal hygiene, boiling water and so on, but both groups are equally ignorant of the links of these changed behaviours to disease causation.

In Nigeria, only secondary-schooled women reveal an in-depth understanding of disease and prevention; lesser educated women are vague about many health issues and are unable to read what is written on their children's health cards. Yet, they are as likely as better educated women to have their children immunized, and young women with some education are no less likely than older, uneducated, but perhaps more experienced women to attribute sickness to witchcraft (Okojie, 1993).

A study of Lebanese mothers finds that the knowledge of nutritional needs improves substantially only among women with seven to nine years or more of education (Jejeebhoy, 1995). In short, education certainly enhances women's awareness of both new forms of behaviour and the rationale underlying these behaviours (Mclaren, 1982).

ii) Education strengthens women's say in family decisions and those concerning their own lives and well-being. It is usually hypothesized that, compared with uneducated young women who are rarely permitted to make a decision or voice an opinion, educated women are more confident of their ability to make decisions and more likely to insist on participating in family decisions.

Insight into the relationship between women's education and decision-making autonomy comes from qualitative studies and intensive village-level observations. Pioneering studies in gender-stratified settings as diverse as sub-Saharan Africa and South Asia find that educated women are more likely than uneducated women, to challenge their mothers-in-law, and their mothers-in law are much less likely to oppose such challenges (Caldwell, 1979).

In Sierra Leone and Zimbabwe, educated women have more leverage in bargaining within their families or with their husbands and have a greater say in spending household incomes than do uneducated women (Bledsoe, 1988; Maloyi, 1991).

In Sudan, educated women take greater control and responsibility for children-rearing themselves, unlike uneducated women whose children are more casually reared either by village members or by siblings (Galal el Din, 1977).

In North India, village elders lament that young educated wives are insufficiently submissive to their mother-in-law and are less likely to brook the kind of social restraints that the strict tradition requires. An educated daughter-in-law has considerably more power than an uneducated women in her husband's home: she sets the standards for dress, for purchases, and for the education of children, and she is admired for the sophistication that accompanies her education (Mandelbaum, 1974; Minturn, 1984).

Evidence from Bangladesh also indicates that a few years of schooling afford women a certain amount of decision-making in routine or short-term decisions. Much more education is required, however, for women to participate in longer term and more important ones. Educated women are certainly more likely to be involved in both routine decisions, such as going to a health clinic, and more important decisions, such as spending household resources. The pattern of the relationship of education to routine decision-making differs, however, from its relationship to participation in major decisions. For routine decisions, women's involvement in decision-making increases steadily with education. For example, among the least educated women, the decision about going to seek health care is made largely by the husband, whereas among even modestly better educated women, it is made mostly by the wife. In contrast, decisions on the disbursal of household incomes are not as easily relinquished by the husband; it takes considerably more education (than in the case of health-seeking) before women participate in household economic decisions (Jejeebhoy, 1995).

The degree of gender stratification in families can, however, limit the domains over which educated women make decisions. Especially in highly gender-stratified settings, among the first domains of family life, in which educated women make decisions, or, more likely, are conceded the authority to make decisions, are those considered more trivial by the larger family, although such decisions may have significant demographic repercussions. A small amount of

education might give women the freedom to make decisions in the domestic spheres most relevant to them, notably with regard to child health, internal food distribution, and other aspects of behaviour related to the conjugal family, and possibly with regard to sexual relation with their husbands (Caldwell et al., 1982).

Economic activity does not, by itself, enhance women's control over material resources or power in the household. What is equally necessary for enhancing self-reliance is that working women have a say in how their earnings are used. In highly gender-stratified settings, working women, irrespective of education, are often expected to hand over their earnings to their husbands, mothers-in-law, or other senior members of the household, giving the women little opportunity to decide on their use. In these circumstances, work can hardly be expected to give educated women control over resources or economic self-reliance.

Evidence from a number of settings confirms a positive relationship between education and control over earnings. In rural Bangladesh, it has been found, that education is strongly linked both to a woman's control over her own earnings and those of her husband; the effect of education is significant even after controlling for age, marriage patterns, and husband's characteristics. Similarly, qualitative evidence from Zimbabwe shows that educated women, especially those who are working, have more leverage in bargaining within their families. A study in Gujarat, India, suggests that better-educated women score higher than less educated women on an income autonomy index which comprises six measures of control over resources (whether a women works and whether she retains her earnings) and access to resources (including whether the husband provides cash to the wife, whether the wife keeps money herself, and whether she participates in economic decisions) (Visaria, 1993).

iii) Education inculcates more self-confidence in dealing with the outside world and in extracting the most from the available services. It encourages women to interact with outside world. In highly gender-stratified settings, which restrict women's physical mobility, educated women have more freedom of movement than uneducated women. Even in a general context, better-educated women turn out to be more confident about themselves when they have to deal with situations in the outside world. They also take it upon themselves that maximum benefits are to be derived from available services than what their less educated counterparts can do.

Not only are better educated women more likely to know of available services and to make decisions regarding use of these services, they are also likely to use these services appropriately, demand them as a right and not as a favour, and extract far more from them than uneducated women do. With greater education comes a greater responsiveness to new services, more self-confidence in

interacting with officials and service providers, and a greater ability to demand what is due (Caldwell, 1981). Hence, educated women tend to be taken more seriously both by their families and by such outsiders as service providers in settings as diverse as India, Indonesia, Mexico, and Sri Lanka (Caldwell et al., 1983; Streatfield et al., 1986).

The most convincing evidence of better-educated women's greater confidence in interactions with the outside world comes from health-seeking behaviour. In every region – Africa, Asia, and Latin America – better educated women are considerably more likely than less educated women to use preventive and curative health services, including pre-natal and post-natal care, and to do so with greater timeliness, to demand a greater quality of care, and to continue treatment with greater persistence and accuracy (Backe and Walle, 1987, Okafor, 1991; Akin et al., 1986; Wong et al., 1987; Streatfield et al., 1990, Elo, 1992; Fernandez, 1984).

In India, the states which have experienced rapid progress in improving health and reducing mortality and fertility are often those where women play an important social or economic role. In Kerala and Manipur, women have ended up with a far more equal and active role in the society than their sisters in, say north Indian states. And correspondingly, there has been far more progress in the fields of health and mortality reduction, not just in terms of reducing the female disadvantage in survival, but also in improving survival chances for everyone. There is a sense in which this connection is quite obvious. Given the gender division of labour that prevails in most of India, nutrition, child health, and related matters typically depend primarily on women's decisions and actions. It is hardly surprising that social achievements in this domain are more impressive where women are better educated, more resourceful, more valued, more influential, and generally more equal agents within the household and in society. (Dreze and Sen, 1995)

In case of child sickness, educated women are quicker to take appropriate action and are confident enough to explain symptoms to, and discuss treatment with, service providers. Evidence from rural South India, Punjab, and rural Nigeria suggests that educated women have more frequent and effective interactions with the health system than do less educated women (Krishnan, 1975; Das Gupta, 1990; Orubuloye et al., 1991; Caldwell, 1979).

In the most patriarchal settings, apparently, women manifest freedom of movement only after they have attained a considerable amount of education. In South Asia, for example, the strong cultural tradition limiting women' autonomy, reinforced by strong seclusion practices for women, may remain a formidable barrier to the effectiveness of education in enabling women to interact with the world outside their homes (Jejeebhoy, 1995).

iv) Education encourages a shift in loyalties from extended kin to the conjugal family and promotes greater bonding or intimacy between spouses and between parents and children and less self-denial among women.

Educated women are more likely to forge a close relationship with their husbands, implying greater social equality and emotional intimacy between spouses. With the strengthening of spousal link, women can become more independent of the extended family, emotionally and, in some cases, residentially. Close spousal ties are one reason why better-educated women are somewhat more likely to reside in nuclear families. The educated women display a greater intimacy with their husbands than uneducated women do (Caldwell et al., 1982).

Aside from ethnographic support, some empirical evidence exists that, compared with uneducated women, educated women have closer ties to their husbands and they are also more likely to have more egalitarian attitudes towards husband-wife relations.

In Khartoum, the Sudan, a positive correlation (0.49) was found between women's education and whether they accompanied their husbands to the theatre or to visit friends (Farah and Preston, 1982).

In Cuernavaca, Mexico, better-educated women were systematically more likely to report egalitarian conjugal relationships than were less-educated women (Jejeebhoy, 1995).

In Bangkok, women's education was the most significant determinant of an index of 'attitudes to women's status' constructed from variables reflecting women's attitudes to equality in husband-wife relations (Limanonda, 1987).

With regard to the attitude of women towards the person who should decide about the choice of marriage partner, education turns out to be an important differentiating factor. It is observed that as the level of education increases, the proportion of women who agree that the parent should take the decision decreases. Correspondingly, the percentage of those who take the view that the choice should be on the basis of mutual consent of the boy and the girl to be married increases with education. In many settings, educated women are more likely than uneducated women both to have love marriages and to marry men who are closer to them in age. Both factors help to explain the closer emotional ties of educated women to their husbands.

Educated women are less likely to deny them self and have greater sense of self-worth than uneducated women do. Among Egyptian women, a strong relationship is found between education and the willingness of working women to spend money not just on their families but on themselves (Nawar, 1994).

In sub-Saharan Africa, closer husband-wife ties are fostered also by a shift towards monogamy, especially among better-educated women. Better educated

women are less likely to accept polygamous unions, they are able to maintain closer ties with their husbands than their uneducated co-wives are, as observed among the Mende of Sierra Leone, often to the material disadvantage of the uneducated women and their children. Conjugal family orientation may also lead to a decline in child fostering, because educated women may be reluctant to abandon control over rearing and caring for their children and, unless they have no children themselves, they may be equally reluctant to assume responsibility for the children of others (Bledsoe, 1988).

v) Education increases women's self-reliance in economic matters as well as self-reliance for social acceptance and status rather than relying on their children or husbands, to attain social status or acceptance (Mason, 1986; Caldwell, 1979; Caldwell et. al., 1982).

Perhaps the most important is the contribution of education to women's economic independence and self-reliance. Educated women have greater control over material resources than do uneducated women. For example, they are more likely than uneducated women to express attitudes favourable to saving money for the future (De Vos, 1984). Their enhanced economic and social autonomy and self-reliance affects such intervening variables as marital age, child survival, family size desires and its components, and contraceptive use.

One indication of better-educated women's greater economic self-reliance appears in statements concerning self-reliance in old age. Evidence from both India and Pakistan suggests that educated women, once they have crossed the middle-school threshold, intend to rely on their own resources in old age, either replacing or, more likely, complementing support from their sons. In rural Maharashtra, for example, even after economic status is controlled, educated women are more likely than others to expect to rely on their own income or savings for old age and, more immediately, for their children's education. This pattern exists among both younger and older age groups (United Nations, 1993). In Karachi, Pakistan, similarly, education is a powerful indicator of women's intention to support themselves in old age (Jejeebhoy, 1995).

The most commonly used indicator of women's control over resources is, however, their economic activity or extra-domestic participation in economic production. It is widely believed that education opens economic opportunities for women and increases their participation in the wage sector and that such participation enhances women's control over material resources by giving them an independent source of income (Birdsall and Griffin, 1988; Blau, 1981). In turn, greater control over material resources may reduce educated women's reliance on children for material support and increase their ability to purchase health and contraceptive services. It may also provide motive for delaying marriage (Cain et al., 1979; Mason, 1988).

Physical Mobility

Education breaks the shackles of women's confinement to home and hearth and creates many opportunities for them to interact with the outside world. The evidence for whether educated women face fewer restrictions on physical mobility comes entirely from south Asia and is mixed. A survey in Bangladesh shows that educated women are less likely than uneducated women to travel outside the village locality, and more likely to veil themselves in public and to require a male escort when out of the village. The effect of education on a mobility index constructed from these variables is inverse and significant, even after controlling for other variables, including age, marriage-age and socio-economic status (Jejeebhoy, 1995).

Evidence from Pakistan is mixed. The proportion of women who are free to go to a hospital alone increases from 20% among uneducated women to 32% among those with primary education and 52% among those with more education. An earlier study, however, suggests that education increases physical mobility only among middle school and better-educated women and only in urban areas. That study shows that women with a primary-school education are actually more secluded and isolated from the outside world than uneducated women are, and more likely to practise purdah. This 'sanskritization' effect reflects the greater ability of wealthier families than of poor ones to seclude their women. However, that this effect persists even after age, husband's education, and household economic status are controlled, suggests that women with a moderate amount of education prefer the prestige that goes with purdah to the autonomy that accompanies freedom of movement (Shah and Bulatao, 1981).

Social Mobility, Attitudinal and Behavioural Changes

Education increases the social mobility of a person and increases his/her propensity to participate in social, cultural and political affairs. It also turns out to be a differentiating factor with respect to the attitudes and the behaviour of women. The relevant variables to be considered here are:

i) Religious beliefs, myths, superstitions, rituals and the participation in religious festivals.

ii) Child marriages, widow remarriage, inter-caste marriage and dowry.

iii) Co-education for girls, their stay in hostels, participation in and public display of music, dance, and other fine arts and participation in mixed parties.

iv) Freedom to children to decide upon their education, career, marriage and other such affairs.

v) Perception about the exploitation of women employees by their employers.

vi) Development of interest and participation in political activities.

vii) Leisure time activities.

viii) Fostering of family attitudes conducive to economic growth.

Miscellaneous

Besides the main externalities discussed above, the education of women has a host of other externalities. The education of a woman helps her to get a desirable life-partner and make the married life more pleasant. One of the motives for many parents to get their daughters educated is to help them in getting a better match in the marriage market. Many women go to college partly to increase the profitability of marrying the more desirable man and therefore gain from a more lucrative marriage (Becker, 1964).

The educational and other achievements of her children gives an educated women a lot of personal satisfaction – some thing which is labelled as 'psychic income'. This psychic gain may help such women in further increasing their own productivity.

One of the most important externalities of education, though not peculiar to women's education, is the option of further study. The attainment of a particular level of education has in it an option of going to still higher levels of education and the probability of enjoying all the benefits associated with the latter. In case of women, this option of going to higher levels of education (accompanying any level of attained education) also increases the range and quantum of external benefits from their higher education.

The aforementioned is certainly a less than complete enumeration of the various externalities of women's education. However, an attempt to assess all the externalities would mean to keep on stretching the argument. In doing so, many developments may be traced back to the externalities of education and very distant links shall have to be established.

External Diseconomies

While there is no doubt that women's education has colossal external economies, one cannot lose sight of certain external diseconomies as well. When the emergence of nuclear families is considered to be a positive indirect benefit of women's education, it may not be without certain disadvantages also. For instance, the children of an educated women, working outside her home, may not be getting adequate care, which during the early stages of life, in particular, may be very crucial for the overall personality development of her young ones. Whereas a nuclear family unit may have certain advantages, the co-residence of an educated woman with her parents/parents-in-law has a significant positive effect not only on her probability of working outside the home, but also on the care which her children would get during her absence. This latter arrangement may also be advantageous in terms of the help, which a woman may get, in household work, from the female co-residents, in particular. A recent study in Japan has clearly concluded the positive effect of co-residence on labour force participation of educated-women (Sasaki. M., 2002). Such co-residence also inherently safeguards the maintenance of traditional values and practices which otherwise becomes a causality in the context of nuclear settings.

One of the possible external diseconomies of women's education is the degeneration of moral and family values. While the development of scientific outlook is perceived to

be a positive external economy of women's education, it also may have a diseconomy of showing lesser respect for traditions, values and culture.

Alongside the argument that education of women has an external economy of contributing to more harmonious spousal relations, there is a counter viewpoint, in terms of the external diseconomy of increasing divorce rates to the extent that education encourages a women to come out of an uncomfortable marital bond (although it is debatable whether the increasing divorce rates is a positive or a negative development from a socio- cultural perspective, yet in any case, the core aim would always be to have a harmonious relationship between spouses, at least for the sake of their children).

The neglect of old parents/parents-in-law, on the part of educated women, under the garb of modernity also indicates it to be a diseconomy of women's education. However, in the ultimate analysis, some of the economies and diseconomies can turn out to be value judgements and, therefore, less capable of getting generalised.

Some Methodological Issues

The external benefits of female education, as identified and detailed above, are ultimately to be captured empirically, so as to serve some useful purpose from an analytical point of view. It is only after such an attempt, that one would be in a position to assess and appreciate all the benefits of education. Having regard to the problems involved in the quantification of externalities in education, a breakthrough needs to be made sooner than later. For this purpose, attempts have to be made, at least for partial quantification of these indirect benefits with the help of some empirical evidence. Some of the externalities of education are observable both at macro as well as micro levels. Some externalities, at the societal level, are visible from secondary evidence, but there are many, at the household levels, that need to be captured with the help of primary data, to be collected at that level.

Invariably, there is an implicit tendency to treat the aforementioned externalities as exclusive outcomes of formal education received in organised institutions of learning. Many a time, some of these benefits may be the result of informal education received by a person. For instance, much of the knowledge about the benefits of potable water and good sanitation are better learned from mass media, particularly through radio and television. But even here, the educational level of the woman becomes crucial, as far as the maximisation of benefits from such knowledge is concerned.

One cannot argue that all externalities are sensitive to the level of education attained. Many externalities stop growing after the attainment of a particular level of education.

While analysing and assessing the externalities of women's education, one has to add a word of caution, because of the possibilities of overlapping – for instance, the improvement in the health status of children which we may attribute to the education of the mother may not be exclusively due to it – the improved health status may be mainly due to the improved health facilities and environment like the availability of nutritional support and immunization, better drinking water and sanitation at the household and/or

societal level. However, one cannot deny that women's education significantly contributes to the success of other inputs in improving the health status of children.

Concluding Remarks

The aforementioned discussion on the external benefits of women's education has conclusively pin-pointed the role of women's education in various human dimensions of development. The evidence from most of the developing countries of Asia, Africa, and Latin America has highlighted the role of women's education in improving their status, autonomy and the role in decision making at the household level; reducing their fertility; the improvement in the health of their children reflected by certain quantitative indicators like infant and child mortality; the health status of the family; the changes in their behaviour, responses and attitudes; and their physical and social mobility. Although these gains may not be exclusively due to the education of women, there are a host of other explanatory variables, yet the education of women contributes to these gains as an independent variable and more importantly as an indirect influence which helps in optimising the returns obtainable from various development efforts made by the government or the society at large. Some of the programmes of human development launched by the government attain increased success in settings where there is widespread education of women. However, most of these external benefits are mainly obtainable from some minimum level of education of women. Beyond an extent, increases in the educational level of women face diminishing marginal returns in terms of the external benefits. As such, in order to optimise the external benefits from women's education, the public policy in developing countries must aim at the broadening of investment in women's education over a wider spectrum rather than to allow it to get deepened in a few.

References

Akin, J.S., C.C. Griffin, D.K.Guilkey and B.M. Popkin (1986): " The Demand for Primary Health Care Services in the Bicol Region of the Philippines", *Economic Development and Cultural Change,* 34, 755-82.

Backe C.M. and E.Van de Walle (1987): "Socio-economic Factors and Access to Health Services as Determinants of Child Mortality", Paper Presented at *IUSSP Seminar on Mortality and Society in Sub- Saharan Africa*, Yaounde.

Barrera, Albino (1988): *Maternal Schooling and Child Health*, Ph.D. Dissertation, Yale University, New Haven, Conn.

Barros, Ricardo and David Lam, (1996): "Income Inequality, Inequality in Education, and Children's Schooling Attainment in Brazil." in Nancy Birdsall and Richard Sabot (ed.), *Opportunity Forgone: Education in Brazil*, 337-66. Washington: Inter-American Development Bank.

Becker, Gary S. (1964): *Human Capital*, New York, Columbia University Press.

_____ (1991): *A Treatise on the Family Cambridge*, Mass: Harvard University Press.

Becker, Gary S, and H. Gregg Lewis, (1973): "On the Interaction between Quantity and Quality of Children." *Journal of Political Economy* 81(2, pt.2):S279-S288.

Behrman, Jere (1990): "The Action of Human Resources and Poverty on One Another: What We Have Yet to Learn", *Living Standards Measurement Study*, Working Paper No. 74, The World Bank, Washington, D.C.

Behrman. Jere, Andrew Foster, Mark Rosenzweig and Prem Vashishtha, (1997): "*Women's Schooling, Home Teaching and Economic Growth.*" Unpublished University of Pennsylvania.

Behm, H. (1980): *"Socio-economic Determinants of Mortality in Latin America"*, in Socio-economic Determinants and Consequences of Mortality, WHO, Geneva.

Birdsall N.M. and C.C. Griffin (1988): "Fertility and Poverty in Developing Countries" *Journal of Policy Modelling*, 10/1, 29-55.

Blau, D.M. (1981): Investment in Child Nutrition and Women's Allocation of Time in Developing Countries, *Yale Economic Growth Centre Discussion Paper, 371*

Bledsoe, C. (1988): The Politics of Polygyny in Mende Education and Child Fosterage Transactions, in B.D.Miller (ed.), *Sex and Gender Hierarchies,* Cambridge, Cambridge University Press.

Butz, W., H.P. Habicht, and J. DaVanzo (1984): "Environmental Factors in the Relationship between Breastfeeding and Infant Mortality", *American Journal of Epidemiology,* 119:4, pp.516-525.

Cain M., S.R. Khanam and S. Nahar (1979): "Class Patriarchy and Women's Work in Bangladesh", *Population and Development Review*, Vol.5, No.3.

Caldwell, J.C. (1979): "Education as a Factor in Mortality Decline", *Population Studies*, 33:395-413.

_____ (1982): "Maternal Education as a Factor in Child Mortality", World Health Forum, 2/1, pp. 75-8.

Caldwell, J.C., P.H. Reddy and P. Caldwell (1982): "The Causes of Demographic Change in Rural South India: A Micro Approach", *Population and Development Review*, 8/4, (December), 689-727.

_____ (1983): "The Social Component of Mortality Decline: An Investigation in South India Employing Alternative Methodologies", *Population Studies,* 37, 185-205.

Cash, Richard A. (1983): "Oral Rehydration in the Treatment of the Diarrhoea: Issues in the Implementation of Diarrhoea Treatment Programmes." in Lincoln Chen and Naville Scrimshaw(ed), *Diarrhoea and Malnutrition: Interactions, Mechanisms and Interventions*, New York: Plenum Press.

Cochrane, Susan. H, (1983): "Effects of Education and Urbanization on Fertility." In R.A. Bulatao and R.D. Lee (ed.) *Determinants of Fertility in Developing Countries*, New York: Academic Press.

Cleland, John and German, Rodriguez, (1988): "The Effects of Parental Education on Marital Fertility in Developing Countries." *Population Studies* 42(3): 419-42.

Das Gupta, M. (1990): "Death Clustering, Mother's Education and the Determinants of Child Mortality in Rural Punjab, India", *Population Studies*, 44, 489-505.

Dreze, Jean and Amartya Sen (1995): *India: Economic Development and Social Opportunity*, Oxford.

Elo, I.T. (1992): "Utilization of Maternal Health Care Services in Peru: The Role of Women's Education", *Health Transition Review,* 2/1, 44-69.

Estrey, S.A. and J.P. Habicht (1987): "*Maternal Literacy Modifies the Effect of Toilets and Piped Water on Infant Survival in Malaysia*", Processed, Cornell University, Ithaca, NY.

Farah, Abdul-Aziz and S.H. Preston (1982): "Child Mortality: Differentials in Sudan", *Population and Development Review*, 8/2, 365-83.

Fernandez, R. (1984): Analysis of Information about Mother-Child Care Taken from *Fertility Surveys in Latin America*, Voorberg, International Statistical Institute, unpublished.

Glewwe, Paul, (1999): "Why Does Mother's Schooling Raise Child Health in Developing Countries? Evidence from Morocco." *Journal of Human Resources*, vol.34, No.1, Winter.

Haines, M.R. and R.C. Avery (1982): "Differential in Infant and Child Mortality in Costa Rica." 1968-73, *Population Studies* 36: 31-44.

Haveman, Robert,and Barbara Wolfe (1995): *Succeeding Generations on the Effects of Investment in Children*, New York: Russell Sage.

Inkeles, A.and D. Smith (1974): *On Becoming Modern: Individual Change in Six Countries*, Cambridge, Mass, Harvard University Press.

Jeejebhoy, S.J. (1995): *Women's Education, Autonomy and Reproductive Behaviour*, Clarendron Press Oxford.

Krishnan, P. (1975): "Mortality Decline in India, 1951-1961: Development vs. Public Health Programme Hypothesis", *Social Science and Medicine*, 9,475-79.

Lam, David, Guilherme Sedlacek, and Suzanne Duryea, (1992): "Increases in Women's Education and Fertility Decline in Brazil." Paper Presented to the *IUSSP Conference on the Peopling of the Americas, Veracruz, Mexico.*

Lam, David and Suzanne Duryea, (1999): "Effects of Schooling in Fertility, Labour Supply and Investments in Children, with Evidence from Brazil" *Journal of Human Resources.* XXXIV.1. pp. 160-90.

Limanonda B. (1987): "Analysis of Thai Marriage: Attitudes and Behaviour: *A Case Study of Women in Bangkok Metropolis*", Paper No.56 (Bangkok, Institute of Population Studies, Chulalongkorn University).

Mandelbaum, D.G. (1974): Human Fertility in India: Social Components and Policy Perspectives, Berkeley, University of California Press.

Mason, Karen Oppenheim, (1986): "The Status of Women: Conceptual and Methodological Issues in Demographic Studies." *Sociological Forum* 1:284-300.

Mclaren, D.S. (1982): "The Home Environment of the Malnourished-Deprived Child", *Health Policy Education*, 2/91.

Mensch, B., H. Lentzner and S. Preston, (1986): *Socio-economic Differentials in Child Mortality in Developing Countries*. New York: United Nations.

Merrick, Thomas W., and Elza Berquo. (1983): The Determinants of Brazil's Recent Rapid Decline in Fertility. Washington, D.C.:National Academic Press.

Mintrun, L. (1984): "Changes in the Differential Treatment of Rajput Girls in Khalapur: 1955-1975", *Medical Anthropology*, 8/2, 127-32.

Mohamed EL Awad Galal el Din (1977): "The Economic Value of Children in Rural Sudan", in J.C. Caldwell (ed.), The Persistence of High Fertility: Population Prospects in Third World, pt. 2, Canberra, Department of Demography, Australian National University.

Murthi, Mamta, Anne-Catherine Guio, and Jean Dreze, (1995): '*Mortality, Fertility and Gender Bias in India'*, Discussion Paper No. 61, Development Economics Research Programme, STICERD, London School of Economics.

Nawar, Lalla., Cynthia B.Lloyd and Barbara Ibrahim (1994): "Women's Autonomy and Gender Roles in Egyptian Families", in Carla Makhlouf Obermeyer, *Gender, Family and Population Policy: Views from Middle East*, Cairo, The American University in Cairo.

Okafor, C.B. (1991): "Availability and Use of Services for Maternal and Child Health Care in Rural Nigeria". *International Journal for Gynaecology and Obstetrics*, 34/331, 331-46.

Okojie, C.E.E. (1993): "Some Inter-Relationship Between Maternal Education and Child Survival in Nigeria: Evidence from Household Surveys and Focus Group Discussions", in International Union for the Scientific Study of Population (IUSSP), *Proceedings of the International Population Conference, Montreal*, iv (Liege, IUSSP).

Olson, Mancur (1996): "Big Bills Left on the Sidewalk: Why Some Nations are Rich, and Other Poor." *Journal of Economic Perspectives*, 10(2): 3-24.

Orubuloye I.O., J.C. Caldwell, P.Caldwell and C.H. Bledsoe (1991): "The Impact of Family and Budget Structure on Health Treatment in Nigeria", *Health Transition Review*, 1/2, 189-210.

Page H.J. And R. Lesthaeghe (1981): *Child Spacing in Tropical Africa: Tradition and Change*, London, Academic Press.

Rosenzweig, Mark and T. Paul Schultz, (1982): "Market Opportunities Genetic Endowments and Intra-family Resources Distribution: Child Survival in Rural India." *American Economic Review* 72, 803-15.

_____ (1985): "The Demand and Supply of Births." *American Economic Review* 75: 992-1015.

Saski, Masaru, (2002): "The Casual Effect of Family Structure on Labour Force Participation among Japanese Married Women" *The Journal of Human Resources,* vol.37, No.2

Schultz, T. Paul. (1989): *Benefits of Educating Women.* Washington, D.C.: World Bank, Background Papers Series, Education and Employment Division, Population and Human Resources Department.

_____ (1993): "Returns to Women Education", in Elizabeth M. King and M. Anne Hill (ed.) *Women's Education in Developing Countries: Barriers, Benefits and Policies, Baltimore*: Johns Hopkins University Press.

Schultz,T. Paul. (1984): "Studying the Impact of Household Economic and Community Variables on Child Mortality." *Population and Development Review.* 10 (Suppl.):215-35.

Schultz, T.Paul (1989): "Returns to Women's Education", Document no. PHRWD/89/001, Women in Development Division, Population and Human Resources Department, The World Bank.

Schultz, T.P. (1990): "Testing the Neoclassical Model of Family Labour Supply and Fertility", *Journal of Human Resources*, 25, 599-634.

Shah, N.M. and E.Q. Bulatao (1981): "Purdah and Family Planning in Pakistan", *International Family Planning Perspectives*, 7/1, 32-7.

Shariff, Abusaleh (1999): "Women's Status and Child Health" in M. Krishnaraj, R.M. Sudarshan and A. Shariff (ed.) *Gender, Population and Development*, Oxford University Press, New-Delhi.

Strauss, John and Duncan Thomas, (1995): " Human Resources: Household Decisions and Markets." in. Jere Behrman and T.N. Srinivasan, (ed) Handbook of Development Economics, Vol. 3.

Streatfield, K., M. Singarimbun and I. Singarimbun (1986): "The Impact of Maternal Education on the Use of Child Immunisation and other Health Services", *International Population Dynamics Programs Research Note on Child Survival*, No.8CS, Canberra, The Australian National University.

Streatfield K., M. Singarimbun and I. Diamond (1990): "Maternal Education and Child Immunization", *Demography*, 27/3, 447-55.

Summers, Lawrence H. (1992): Investing in All the People. Washington, D.C.: World Bank, Office of the Vice President, *Policy Research Working Papers*, Report No. WPS 905.

Susan De Vos (1993): "The Old-Age Security Value of Children in the Phillippines and Taiwan", *Papers of the East-West Population Institute*/60-G, Honolulu, East-West Center.

Thomas, Duncan, John Strauss, and Maria Helena Henriques, (1991): "How Does Mother's Education Affect Child Height?" *Journal of Human Resources* 26 (2): 183-211.

United Nations (1993): *Women's Education and Fertility Behaviour: A Case-Study of Rural Maharashtra*, India (New York, United Nations)

Visaria, Leela (1993): "Female Autonomy and Fertility Behaviour: An Exploration of Gujarat Data", in International Union for the Scientific Study of Population (IUSSP), *Proceedings of the International Population Conference, Montreal*, iv, (Liege, IUSSP).

Vlassoff, C. (1980): "Unmarried Adolescent Female in Rural India: A Study of the Social Impact of Education", *Journal of Marriage and the Family*, 42/2, (May), 427-36.

Weale, Martin. (1992): Education, Externalities, Fertility, and Economic Growth. Washington, D.C.: World Bank, Population and Human Resources Department, *Policy Research Working Paper* No. WPS 1039.

Willis, Robert J. (1973): "A New Approach to the Economic Theory of Fertility Behaviour." *Journal of Political Economy* 81(2, Part2): S14-S64.

Woodhall, M. (1973): "Investment in Women", *International Review of Education,* 19, pp.9-28.

Wonge, E.L., B.H. Popkin, D.K.Guilkey and J.S. Akin (1987): "Accessibility Quality of Care and Prenatal Care Use in the Philippines", *Social Science and Medicine*, 24, 927-44.

World Bank. (1992): *Poverty and Income Distribution in Latin America: The Story of the 1980s.* Washington, D.C.: Technical Department, Latin America and the Caribbean Region, Regional Studies Program, Report No. 27

World Bank (1993): "*The Benefits of Education for Women*", HRO Dissemination Notes, No. 2, March 8, 1993.

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Educational and Employment Scenario in Electrical Engineering at Degree and Diploma Levels

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Abstract

There has been a significant expansion in the engineering educational facilities in general and electrical engineering in particular. This study attempts to analyse whether the expansion of facilities for electrical engineering education is related to the anticipated requirements of electrical engineers; what is the nature of labour market for electrical engineers, and what kind of signals emanate from the labour market for policy making in this area of education? The analysis indicates that the labour market for electrical engineers is faced with excess supply. This is reflected in long waiting periods and significant unemployment observed both at degree and diploma levels in many states. Obviously, there is either a mismatch between demand and supply; or alternately, the product is not employable; or both. However, considering the potential investment and expansion in power generation, one could expect creation of more employment opportunities in near future for electrical engineers.

Introduction

Energy is an essential input for the economic development of a country. Its production level is considered as an index towards prosperity and economic growth of countries. For meeting the growing needs of our society, power development in India started at the end of the 19th century. At the time India attained independence, the installed power generation capacity in the country was 1,400 MW. At the end of 2001-02, the installed power generation capacity is 104,917.5 MW. In spite of this increase in installed capacity, the per capita consumption of electricity in our country is only 350 KWH, much below the consumption levels in developed countries. To achieve the target of providing

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power to all by 2012, additional capacity of 100,000 MW will have to be set up. Capacity addition plans for 41,110 MW have been finalized state-wise for the Tenth Plan period (2002-07). The outlay for power sector during the Tenth Plan period was enhanced to about 143,000 crores, which is approximately 214 per cent higher than the IX Plan outlay (PIB Features, 2003).

Considering the potential investment and expansion of power generation, transmission and distribution networks in the country, it can be said that in near future there would be creation of more employment opportunities for electrical engineers. In recent past, the labour market for both degree and diploma holders in electrical engineering has been showing mixed trend. It shows that for the degree holders the labour market situation was favourable in about half of the States and satisfactory in another one-third. The labour market situation for diploma holders was, however, not favourable in most of the States. As a result there has been significant unemployment amongst them. Therefore, it can be said that the supply and demand is not in equilibrium. In this context, an attempt has been made to trace the development that has taken place in the facilities for electrical engineering education both at degree and diploma levels and also capture signals that emerge from the analysis of labour market situation for them.

Educational Facilities for Electrical Engineering

Electrical Engineering, being one of the core disciplines, was introduced in the engineering educational institutions in the very beginning of engineering education in the country. If we look back to earlier period, we find that in 1947 the out-turn of electrical engineers in our country was only 149 and that of diploma holders simply, 212. Over the years there has been a considerable expansion of electrical engineering education both at degree and diploma levels. In 2003-04, out of 1347 institutions offering degree in engineering, in as many as 789 institutions, accounting for 59 per cent of the total institutions, facilities are available for degree level education in electrical engineering. Number of diploma level institutions (Polytechnics), as in the year 2002-03, in the country is 1228, out of which 551 offer courses in electrical engineering at diploma level accounting for about 49 per cent of the total institutions in the country. Table 1 explains.

Degree level institutions imparting education in electrical engineering

In the year 2003-04, there were 1347 degree-level institutions including university departments. Out of these, 689 institutions accounting for 51 per cent are located in the southern region, followed by western region with 289 institutions (22%). In the northern region, the total number of degree level institutions is 248, accounting for 18 per cent of the total institutions in the country. In the eastern region, the number of institutions is not very large. For instance, only nine per cent of the total institutions of the country are located in this region.

TABLE 1

Total Number of Engineering Institutions and Number of Institutions offering Degree and Diploma Level Courses in Electrical Engineering by Region and State

Region / States	Degree*		Diploma**	
	Total Institutions	Institutions having Courses in Elec. Engg.	Total Institutions	Institutions having Courses in Elect. Engg.
Andaman & Nicobar	0	0	2	1
Arunachal Pradesh	1	1	1	1
Assam	4	3	10	6
Bihar	9	5	13	7
Jharkhand	8	4	15	5
Manipur	1	0	3	1
Meghalaya	1	0	2	1
Mizoram	1	0	3	1
Nagaland	0	0	2	1
Orissa	39	30	27	18
Sikkim	1	1	2	0
Tripura	1	1	1	1
West Bengal	55	33	43	24
Eastern Region	**121**	**78**	**124**	**67**
Andhra Pradesh	228	191	92	44
Karnataka	116	54	201	56
Kerala	84	40	52	16
Pondicherry	6	5	5	3
Tamil Nadu	255	197	214	158
Southern Region	**689**	**487**	**564**	**277**
Dadra & Nagar Haveli	0	0	1	0
Goa, Daman & Diu	4	1	9	1
Gujarat	32	24	40	27
Madhya Pradesh	58	26	46	27
Chhattisgarh	12	8	12	6
Maharashtra	183	36	170	50
Western Region	**289**	**95**	**278**	**111**
Chandigarh	4	1	4	1
Delhi	18	7	26	7
Haryana	39	14	31	9
Himachal Pradesh	5	4	7	3
Jammu & Kashmir	5	4	14	9
Punjab	40	22	40	15
Rajasthan	40	29	28	15
Uttar Pradesh	87	42	90	31
Uttaranchal	10	6	22	6
Northern Region	**248**	**129**	**262**	**96**
All India	**1347**	**789**	**1228**	**551**

Source: AICTE & NTMIS * For the year 2003-04; ** For the year 2002-03

It can be seen from Table 1 that, as in the year 2003-04, at the national level, as many as 789 institutions at degree level offer programme in electrical engineering. This implies that facilities for electrical engineering at degree level are available in about 59 per cent of the total number of institutions. Out of 789 institutions offering programmes at degree level in electrical engineering, southern region accounts for 62 per cent of the institutions while western, northern and eastern region, account for 12, 16 and 10 per cent respectively.

Out of 689 institutions in the southern region, 71 per cent offer courses in electrical engineering while in the western region the share of such institutions in the total number of institutions is 33 per cent. In the northern region, the proportion of such institutions comes to 52 per cent while in the eastern region it is 56 per cent.

State-wise analysis of degree level institutions shows that in the southern region, Tamil Nadu has 197 institutions offering degree in electrical engineering, followed by Andhra Pradesh with 191 such institutions. Karnataka comes third with 54 institutions. In the western region, Maharashtra with 36 institutions tops the list of states in terms of number of institutions offering degree in electrical engineering; Madhya Pradesh with 26 institutions comes second in the region. In the northern region, in Uttar Pradesh 42 institutions offer degree in electrical engineering, followed by Rajasthan (29), Punjab (22) and Haryana (14), while in the eastern region, West Bengal has 33 institutions, followed by Orissa with 30 institutions and so forth (Table 1).

Growth in intake

Table 2 presents state-wise data on the sanctioned intake at degree level during the period 1985-2003. It can be seen that the sanctioned intake in the year 1985 at the national level was 5571; thereafter, a substantial increase in the sanctioned intake has been observed in the year 1991 as compared to 1985, that is, about 2083 seats. Similar increasing trend has been observed in the year 1995 and 2000. The intake capacity reached 12592 in the year 1995 and 24948 in the year 2000 (Figure 1) while in the year 2003 it increased to 47053. Therefore, it can be said that the increase was very steep during 1985 and 2003.

Analysis of intake by state indicates that Tamil Nadu has the maximum sanctioned capacity of 12022 in the year 2003, followed by Andhra Pradesh with 11645 seats. Karnataka with 3035 seats and Maharashtra with 2122 seats rank third and fourth in terms of sanctioned capacity at degree level programmes for electrical engineering.

Growth in out-turn

Total out-turn of electrical engineering degree holders in 1947 was 149. With the passage of time, facilities for engineering education increased so did the facilities in electrical engineering. As a result, the out-turn profile of engineers changed. In the year 1960, the out-turn of electrical engineers was 923, which was over 500 per cent higher than that out-turn of 1947. Ten years later, that is in the year 1970, there was a significant growth in the out-turn of electrical engineers. As a result, it reached 4539 in the year 1970.

Thereafter, it started decreasing and reached at as low as 2635 in the year 1976. Since 1976, there has been an increasing trend. In the year 1980, the total out-turn of electrical engineering degree holders was 3339, which increased to 4513 in the year 1985 and then to 5551 by the year 1991 (Figure 1). The out-turn of electrical engineers further increased to 6393 in the year 1995 and to 9359 in the year 2000.

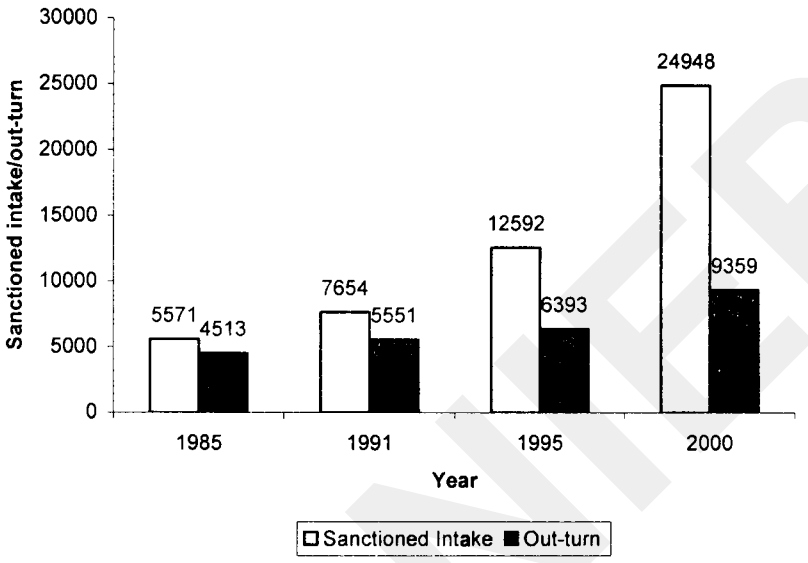

Figure 1. Sanctioned Intake and Out-turn in Electrical Engineering at Degree level

State-wise analysis of out-turn indicates that, in the year 2000, Tamil Nadu had the largest out-turn of 2822, followed by Karnataka and Andhra Pradesh (1198). The State which comes next, in terms of out-turn of electrical engineers, is Gujarat with 678, followed by Kerala with 568 (Table 3).

Diploma level institutions imparting education in electrical engineering

Out of 1228 diploma level institutions (polytechnics) existing in the country during 2002-03, southern region accounts for a major share of polytechnics that offer programmes in engineering at the diploma level. Out of the total number of 1228 polytechnics that exist now, southern region has 564 institutions, that is, the southern region accounts for 46 per cent of the total number of polytechnics in the country. Western region with 278 polytechnics comes second while the northern region stand third and the eastern region fourth with 262 and 124 such institutions respectively. Thus, the share of western region accounts for 23 per cent, northern region 21 per cent and eastern region only 10 per cent in the total number of polytechnics in the country.

Electrical Engineering diploma level programme is available in as many as 551 institutions, out of the total of 1228 institutions in the country (Table 1). In other words, 45 per cent of the total diploma level institutions in the country impart education in electrical engineering.

TABLE 2

Sanctioned Intake into Degree Courses in Electrical Engineering

State	1985	1991	1995	2000	2003
Andhra Pradesh	424	550	1180	3990	11645
Arunachal Pradesh	-	-	30	30	30
Assam	160	170	145	175	145
Sikkim	-	-	-	40	60
Bihar & Jharkhand	400	420	355	415	480
Chandigarh	60	60	60	60	60
Delhi	145	175	205	355	500
Goa, Daman, Diu	20	20	20	20	60
Gujarat	385	430	530	930	1438
Haryana	90	140	270	610	805
Himachal Pradesh	-	30	60	85	205
Jammu & Kashmir	50	35	65	285	200
Karnataka	480	1802	2100	2395	3035
Kerala	335	315	600	720	2580
Madhya Pradesh & Chhattisgarh	390	543	550	875	1995
Maharashtra	592	962	1542	2150	2122
Orissa	215	520	300	1100	1695
Pondicherry	-	-	60	240	300
Punjab	135	155	145	455	1285
Rajasthan	215	192	244	833	1706
Tamil Nadu	530	570	3245	6624	12022
Tripura	40	40	40	40	40
Uttar Pradesh & Uttaranchal	580	455	517	1577	2627
West Bengal	325	370	329	944	2018
Total	**5571**	**7654**	**12592**	**24948**	**47053**

(-) Data not available/ Course not available

Source: AICTE & NTMIS

Out of the total of 551 institutions offering diploma level education in electrical engineering, region-wise, southern region accounts for the largest number of institutions offering diploma level programmes in electrical engineering. Total number of such institutions is 277, accounting for 51 per cent, followed by the western region with 111 institutions, accounting for 20 per cent, northern region with 96 institutions (17%) and eastern region with 67 institutions (12%) of the total number of diploma level institutions in the respective regions.

TABLE 3

Out-turn of Degree Holders in Electrical Engineering

State	1985	1991	1995	2000*
Arunachal Pradesh	-	-	-	26
Andhra Pradesh	323	393	568	1198
Assam	91	159	76	178
Bihar & Jharkhand	231	309	310	300
Chandigarh	62	50	56	54
Delhi	150	100	145	164
Goa, Daman, Diu	20	17	17	20
Gujarat	303	266	433	678
Haryana	36	50	85	109
Himachal Pradesh	-	15	36	46
Jammu & Kashmir	31	30	98	26
Karnataka	784	836	1088	1198
Kerala	309	472	516	568
Madhya Pradesh & Chhattisgarh	337	415	759	331
Maharashtra	443	424	759	361
Orissa	81	164	92	375
Pondicherry	-	-	-	42
Punjab	67	53	58	72
Rajasthan	227	125	179	171
Tamil Nadu	345	843	902	2822
Tripura	10	20	32	36
Uttar Pradesh & Uttaranchal	357	450	250	270
West Bengal	306	360	295	314
Total	**4513**	**5551**	**6393**	**9359**

* Provisional; (-) Data not available/ Course not available

Source: NTMIS

Out of 124 polytechnics that exist in the eastern region, facility for electrical engineering education is available in 67 institutions, accounting for 54 per cent of the total institutions in the region. In southern region, out of 564 polytechnics that exist, 277 (49%) institutions impart education in electrical engineering. Out of the total number of institutions that exist in the region, only 40 per cent institutions in the western region and 37 per cent institutions in the northern region offer electrical engineering diploma level education.

The State of Tamil Nadu in the southern region tops the list of states offering diploma level courses in electrical engineering as it has 158 such institutions, followed by Karnataka with 56. Andhra Pradesh with 44 institutions comes third in the region while Kerala stands fourth with 16 such institutions. In the western region, Maharashtra has the maximum number of such institutions, that is, 50 polytechnics out of a total of 170 polytechnics. In the case of northern region, as can be seen from Table 1, Uttar Pradesh has 31 polytechnics offering courses at diploma level in electrical engineering out of the total of 90 polytechnics; while in the eastern region, West Bengal comes at the top of the states in the region in terms of number of polytechnics offering diploma level programmes in electrical engineering with 24 such institutions out of a total of 43 polytechnics followed by Orissa with 18 polytechnics out of the total of 27 in the state. It can also be seen from the Table 1 that though there are two polytechnics, in the State of Sikkim and one in Dadra & Nagar Haveli, none of them impart education in electrical engineering.

Growth in intake

As can been seen from Table 4, in the year 1985, the sanctioned intake was 12604 which increased to 16296 in the year 1991. In the years 1995 to 2000, the intake capacity showed an increasing trend. In the year 2000, sanctioned intake reached 27385 indicating an increase of about 11090 seats at diploma level institutions between the year 1991 to 2000 while in the year 2002, it was 27443, showing a marginal increase of intake capacity between the year 2000 and 2002.

State-wise analysis of sanctioned intake indicates that Tamil Nadu has the maximum capacity of 8530 in the year 2002, which accounts for 31 per cent of the total sanctioned capacity at diploma level at the national level, followed by Maharashtra with 2745 (10%). Karnataka comes third with 2735 sanctioned seats (10%), followed by Andhra Pradesh with 2140 seats (8%).

TABLE 4
Sanctioned Intake into Diploma Courses in Electrical Engineering

State	1985	1991	1995	2000	2002
Andaman & Nicobar	-	15	30	30	30
Andhra Pradesh	965	1159	1460	2100	2140
Arunachal Pradesh	-	-	30	30	30
Assam	185	200	200	170	200
Bihar & Jharkhand	710	680	505	430	520
Chandigarh	50	65	75	75	75
Delhi	255	245	395	531	495
Goa, Daman & Diu	50	30	30	30	30
Gujarat	810	1090	1085	1855	1890
Haryana	265	230	355	365	365
Himachal Pradesh	54	60	90	90	90
Jammu & Kashmir	20	40	40	400	400
Karnataka	945	2016	2615	2850	2735
Kerala	690	785	849	870	900
Madhya Pradesh & Chhattisgarh	835	1050	1550	1640	1640
Maharashtra	1260	1928	2555	2815	2745
Manipur	30	30	40	40	40
Meghalaya	30	30	30	30	30
Mizoram	40	30	30	30	30
Nagaland	15	15	15	15	15
Orissa	240	360	605	920	920
Pondicherry	30	30	148	126	120
Punjab	455	445	470	750	750
Rajasthan	105	285	375	415	415
Tamil Nadu	1760	2823	3800	8500	8530
Tripura	30	40	30	30	30
Uttar Pradesh & Uttaranchal	1935	1665	1410	1148	1178
West Bengal	840	950	1100	1100	1100
Total	**12604**	**16296**	**19917**	**27385**	**27443**

(-) Data not available/ Course not available
Source: AICTE & NTMIS

Growth in out-turn

At the time India attained independence, that is, in 1947, the total out-turn of electrical engineering diploma holders was 212 only. Since independence, the out-turn of this category of engineers increased significantly. It can be seen from Table 5 that in the year 1985, the country produced 8195 electrical engineering diploma holders which increased to 10044 in the year 1991, that is, 123 per cent higher than the out-turn of the year 1985. It is also evident from Table 5 that there is a continuous increase in the out-turn. As a result, the out-turn of electrical engineering diploma holders in the country reached 14375 in the year 2000 (Figure 2).

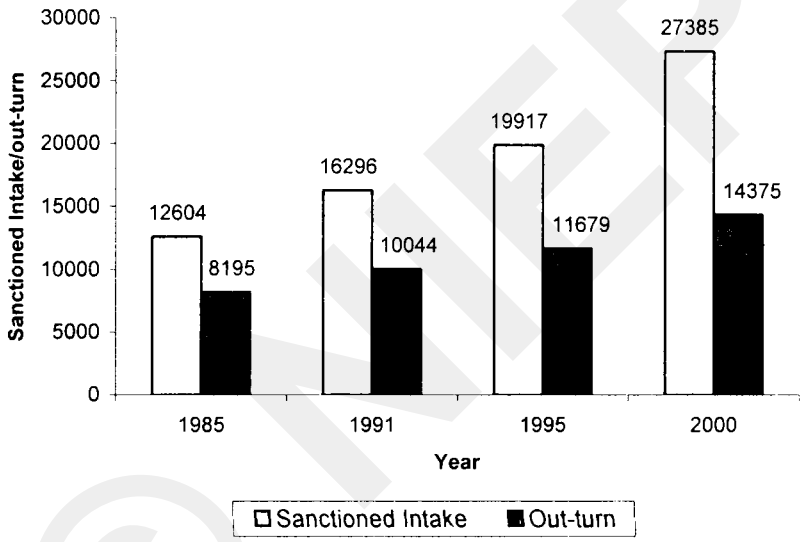

Fig. 2. Sanctioned Intake and Out-turn in Electrical Engineering at Diploma Level

As we look at the state-wise figures in Table 5, we find that the State of Tamil Nadu had the largest out-turn of 4034 in the year 2000, followed by Andhra Pradesh (1874) and Maharashtra (1623). Region-wise, southern region has produced highest number of electrical engineering diploma holders in the year 2000, followed by western, eastern and northern regions.

Such significant stride in the development of this core discipline has also brought in another issue viz. the employment. One moot question that now arises is that what happens to these degree and diploma holders after their successfully completing the courses.

TABLE 5
Out-turn of Diploma Holders in Electrical Engineering

State	1985	1991	1995	2000*
Arunachal Pradesh	-	-	8	16
Andhra Pradesh	678	606	1574	1874
Assam	172	104	48	39
Andaman & Nicobar	0	9	5	10
Bihar & Jharkhand	325	341	265	250
Chandigarh	42	30	29	38
Delhi	131	195	135	94
Goa, Daman, Diu	27	13	20	20
Gujarat	546	667	866	1223
Haryana	144	115	195	195
Himachal Pradesh	34	55	53	47
Jammu & Kashmir	14	21	32	32
Karnataka	719	1128	1286	1011
Kerala	531	622	520	791
Madhya Pradesh & Chhattisgarh	342	887	780	637
Maharashtra	966	1069	1532	1623
Manipur	18	15	5	26
Meghalaya	20	12	7	5
Mizoram	-	33	21	4
Nagaland	20	10	15	-
Orissa	130	136	219	472
Pondicherry	30	27	29	25
Punjab	280	285	194	226
Rajasthan	90	125	166	258
Tamil Nadu	929	1767	2066	4034
Tripura	26	12	19	21
Uttar Pradesh & Uttaranchal	1447	1085	879	557
West Bengal	534	675	711	847
Total	**8195**	**10044**	**11679**	**14375**

* Provisional; (-) Data not available/ Course not available
Source: NTMIS

Employment Scenario

Under the NTMIS, an assessment of the employment market for engineers is done through regular follow-up of degree and diploma holders passing out from the educational institutions every year. The methodology followed is to collect addresses of all students who obtained degree and diploma in engineering from each institution. This is done by the concerned Nodal Centres. A pre-designed 'graduate' follow-up questionnaire is mailed to all of them after two years of passing out the examination at degree and diploma levels. Attempts are made to achieve at least 50 per cent response through mailed enquiry. Whereafter, the non-responding 'graduates' are approached personally through a sample survey in order to account for non-response.

Among various other things, the questionnaire elicited information regarding the current activity status. Those reporting employed are further asked to indicate the time taken for getting the first paid employment. This information is used to work out the percentage rate at which the fresh graduates get absorbed each year after graduation. Based on the pattern of absorption in different states, the job prospects for engineering degree and diploma holders in different states are assessed.

The analysis presented here is based on the 'graduate' follow-up survey of 1988 and 1999 pass-out degree and diploma holders. The follow-up survey of 1999 batch means that the survey was started in July 2001, that is, after two years of passing out, and concluded in the year 2002.

There are a number of parameters which can be considered in the context of labour market analysis of a particular category of manpower in general or degree and diploma holders in electrical engineering in particular. However, in this section we have discussed only three parameters considered to be very important. These are: absorption rates, earning differentials and size of unemployment.

Pattern of Absorption

In the discussions that follow, an attempt has been made to present the pattern of absorption in terms of percentage of degree holders and diploma holders in electrical engineering getting absorbed in two years. In order to see how the situation has changed over a period of time, we have also tried to present the situation that emerged for degree and diploma holders in electrical engineering who passed out in the year 1988 and 1999. The comparative picture so obtained has been presented in Table 6 for degree and diploma holders.

Degree holders

It can be seen from Table 6 that except that of Arunachal Pradesh, electrical engineering degree holders who passed out in 1999 took more than two years for complete absorption. In the case of states like Andhra Pradesh, Chandigarh, Madhya Pradesh, Punjab and Rajasthan, percentage of graduates getting absorbed in two years was between 60 to 70 per cent. Haryana, Karnataka, Kerala, Maharashtra, Orissa, Tripura,

Uttar Pradesh and West Bengal are the states where the percentage of degree holders in electrical engineering getting absorbed within two years ranged between 71 to 90 per cent, while the state like Delhi, showing comparatively better opportunities for employment when compared to the rest of states as the absorption of graduates within two years of passing out, was more than 90 per cent. The absorption is very poor in the States of Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir and Tamil Nadu. It can also be seen from the Table that opportunities for employment for those who passed in the year 1988 were better when compared to pass-outs of 1999.

TABLE 6

Absorption Rates of Fresh Degree/Diploma Holders within Two Years after Obtaining their Degree

State	Absorption (in Percentage)			
	Degree Pass outs		Diploma Pass outs	
	1988	1999	1988	1999
Arunachal Pradesh	-	100	-	-
Andhra Pradesh	100	67	60	47
Assam	70	59	69	46
Bihar & Jharkhand	74	-	41	-
Chandigarh	100	69	79	24
Delhi	70	93	96	85
Gujarat	82	52	60	27
Haryana	59	82	71	41
Himachal Pradesh	0	59	27	74
Jammu & Kashmir	77	33	74	27
Karnataka	100	71	61	69
Kerala	100	80	44	44
Madhya Pradesh & Chhattisgarh	79	65	45	45
Maharashtra	95	80	94	51
Orissa	83	72	55	8
Mizoram	-	-	-	-
Meghalaya	-	-	-	33
Nagaland	-	-	-	-
Punjab	88	61	32	42
Rajasthan	100	70	68	25
Tamil Nadu	100	45	85	36
Tripura	67	87	73	100
Uttar Pradesh & Uttaranchal	100	87	43	49
West Bengal	100	85	60	64

(-) Data not available/ Course not available;
Source: NTMIS

Diploma holders

In the case of diploma holders it can be seen from Table 6 that percentage of absorption is low in comparison to degree holders in almost all the states. For instance, the percentage of diploma holders getting absorbed in two years after passing out in 1999 ranged between as low as 8 per cent, in the case of Orissa, to 100 per cent in the case of Tripura. However, in these states, the out-turn is also very low. About 85 per cent of the out-turn from Delhi were able to find employment within two years; whereas in the states like Himachal Pradesh, Karnataka and West Bengal, the absorption varies between 60 to 75 per cent. In the remaining States, the absorption within two years was below 60 per cent.

TABLE 7

Emoluments Earned per Month by Fresh Degree and Diploma Holders in Electrical Engineering (1999 Pass outs)

State	Emoluments Earned (Rs.)	
	Degree Holders	Diploma Holders
Arunachal Pradesh	7438	-
Andhra Pradesh	10176	3299
Assam	14522	2481
Chandigarh	16752	2250
Delhi	22873	5339
Gujarat	6770	3154
Haryana	12353	3337
Himachal Pradesh	9505	3540
Jammu & Kashmir	8071	3588
Karnataka	8295	3340
Kerala	8575	2822
Madhya Pradesh & Chhattisgarh	12583	2794
Maharashtra	4040	5850
Manipur	8600	-
Mizoram	6333	-
Meghalaya	-	6000
Nagaland	-	-
Orissa	15951	2196
Punjab	10172	2445
Rajasthan	10059	3123
Tamil Nadu	4676	2414
Tripura	9669	7500
West Bengal	10504	4821
Uttar Pradesh & Uttaranchal	15670	3300

(-) Data not available/ Course not available

Source: NTMIS

Therefore, that a large chunk of out-turn of most of the states is not able to find employment even within two years of obtaining their diploma clearly indicates unfavourable labour market situation for this category of engineers.

TABLE 8

Estimated Size of Unemployment of Electrical Engineers at the end of 2003 (excluding the out-turn of 2003)

State	Size of Unemployment	
	Degree Holders	**Diploma Holders**
Arunachal Pradesh	4	-
Andhra Pradesh	1224	1251
Assam	93	58
Bihar	217*	611*
Chandigarh	51	75
Delhi	35	126
Goa, daman & Diu	0	18*
Gujarat	881	2664
Haryana	173	327
Himachal Pradesh	63	31
Jammu & Kashmir	71	116
Karnataka	980	861
Kerala	322	1337
Madhya Pradesh & Chhattisgarh	250	854
Maharashtra	951	1868
Manipur	-	-
Mizoram	-	-
Meghalaya	-	12
Nagaland	-	-
Orissa	502	1584
Punjab	180	578
Rajasthan	377	686
Tamil Nadu	4771	8979
Tripura	5	5
West Bengal	161	502
Uttar Pradesh & Uttaranchal	172	775
Total	**11483**	**23318**

(-) Data not available/ Course not available

* Based on latest available data

Source: NTMIS

Earning Differentials

Under the NTMIS programme, data are gathered, among other things, on emoluments earned by fresh degree and diploma holders in engineering. Such data help in having a better appreciation of relative employment market situation for different categories of engineers.

Degree holders

It can be seen from Table 7 that emoluments earned per month by fresh degree holders in electrical engineering ranged from as low as Rs. 4040 in the case of Maharashtra to Rs. 22873 in the case of Delhi.

Diploma holders

Compared to degree holders, the earnings of diploma holders in electrical engineering are very low (Table 7). The maximum earning of Rs. 7500 has been observed in the case of diploma holders of Tripura and the minimum of Rs. 2196 in the case of Orissa.

Size of Unemployment

Yet another indicator of labour market situation for engineers is the size of unemployment as it throws light on over-production of a particular category vis-a-vis the requirements. Estimates of size of unemployment for electrical engineers as at the end of the year 2003 (excluding the out-turn of 2003) are given in Table 8. It can be seen from the Table that the size of unemployment is highest in the State of Tamil Nadu (4771), followed by Andhra Pradesh (1224), Karnataka (980), Maharashtra (951), Gujarat (881) and so on.

At diploma level, Tamil Nadu (8979) is at the top, followed by Gujarat (2664), Maharashtra (1868), Orissa (1584), Kerala (1337), Andhra Pradesh (1251) and so on. However, the total size of unemployment of electrical engineers at the national level at the end of the year 2003 has been estimated to be 11483 at degree level while 23318 at diploma level.

The pattern of absorption, size of unemployment and emolument pattern of electrical engineers in most of the states does not give encouraging signal towards the labour market situation.

Conclusion

There has been significant growth in the facilities for engineering education in general and electrical engineering education in particular. Of the total number of 1347 degree colleges existing in the year 2003-04, as many as 789 institutions are offering electrical engineering at under-graduate level. In the case of diploma level courses, the total number of polytechnics that exist is 1228 (as in the year 2002-03) out of which as many as 551 offer electrical engineering at diploma level. It has been also observed that the southern and western regions together account for a large chunk of both engineering

colleges and polytechnics in general and also the institutions offering electrical engineering at these two levels in particular. In tune with the growth in the number of institutions offering courses in electrical engineering, the intake capacity at degree and diploma levels has increased significantly till the reported year i.e. 2003 for degree and 2002 for diploma.

Analysis of labour market for electrical engineers does not provide an encouraging picture. In most of the states, a significant proportion of fresh degree holders were found to be looking for job even after two years of their graduation. The situation is more acute in the case of diploma holders as in many states even 50 per cent of them could not find jobs within two years after passing out. Further, over the years the statistics indicate that absorption capacity for electrical engineers, both degree and diploma holders, has declined in many states. If a significant proportion of degree and diploma holders are looking for jobs, even after two years of obtaining their degree/diploma, it only indicates mismatch between demand and supply of these categories of engineers in the labour market.

At the end of the year 2003, the backlog of unemployed degree holders in electrical engineering in the country has been estimated to be 11483 while that of diploma holders 23318. The States of Tamil Nadu, Maharashtra, Andhra Pradesh, Kerala and Orissa together account for a large chunk of unemployed degree and diploma holders in electrical engineering. Emoluments earned by degree and diploma holders in electrical engineering varied significantly between the two levels and also among the states.

After analyzing the three important parameters viz. absorption rate, earning differentials and size of unemployment, it has been observed that the labour market situation of electrical engineers in the country is not encouraging; it is rather alarming at least at diploma level. Therefore, it is very clear that there is either a mismatch between demand and supply; or alternately, the products are not employable; or both. These qualitative dimensions need to be probed further through micro level investigations. However, with accelerated investment and expansion in power generation during Tenth the Plan period (2002-07), one could expect more employment opportunities for the electrical engineering degree as well as diploma holders.

References

Annual Technical Manpower Reviews (various issues), National Technical Manpower Information System (NTMIS), Institute of Applied Manpower Research, New Delhi.

Kumar, A. and Kumar, P. (2002) "Facilities for Engineering Education and Employment Scenario of Engineers in India", National Conference on Emerging Trends in Engineering Education, Aurangabad, Maharashtra, October 25-26.

NTMIS Bulletin (1999), Institute of Applied Manpower Research, New Delhi, Vol. IV, No. 4, January-March.

Out-turn of Scientific & Technical Manpower in India (1984-89) Vol. 2 (1993), *Council of Scientific and Industrial Research,* New Delhi.

PIB Features (2003) "Power to All by 2012", *Yojana* 47 (4), pp. 49-50.

Raghvan, K. and Saini, S. (1997) "Facilities for Education and Employment Market for Electrical Engineers". Report No. IAMR-NTMIS-3(3)/1997, Institute of Applied Manpower Research, New Delhi.

Technical Education in Independent India (1947-97), All India Council for Technical Education, New Delhi.

List of Approved Institutions, All India Council for Technical Education (AICTE), New Delhi. www.aicte.ernet.in

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What Lessons Can DPEP Offer?*

R.V. Vaidyanatha Ayyar**

Abstract

The programme of Sarva Shiksha Abhiyan, launched by the Government of India, adopted the managerial structures and processes of DPEP. Therefore, the lessons from managerial evaluation of DPEP would be of great relevance in managing the march to UEE. Concerted action based on deep strategic thinking is called for if the SSA objectives are to be realized. There are two aspects of this strategic thinking. First, to critically evaluate the DPEP strategy, processes and interventions and thereafter weed out those which are proven failure and reinforce those that are successful or promising. Secondly, to introduce new strategic elements as well as tactical processes and interventions. In a sense, akin to zero-based budgeting, the DPEP strategy and tactics need to be validated ***de novo****. The managerial studies and evaluations of DPEP appear to be inadequate for this purpose, mainly because of the conceptual frame they adopt. Programme design, implementation and evaluation cannot be based only on the pure rational actor model and need to factor on other models that take into account organizational rationality and the negotiations among different actors involved in programme design and implementation.*

The objective of this seminar is avowedly to draw lessons from the District Primary Education Program (DPEP) experience and to apply these lessons to *Sarva Siksha Abhiyan* (SSA). No other education programme in India had triggered so much documentation and study as DPEP[1]. The Technical Support Group for DPEP (DPEP TSG) had brought out two volumes of abstracts of studies supported by DPEP. Of these 491 abstracts, 152 pertain to evaluation studies. In addition, the background papers circulated for this seminar include reports of five evaluations. These include two evaluations, one by a consortium of IIMs[2] and another by Jyotsana Jha based on a study sponsored by the European Commission on the managerial processes on elementary education.[3] A World Bank report[4] lists as many as 224 references of which 45 are national or multi-state studies and almost all others are state-specific studies. Given the

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* An elaboration and refinement of the valedictory address and presentation given by the author at the valedictory session of the research seminar on the Impact of DPEP on Primary Education organized at Jamia Millia Islamia, 5-7, June, 2003.

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wealth of studies, one expects inferences and lessons from the DPEP experience to be abundant.

II

First, what type of lessons can DPEP offer? Given that "DPEP is perhaps the most ambitious primary education initiative in Independent India"[5], characterized by holism and a well-defined strategy, DPEP should be capable of offering many lessons spanning a vast range. It could offer lessons on the overarching strategic objective of accelerating the universalization of elementary education (UEE); also lessons for improving effectiveness in achieving intermediary goals in different segments of UEE such as access, participation, equity, pedagogic renewal and quality; and further, lessons for discrete tactical interventions in each of the segments of UEE. No other elementary education programme can offer strategic lessons for achieving the strategic objective of UEE and few can match DPEP in the variety of strategic and tactical lessons, it can offer for achieving the intermediary objectives.

SSA has a larger scope than DPEP in that it covers the upper primary stage also; further, unlike DPEP, it covers all the districts in the country. SSA builds upon DPEP strategy and experience. All the elements of the DPEP strategy are discernible in SSA. To wit, the district plan is central to SSA; so are critical appraisal of the perspective and annual plans as well as periodic supervision of implementation of the plans; so is holism, that is simultaneously addressing of all aspects of universalization; so also is the equal emphasis on processes, community mobilization and outcomes; so too is the implementation in a mission mode through a state level society and core groups in the districts and blocks; and so is capacity building at all levels to plan, manage and monitor the programme. Goal setting is also similar, with the singular exception that SSA sets no quantitative goals for learning achievement. It is, therefore, self-evident that the lessons that can be drawn from the studies and evaluation of DPEP would be of great value for the SSA.

It is axiomatic that one can draw lessons from DPEP, or, for that matter, from any experience or life itself, only if one knows what the outcomes are, relates the outcomes with the expectations and try to explain the variance between the expectations andoutcomes. For an evaluation to be comprehensive and rigorous, it should assess *what* happened and *what* did not; also assess, if not measure, *how* much of what was expected had happened; and further explain *why* what and how much that happened did happen and conversely, also explain *why* what did not happen did not and why the shortfalls occurred. Or, in other words, only comprehensive impact evaluations, which blend *that, how and why,* can offer robust lessons. A comprehensive evaluation has to answer a host of questions. Has there been a DPEP effect? That is to say, did DPEP make a difference to the progress towards UEE in the districts where it was implemented? What would have happened in these districts if DPEP had not come into being? How strong was the DPEP effect? Was it as much as expected? Answering these questions would entail measurement in respect of quantifiable objectives and qualitative assessment in respect of other non-quantifiable objectives. And then, what explains the magnitude of the DPEP

effect? Two methodological approaches suggest themselves. First, comparison of *ex-ante* and *ex-post,* and second, comparison with control districts where DPEP was not implemented. The plethora of evaluations notwithstanding, there has been hardly an impact evaluation, which isolates the DPEP effect in the *stricto senso.* The World Bank report earlier cited concludes that, with the exception of a study by Jalan and Glinskoyanone[6] of the studies could qualify as true impact evaluations. This is because most studies are limited to studying the trends in processes and outcomes in the DPEP districts; the few that compare outcomes across project and non-project districts do not adequately control non-DPEP related factors. Thus, according to this report, what we are left with is a broad assessment of the progress made by DPEP in achieving its objectives, and, further observations on the successes and limitations of the various processes and interventions. Suffice to say, it is worthwhile to mount more rigorous impact evaluations that would also be informed by an understanding of the larger social reality[7] and the true essence of DPEP viz., that there is more to DPEP than quantitative goals and that it was concaved as a beach-head to transform the entire primary education system, to arouse the leviathan and set him on UEE. Further for eliciting strategic lessons, the evaluator should look at the wood as well as trees, the macro and the micro picture.

With all their limitations, what have the evaluations to say for the progress made by DPEP in achieving its objectives? While progress has been remarkable, the quantified goals have not been fully achieved. To summarize the conclusions of the World Bank study cited, in spite of the substantial growth in enrolment, universal enrolment has nowhere been achieved; further, the increase in enrolment is concentrated in a few States. The objective of reducing cohort drop-out rates to less than 10 per cent was not achieved in most districts. For Class-I, all districts achieved minimum 40 average achievement scores while only 50 to 75% of the districts achieved the objective of increasing achievement levels by 25% over baseline. In contrast, for Classes III and V, the progress has been far more limited. Thus, the achievement levels in Classes-III and V increased by 25 per cent over baseline in less than five districts. There was more progress in reduction of gender disparity than in social disparity (between scheduled castes/scheduled tribes and others). In 95% of the districts, gender disparity in enrolment rates was reduced to less than 5%; however, few districts achieved a similar reduction in social disparity. Educational advancement of ST children continues to be problematic. In 75% of the districts, the gender disparity in drop-outs was reduced to less than 5 per cent; however, in the absence of data, a similar inference cannot be drawn in regard to social disparity. These shortfalls are a pointer to the awesome challenge that SSA faces. SSA goes far beyond DPEP in its scope, coverage and goal setting. It sets out to achieve by 2010, that is within a time span almost similar to that of DPEP, universal enrolment and retention all over the country, not only at the primary stage but also at the upper primary stage. Needless to say, concerted action based on deep strategic thinking is called for if the SSA objectives are to be realized. There are two aspects of this strategic thinking. First, to critically evaluate the DPEP strategy, processes and interventions and thereafter

weed out those, which are proven failures and reinforce those, which are successful or promising, secondly, to introduce new strategic elements as well as tactical processes and interventions. The question that arises in this context is: are the studies and evaluations adequate to provide sufficient inputs for the strategic thinking? In a sense, akin to zero-based budgeting, the strategy needs to be validated *de novo.*

There are two other aspects of the DPEP factor which have a bearing on the strategic thinking on DPEP. The first aspect consists of assessing the inter-State and inter-district variations in the impact of DPEP and relating these variations with explanatory variables. The second aspect deals with the impress of DPEP on the State and district primary education systems. The key strategic element of DPEP is contextuality. DPEP proceeds from the premise that planning of and implementation for UEE cannot be organized from Delhi or from any State capital, and that only through local level planning and implementation can UEE be realized. The DPEP objectives for enrolment, retention and reduction of disparities are uniform across the board; only the objectives for enhanced learning achievement were set in relative terms. That being so, the context-rooted process of district planning and implementation was expected to set off the disparities in the inter-district levels of educational development and administrative capability. To use an imagery, in the race to the universal primary education, the starting points vary, though the winning post is the same. The backward districts have a longer distance to traverse in the race. District planning was expected to help the backward districts to overcome their handicap and reach the winning post along with others. This is an implicit objective which was lost sight off by all studies. It would be interesting to know how far this objective was achieved? A host of questions arise. How significant are the inter-district variations in outcomes? What explains these variations? Did DPEP succeed in reducing, if not equalizing, the educational disparities among the districts in which it was implemented? Even if equalization was not accomplished, were the disparities reduced? Have conditions been created for the less-developed districts to join the race towards UEE, under the aegis of SSA, without much of a handicap? Are they ready for "the forced march in seven league boots"?

Answers to these questions in turn are dependent on the degree of success attached to the key managerial interventions of DPEP. DPEP envisaged that individual district "perspective" and annual plans are developed with popular participation to reflect local needs and with conformity to the eligibility norms and operational parameters of DPEP. The preparation of these annual plans, their scrutiny and appraisal at the State and national levels, their final approval by the DPEP Bureau, the periodic review of implementation and incorporating the lessons of the review in the next annual planning cycle, all these constitute the fundamental process of management planning and control. The iterative process of planning and review was intended to be the key instrument for ensuring flexibility, responsiveness to local needs and learning from implementation experience. The questions that arise in a rigorous managerial evaluation are: how robust was the planning and implementation process across the districts? Were the district plans just facsimiles of templates or did they reflect the area-specific variations in the levels of

developmental aid needs? How adequate were the workplans? Over the years, was there qualitative improvement in the workplans? Was learning by doing at work? Was the experience in implementation reflected in subsequent workplans? How effective were the implementation of the workplans? Can one correlate the variation in the achievement of quantitative goals by districts with variations in the quality of the district planning and implementation? Were the financial and other operational parameters mechanically applied? Did the ceiling of Rs. 40 crores on the outlay in a district come to be viewed as an entitlement? Was the ceiling low for more populous and educationally disadvantaged districts? Is it right and proper to set uniform goals for access, enrolment and retention for all districts? Should districts with lower levels of educational development and more difficult environment be permitted to set realistic and credible targets rather than be doomed to frustration and failure by being compelled to strive for all India goals? These are very vital questions whose answers would be of great value to the strategic thinking on SSA, for SSA relies on the very same planning process as DPEP. What have the studies and evaluations to say on these questions? Not much. There is not even a rigorous comparative descriptive account of the performance of different districts, much less an analytical study which correlates the disparities in performance with those in the planning and implementation process. Suffice to say, robust and meaningful lessons are inconceivable without rigorous cross-sectional managerial evaluation studies.

The managerial evaluations should also critically examine the key structural innovation introduced by DPEP. The society model of implementation was more than creating a conduit for free flow of funds from the Government of India to the project implementing entity in the field. Far from being a valve, a graft to bypass the choked arteries of financial flows, it was designed to usher a new form of managing primary education. If I may walk down on the memory lane, this was not an idea which was readily acceptable to some in the World Bank and also to academics who were derisive of the conventional enclave-type project implementing units and who, therefore, advocated that educational reform should be done through the system itself. Or to use the imagery of Kenneth King, the reformer should use the front door leading to the system and not the back door. Our stand was that a frontal assault is not always expedient. *The Challenge of Education*, the National Policy on Education, 1986, and its Programmes of Action had eloquently articulated the widely prevalent view that the education departments are in a state of utter disarray. They need to be professionalized. They need to be more open and inclusive by being willing to accept good advice and practices even from outside and to work in partnerships with NGOs, local communities and others interested in the achievement of UEE in letter and spirit. They also need to be outcome-oriented. In effect, the reform that is needed is far-reaching, a veritable Cultural Revolution. Even while recognizing the need for comprehensive reform, it was considered strategically more expedient to adopt an incremental, staggered approach. The changes that are needed in the system at large were to be developed and tried out in a parastaatal structure like the State society which was part of the system but could function autonomously and be more professional, inclusive and outcome-oriented. Over course of time, the new

managerial practices would percolate to the main education departments. That was the strategy. To use an imagery of those years, the society was separated from the department and not by a Great China Wall, but by a permeable membrane. This membrane facilitates osmosis of the good practices and thereby transformation of the department, the system itself. It was not a question of implementation *either* through a separate project implementation unit *or* by the department. The mode selected was expected to be part of the department but yet not be different – a lotus in the pond.

It was self-evident that the new structures and places would not fall in place on their own without encountering any resistance. And it was for that reason that a study of the managerial structures and processes was conducted in the first seven states. In the synthesis study which brought together the findings of these studies, Sajitha Bashir, who was then with the DPEP TSG, raised alarm bells. To quote:

"The realization of the ambitious objectives and goals of DPEP rely quite heavily on the new management structures and processes that have been introduced as part of the programme. Yet, these new structures and processes operate in an environment that is indifferent, if not hostile, to these innovations. Given the relative size of the new structures, there is every possibility that the larger environment and its inertia may overwhelm the nascent processes, or that the new processes may themselves become encased in petrified forms, which prevent invigoration of the content. Furthermore, while management reforms are seen as crucial to the success of DPEP, these reforms are being introduced only in a small part of the system and are expected to gradually diffuse through the system. At the same time, the objectives of universal enrolment and retention, raising achievement levels and reducing social gaps are to be attained within a relatively short time span."[8]

It would be very interesting to know whether these structures and processes operated in the way they were expected to, and if they did not, why not, and to relate the managerial inadequacies with the shortfalls in the achievement of the quantitative goals. Some of the questions that a rigorous managerial evaluation of the structure should pose are:

- How did the DPEP societies work?
- Can one discern patterns on the functioning of these societies in different States?
- Were they just conduits for flow of funds?
- Was there any difference in the managerial practices of the society from that of the education department? Or to use the imagery of osmosis, did good practices develop in the smaller compartment of the society? If so, did the good practices permeate the department as a whole? In other words, were the society and the department separated by a membrane or by a Great China Wall? Can the variance in achievement of quantitative goals be related to the variance in the functioning of the DPEP societies?
- Is the society model relevant at all?

- How far did DPEP equip a state to manage UEE and educational transformation better?

III

As already set out, DPEP prided itself in being a beachhead to transform the primary education system. As rhetorically set out by its initial designer, "DPEP is not an enclave project, it seeks to restructure and improve system of primary education as a whole. Therefore, not achievement of quantitative targets or fund initialization but DPEP's impact in improving systems is the litmus test".[9] It would be interesting to know particularly for the strategic thinking on SSA, whether the litmus test was applied, and if so, what is the result? The studies do throw some light on systemic improvement, particularly in the matter of pedagogy. But the illumination is rather limited. Anecdotal and impressionistic reporting about village education committees, community mobilization, capacity building notwithstanding, systematic examination of the improvement in the administrative systemic capacity is a dark area. Two factors account for this dark area. First, management of education is an orphan, not exactly a darling either of educational or of management specialists. Secondly, the supervision mechanism, though innovative in many respects, was more geared to assessing the quantitative objectives laid down in the DPEP guidelines and later incorporated in the agreement with European Commission as well as in the World Bank's Staff Appraisal Reports (SARs). It can even be said that the Standard Operating Procedures (SOPs) of the joint supervision mission were geared to meet the requirements of the World Bank. For the World Bank, DPEP is a project financed by specific investment loans; it was not sector program assistance. The SOPs of the World Bank for such loans provided for monitoring of three elements: (i) adequate provision of inputs; (ii) operation of the processes and interventions to the extent needed for achievement of the qualitative goals in the SARs; and (iii) physical and financial outcomes as set out in the SARs. Systemic reform is not in the remit of monitoring and supervision of project-specific lending.

Be that as it may, what does the limited illumination show? To borrow heavily from the article earlier cited of Sajitha Bashir and me, the systemic improvements in pedagogy are quite considerable. The financial parameters which set limits on construction and hiring of additional teachers compelled the states and districts to concentrate on quality improvement. Almost all DPEP States embarked on a process of pedagogic renewal that covered training content and delivery, updating curricula and revision of textbooks. As opportunity for exchanging information and disseminating innovations was offered, spread effects were noticeable with state and district teams learning from each other. There is a noticeable shift from the hitherto accepted paradigm of teacher-centered pedagogy to learner-centered pedagogy. There were signs of willingness to enlist technical resources and experience outside the government. However, the paradigm shift is reflected mainly in the processes for the development of new training packages and learning materials. However, evidence is not clear how far the shift percolated to classroom practice. Further, the impact of the pedagogical renewal factors was

constrained by several factors. These include financial constraints for mainstreaming many of the innovations as well as institutional inadequacies of mainstream resource institutions like SCERTs and DIETs, and their peripheral involvement in some states in DPEP and consequently their succumbing to the NIH (Not Invented Here) syndrome.

Compared to the transforming effects on pedagogy, the transforming effects on management appear even more limited. There is little hard evidence on the effectiveness of the new management structures and processes introduced by DPEP; but what is clear is that while there has been considerable investment in training for preparing the "perspective" and annual plans at the district level, the efforts to build policy planning capacities at the state level and to locate district plans within an overall framework for the development of primary education within the state seem to be relatively limited. Even in regard to annual workplans, the planning process did not extend to non-DPEP districts and that even in DPEP districts, State and Centrally Sponsored Schemes (CSS) continued to operate within their own compartments. To the extent that it is universal in coverage and integrates all CSS like Operation Blackboard and Teacher Education, SSA does away with compartmentalization. However, the systemic dilemma that SSA faces is more acute than that faced by DPEP. Universal coverage that SSA strives for brings upfront the relationship between the traditional administrative structures and processes, on the one hand, and their counterparts that DPEP introduced and are being extended by SSA, on the other. However, one happy augury is the indication that States like Uttar Pradesh and Madhya Pradesh, with a higher proportion of districts covered by DPEP, seem to have performed better than states with lower coverage. However, there is no clear evidence on the robustness of the indication and the factors responsible for the indication. A few questions spring to mind. Would it be enough for the State societies to play the bye-pass role? Is there a minimum threshold for systemic change? Does scale elicit more commitment to systemic change from the State? Consequently would the universal SSA elicit more commitment from the State Governments and the main education departments than the more selective and limited DPEP? Or, is there no scale factor at all? Is it that the better performance, one hears about in Madhya Pradesh and Uttar Pradesh, is related to the continuity in a top management and its leadership prowess? One does not know, but one needs to.

There is another strategic question that SSA needs to address now. Being anchored in incrementalism, DPEP did not address several areas of reforms. A few that come to mind are school supervision and effectiveness, professionalization of the different functionaries of the education departments, decentralization and devolution. It is time to consider whether it would be strategically more expedient to expand the reform agenda rather than just consolidating the gains of the last decade. This again calls for a very rigorous managerial stock-taking and evaluation.

Without any more ado, let me say, after having been an insider and then an outsider, I am convinced more than ever that UEE cannot be achieved in the foreseeable future just by pursuit of quantitative goals. To recall the saying of Gandhiji, 'if one takes care of the means, the ends would take care of themselves. If one takes care of the means, in this

case the processes, capacity building, institutional strengthening and well-structured reforms, the quantitative goals would achieve themselves'. Let me buttress my contention by extrapolating Gandhiji's saying. If, instead of taking care of the means, one is driven by the ends, what is achieved is not UEE but inflated and fudged statistics. I remember my mentor, Bordia, telling me not once but many a time, how after the 20-point formula was introduced, there was a remarkable spurt in enrolment. This spurt was more a statistical illusion, an unintended consequence of enrolment being one of the twenty points and of States being judged with reference to their achievement of the 20-points. In any matter involving human beings, the law of unintended consequences operates relentlessly. Human beings cannot be anything but all too human. No one, neither the decision maker nor the evaluator, can ever afford to ignore this law. To ignore would be to live in the cuckoo land, to lose relevance and credibility.

Suffice to say, the strategic thinking in SSA calls for a rigorous managerial evaluation of the management of change that DPEP attempted. We need to unravel the management of change rather than treat management as a black-box which is expected to function optimally and transform, with cent per cent efficiency, financial, technical and pedagogic inputs into educational outcomes.

IV

Let me now touch upon conceptual frames that underlie decision-making and evaluation of decisions. Every component of a programme is a bundle of decisions and actions in pursuance of those decisions. Like myriads of discrete pixel images together giving rise to an image that appears on the computer monitor, myriads of discrete decisions and actions underlie programme design or implementation. It is axiomatic that an analysis can be no better than the underlying theory. That being so, the logical question is: is the theory underlying the analysis and evaluation of decisions robust? I have to disappoint my academic friends by saying that almost always it is not so. Let me pose another question. With the best possible design implementation, can a programme which envisages system reform achieve the planned goals? Most would answer in the affirmative. At times the failure to achieve the goals is attributed to deficiencies in design. But most often, the story line is that planning is good but implementation is poor. The sophisticated would go further and invoke politicization, lobbying by interest groups and so on. All this may be true but I would like to assert that insistence on hundred per cent achievement of quantitative goals by all programmes is a fallacy. The dictionary meaning of fallacies is that it is an idea which many believe to be true but which is in fact false because it is based on faulty reasoning. Of course, there have been, and would be some programmes which fully achieve cent percent of the goals set. But I would like to assert that such programmes are far and few between. They are usually simple in nature and are repeats in which the learning curve of design and implementation has been fully skimmed in the earlier trials. Excepting all other programmes, the full realization of goals is a mirage.

Why then is this mirage pursued again and again? The answer lies in the hegemony of the rational actor model in academic analysis, or to use the celebrated three-model schema of Allison, Model-I[10]. In its pure form, this model assumes that government is a unitary actor as rational as Mr. Spok of *Star Trek*, ever analyzing a problem with the utmost rationality, coming up with the most efficient solutions and through command and control ensures that the right inputs are provided at the right time and are transformed wholly into predetermined outputs without any wastage. This model is ubiquitous and dominant in about every theoretical treatment of governance, be it foreign policy, economic reforms or programme design. It also informs the classical input-output models of evaluation. The model can nowhere be approximated in the real world of governance. That explains why "practical" men in Government scoff at academic policy and programme advice as being too academic. But then the model in its extreme rigorous form is impossible to justify even theoretically. The world indeed is not a clock. The second law of thermodynamics precludes the construction of an engine which wholly transforms energy into work without wastage. Information is never perfect; uncertainty is something which no decision-maker can escape from. Even if that were discounted, rationality is bounded. Even mathematics, the language of Gods and the ultimate in rigour and reasoning, is not free from limits. Gödel's theorem sets limits on the ability to prove or disprove. There is another aspect of the pure rational actor model that is an utter disconnect with the world as is. Apart from the omniscience of the Almighty, the model calls for the decision maker to have power and might exceeding that of the President of the United States. In his celebrated study of the Truman and Eisenhower White Houses, Neustadt cites a very interesting anecdote to explain the presidential condition, a condition arising from the division of powers in the American Constitution whereby the President is compelled to share power with many other power-centers such as the Congress[11]. Truman, in the early summer of 1952 when the Presidential campaign had already begun, was contemplating the problems that Eisenhower would face when he is elected. *"He'll sit here" Truman would remark (tapping his desk for emphasis)" and he'll say, "Do this! Do that! And nothing will happen. Poor Ike. It won't be a bit like the army. He will find it very frustrating."* Through three case studies, Neustadt established that the powers of the President are no guarantee of power, that despite his powers, the President does not obtain results by giving orders, that most often presidential power is the power to persuade, to bargain and that he gets no help if he does not pay for it.

Much water has flown down the Potomac since then. The Cold War has ended and the world is a unipolar world dominated by the sole hyper-power. For all this change, theposition of our dear Dubaya, George Bush Jr. is not much different. He cannot command and control Musharraf; he needs to persuade and make side payments. He might have won the Battle of Baghdad but to manage post-war Iraq he has to strike a deal with the troika of Russia, Germany and France. Even for the President of the United States, command and control is more an exception than a norm. What about lesser mortals?

I am aware that in analytical praxis, some of the conditions of the pure rational actor model are relaxed, thereby tempering the unrealistic nature of the model. The current praxis of project management does not treat government as a unitary actor. On a lighter vein, the World Bank insists on the participant states to be parties to an agreement, though it is the centre that bears the loan liability. The extant commandments of development praxis do challenge the command-control mode and by insisting on project ownership by all stakeholders, mobilization, demand generation and capacity building. They also insist upon improvement of procedures and systems. So far so good; but still these commandments do not question the Enlightenment legacy of the supremacy of reason, of believing in the innate rationality of the human being and his acting in public interest. Listen to people, bring in the civil society, and base your design on focus group discussion and social assessments. With these, the Kingdom of God would be here. Project *Nirvana* would be around. Amen! That seems to be the implicit belief, a belief that is inconsistent with the fact that reason and altruism are only two of the many characteristics of man, who by his very nature is a bundle of contradictions. One can never eschew self-interest and Adam Smith and neo-cons notwithstanding, the selfish pursuit of private interest does not necessarily lead epi-phenomenally to public good. One cannot defy the Impossibility Theorem of Arrow, one of the all time Greats of economics. It is impossible to use the preferences of individuals to construct a ranking to represent social preferences. Suffice to say, that even the more realistic forms of the rational actor model need to be complemented by other models for decision-making, analysis and evaluation. And it is here that the negotiation perspective adds value. If then command control does not work most of the time, what else would? Charisma may sometimes but, as with miracles, one cannot live by charisma. Effective bargaining may complement the rational actor approach to provide better decisions and outcomes.

Let me briefly outline the key elements of negotiation theory that are relevant for the purpose of programme management and evaluation. First, as Neustadt illustrated with the American President, the need to secure agreement is an ineluctable administrative condition, whatever the rank or level of the decision maker. Contrary to the general impression, negotiations are not limited to explicit bargaining situations, such as that between union and management, or between nations. Second, senior administrators and managers are engaged in "indirect management", that is, their formal authority falls short of their responsibilities and their success is dependent on actions by individuals and agencies outside the chain command and over whom they have no direct control. Even in respect of agencies and individuals over whom one has *de jure* control, indirect management may often be the *de facto* reality. It is not unknown in administrative life to have a deputy who has direct access to and greater influence over one's supervisor and hence is not amenable to one's command and control. Hence, command-control would not always work even with line subordinates. Thirdly, a party to a negotiation, if it is an organization, is not a homogenous, monolithic entity. Hence, in parallel to the external negotiations, that is negotiations with parties external to the organization, there are internal negotiations within each of the organizations engaged in negotiations. The

internal negotiations are likely to be more bitter and acrimonious than the external negotiations. Thus in the development of DPEP internal negotiations, that is, negotiations within the central government or with states, were occasionally more tense than those with external agencies. The internal and external negotiations are not usually insulated from each other; together their interplay drives the negotiation process. Fourthly, the larger the number of parties to negotiations, the greater is the complexity of the negotiation process and the greater the uncertainty of the outcome. Even the addition of a single party to a two-party negotiation introduces coalition dynamics. Fifthly, in every negotiation, there is tension between cooperation and conflict. The very rationale for a negotiation is that, for the parties the agreement that could be secured is preferable to other alternatives. There is, therefore, a commonality of interest in trying to augment the size of the pie through cooperation and joint pursuit of gains. At the same time, there is a conflict of interest in that each party seeks to maximize his share of the pie. Where the parties to a negotiation have a long term relationship, as between the firm and its suppliers, or between divisions in any organizations, there is a greater willingness to concede to the other than in once in life time encounters. In a bazaar, frequented by foreign tourists, both the merchant and the tourist are more likely to cheat. Recognition of interdependency, implicit in a long-term relationship, does affect negotiating behaviour. Sixthly, give the very nature of the negotiation process, the outcomes are likely to be indeterminate and at variance from the expectations of parties or from the outcome that is rational for each one of them. Lastly, bargains tend to obsolesce. To give an example, once a MNC has invested in a country, the fixed assets so created are a hostage to the host country. The bargain struck for investment in the country begins to obsolesce. Or to give an example nearer home, once a decision is taken to implement DPEP in a state and the work plan is approved, there are limits to the ability of the national management unit to compel a State to implement strictly in accordance with the work plan. You cannot always invoke the *brahmaastra* of suspending or terminating the operations. Therefore, safeguards have to be built in to sustain the agreements arrived at and to prevent the erosion of their values.

To come back to Allison's models, Model-I takes government to be a monolithic unit, rationally defining the national interest, setting and prioritizing the goals, identifying and evaluating the options, and choosing the option, which maximizes value. In contrast to Model-I, Model-II does not treat government as a monolithic. A giant organization like government is a vast conglomerate of loosely allied organizations, each of which has a substantial life and mind of its own. A new organization may set new goals and new routines. However, in contrast, an old organization has a "received" notion of its mission, priorities, programmes and culture. Over a course of time, it would have developed its standard operating procedures (SOPs) with a view to ensuring regular and coordinated action, achieve acceptable levels of performance and minimize uncertainty. SOPs do not embody the rationality of Model-I; but all the same they are rational indeed. Imagine flying in a commercial flight without any navigational plans or operational procedures and with the pilot flying by the seat of his pants!

Model II does open the black box of government but not sufficiently. Every organization in a government does have, as Model II posits, a mind, life and culture of its own. But it is still a composite comprising individuals. Yet, Model II assumes that the identity of particular individuals within an organization is irrelevant for explaining the organization's decisions or its stand within the government on any matter. The SOPs are, indeed, designed precisely to achieve that irrelevance. But no design, however ingenious and however meticulously acted upon, can iron out individuals. Hence individual behaviour is an intractable explanatory variable. It is this variable that Model-III factors in. In every setting in which decision is taken, there are key players who together shape the decision. The players may bring to bear upon the decision making process the interests and perceptions of the organization and position they hold as well as their own personal perceptions and interests. Individuals are human, all too human. Therefore, it would not be surprising if they do like their views and interests to prevail and they would be less than human if they do not pursue personal agenda and aggrandizement. Thus, Kennedy's foreign policy was characterized by an insider-turned-chronicler, Roger Hilsman, as "a story of battles, battles over national policy". These are battles fought not with live ammunition but with bargaining chips. Even war has its rules; likewise bargaining within an organization is regulated by explicit or implicit rules. Hence, in reality, governmental decisions reflect not just a single rational choice or the resultant of competing organizational behaviours. They are also shaped by the pulling and hauling of the game of politics of which bargaining is the not-so-hidden hand.

All this does not mean that rationality has no relevance at all and that decision-making or analysis or evaluation can or should be done without factoring it at all. The appropriate imagery of project management, or, for that matter, all governance itself, used the imagery of a sailing ship battling against a moderate wind and strong tide in narrow waters. Philip Woodruff used this imagery to describe the progress of India towards self-rule. To quote:

Seen from six thousand feet above her, the tiny ship seemed to gain a little on almost every tack and slowly pass one marked reef or buoyed mud flat after another. But from the deck it was not so easy to discern the progress, and every time the ship came about there seemed to be hesitation and contradiction, so that she would hang in the wind with sails flapping before she came around and filled on the new tack. It looked from close quarters as though the captain and the crew were thoroughly confused about the whole affair.[12]

The word governance comes from the Greek word, *kybernān*, for steering. For a boat to be steered safely, it needs a good captain and crew, plus reliable measures and instruments to gauge its progress. The instruments are the rationality of Model-I, which helps to set the goal and assess the progress towards the goal objectively, rather than by instinct and intuition. The measures are the standard operating procedures of Model II. Captaincy consists in managing the crew and the ship; adjust the presumptions of Model-I from time to time so as to suit the changing context, depart from the standard operating procedures where necessary and to negotiate with the crew so that they are in line.

Negotiations correspond to Model III. Even with all the three models, the navigation that governance is, can never be a science. Sometimes, it remains a mystery why a ship reached the port or did not.

How relevant are all this theory and models to DPEP? The answer is in the affirmative. To elaborate the recognition that UEE is a composite, comprising universal enrollment, universal retention and universal achievement of at least of minimum levels of learning, the choice of a context-based strategy for achieving UEE through disaggregate target-setting and decentralized participatory planning and the choice of district as the unit of planning – all these fit in Model I. These choices emanated from iterative situation analyses. One can discern three streams in this analyses: first, policy analysis connected with NPE, 1986 and its updating; secondly, the planning process associated with POAs, 1986 and 1992, and the formulation of the Eighth Five Year Plan; and thirdly, the lessons learnt from programs like the Operation Blackboard, Teacher Education and the (Total Literacy Campaigns (TLCs). The incorporation in the district level planning of the best practices and the lessons from the earlier external funded projects also fits in Model I. To recapitulate, these included the society model and planning exercise from Bihar Education Project, and the teacher training and cluster level resource centers from Andhra Pradesh Primary Education Project (APPEP). Model II considerations explain the choice of a State society for implementation. Among the new SOPs that sought to be introduced for smooth functioning of DPEP were local area of planning, speedy approval process, smooth financial flows, induction of expertise from outside the government and community mobilization. As agreement had to be secured for the society model from within the government, from the states as well as with external agencies for financing DPEP, Model III processes were necessarily involved. To get everyone the agencies, states and the central government organizations concerned – on board was like assembling the Noah's Ark. While the Bible itself does not describe the problems Noah had in getting on board the different species of living beings, Hollywood did. This necessarily meant working on and working against a few key players, as Model III posits.

In my view, the best lessons that DPEP can offer to SSA is in the nitty-gritty of managing the march to UEE. To this end, induction of Models II and III in the evaluation framework would add value. Following is a sampler of the questions that would arise in a managerial evaluation of DPEP which Models II and III give arise to:

- What has been the inter-play between the department, SCERT and the DPEP society? In other words, what has been the nature and outcome of the negotiations amongst the DPEP society, SCERT and the State government?
- Similarly, what has been the inter-play between the district level DPEP structure and the traditional structures like the district education office and DIET?
- In a given functional area which of the two sets of SOPs had a greater impress? Those of the department or of the society?

- Was the managerial change dependent on key players? With turnover in the players, did the agreement between the national management unit and the states obsolesce?
- Were the arrangements to secure the agreements and prevent obsolescence adequate?

These are not just academic questions relating to a programme on which the sun has set. The SSA adopts the DPEP strategy in its entirety. It seeks to plan and implement the programme at the State, District and Block levels exactly on the line of DPEP. Even if the society were done away with, effective implementation would entail designating functionaries for the programme and introducing new SOPs. SSA cannot escape the tensions inherent in DPEP, or, for that matter, in any management of change, between the new and old, the chosen few and the rest. To paraphrase Santayana, if the Past is not studied and remembered one is condemned to relive the Past.

As already mentioned, this is just a sampler and more work is needed for a robust evaluation framework that incorporates the Model II and III perspectives.

Let me now address the question why in spite of the negotiation theories and Allison Models being around two decades, these are still not mainstreamed? A few answers come to my mind. First, human inertia from which even academics are not exempt. In his seminal work, *The Structure of Scientific Revolutions,* Thomas Kuhn[13] had outlined how a new paradigm comes to be the established version only after the earlier generation of scientists steeped in the old paradigm fades away. Secondly, Models II and III lack the elegance and tidiness of Model I. Even scientists do not cease to be aesthetes. There are enough examples to bring out that, other things being equal, an elegant theory is preferred to others. Thirdly, but most importantly, Models II and III are extremely demanding of information, of tit-bits, of history, with the lower case 'h', which is often unrecorded and fast flushed out in the drain-pipe of Time. Further, unless the analyst is extremely rigorous and parsimonious, the output of Model II and III analysis may be rambling and sketchy. The Past can at best be reconstructed but never recaptured. Therefore, the information that is necessary for Model II and Model III evaluation of DPEP is extremely difficult but still not impossible. An attempt can be made by screening and analyzing the reports of supervision missions, the proceedings, the orders, and circulars of the national, state and district units dealing with DPEP and of media reports. These can be supplemented by eliciting from all the key players their story of what was happening and what happened. But there is a danger here. Unless a rigorous structure is imposed, the stories may be fairy tales, laced with emboldened anecdotes and "I am the greatest" tone and tenor that renders most civil servant memoirs a unique genre of unreadable pulp biography. I may also add that should SSA seek to impart lessons for the other educational transformations, it would be necessary to make adequate arrangements to document as much as possible information that the Model II and III analysis would require. This means that any arrangement for documentation and monitoring have to go far beyond what DPEP attempted and what the studies and evaluations suggested.

Let me conclude by saying that what all DPEP did was to engage in exploratory skirmishes and what is now needed is a forced march in seven-league boots. If DPEP can offer worthwhile lessons for the long march ahead it has been worth its while, in spite of all its limitations. I may be faulted for raising only questions and offering no answers at all. Paraphrasing Hamlet, one may even say Questions, Question, and Questions. But then as Poincare, the celebrated French mathematician and philosopher, sagaciously put it, the question is not what the answer is but what the question is. Only by right questioning can right answers be elicited. You are the best suited to answer and assess the lessons of DPEP. Let me wish you God Speed in your endeavour.

Notes and References

1 EdCil (1999): *Research Abstracts in Primary Education (1994-1997)*, New Delhi: Research, Evaluation and Studies Unit, Technical Support Group of DPEP.

2 EdCil (2002): *Research Abstracts in Primary Education (1997-2000)*, New Delhi: Research, Evaluation and Studies Unit, Technical Support Group of DPEP.

3 Ed Cil (2003): External Evaluation of DPEP, Phase-I – Summary of Main Findings based on the State Reports prepared by the Indian Institutes of Management, Ahmedabad, Bangalore, Kolkata and Lucknow. New Delhi: Research, Evaluation and Studies Unit, Technical Support Group of DPEP.

4 Jyotsna Jha (2003): *Management Processes in Elementary Education and DPEP.*

5 The World Bank, Human Development Sector, South Asia Region (2003): *A Review of Educational Progress and Reform in the District Primary Education Program (Phases I and II)* Washington, D.C.: The World Bank.

6 Vimla Ramachandran (2003): "The New Segregation: Reflections on Gender and Equity in Primary Education", *Economic and Political Weekly*, April 27, 2002, pp 1600-1613.

7 Jalan Jyotsna and Elemn Glinskoya (2002); *Improving Primary School Education in India: an Impact Assessment of DPEP Phase-I (Draft),* New Delhi; Washington D.C. This study is beset with quite a few conceptual and factual errors.

8 The Vimla Ramachandran study referred to earlier displays such an understanding; so does that of Jyotsna Jha and Dhir Jhingran (2002): *Elementary Education for the Poorest and Other Disadvantaged Groups: The Real Challenge of Universalisation*, New Delhi: Centre for Policy Research

9 EdCil (1996): *Evaluation of Managerial Structures and Processes under DPEP – A Synthesis Study.* New Delhi: Research, Evaluation and Studies under Technical Support Group of DPEP.

10 Sajitha Bashir and Vaidyanatha Ayyar (2003): "District Primary Education Programme" in *Encyclopaedia of Indian Education New Delhi*: National Council of Educational Research and Training.

11 Allison, Graham (1971): *The Essence of Decision: Explaining the Cuban Missile Crisis.* Little, Brown & Company, Boston, MA. Allison sought to secure satisfactory answers for the various questions connected with the crisis. Why did Soviet Union place strategic offensive

missiles in Cuba? For what purpose did the Russians undertake such a drastic, risky departure from their traditional policy? Why did the U.S. respond in the way it did? Was it necessary for the U.S. to force a public nuclear confrontation? What were the alternatives? Why was the blockade of Cuba the chosen response? Why were the missiles withdrawn? Did the blockade work or was there a deal? How was the deal struck? Thorough his analysis, Allison established that the rational actor model could not adequately explain the crisis. Adequate explanation required Model I to be supplemented by two other models, Model II (Organizational Process Model) and Model III (Government Politics Model). In effect, the crisis was used as a case to develop a powerful schema for analyzing foreign policy decisions. Since publication of this classic, there has been a torrential downpour of information on the Cuban Missile Crisis. Consequent to the end of cold-war, the Soviet archives have been opened up, and further the former combatants in the opposite sides have come together on a few occasions to exchange information on what exactly happened and why so. The very wealth of information and its importance ensured that the Cuban Missile Crisis elicited unprecedented scholarly attention and analysis. Yet so robust is the Allison scheme that it remains untouched in the second edition (2001) of the classic, co-authored with Philip Zelikow and publicized by Adison Wesley Longman. The second edition offers more illustrations in support of the schema and an elaboration of the organizational behavioral and group processes. Since its publication, Allison's classic is being extensively used in American graduate schools of Government, public policy and business. Conceptually this schema is applicable in several areas of public policy. However, rather strangely, the published literature applying the schema is almost wholly in the domain of international relations.

12 Neustadt Richard (1960): *Presidential Power*, New York: John Wiley.

13 Phillip Woodruff (1963). *The Men Who Ruled India: The Guardians*, p.244. Jonathan Cape, London.

14 Kuhn Thomas (1962): *The Structure of Scientific Revolutions*, Chicago: University of Chicago Press.

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A Comparative Study of Profiles and Professional Development of School Principals in Australia, Japan and the USA

David Gamage*

Nations continue to differ both in theories and practices in preparing their educational leaders although they have recognized that principals are at the centre of school improvement efforts. Educational policy makers and reformers should draw some lessons from this comparative study in their efforts to recruit and prepare more and better principals, who are committed to confronting the challenges of the 21st Century that are demanded by the changing societies and advances in technology. After all, the effective principals are the ones who create effective schools where the future generations can be educated and trained to take their place in an ever changing world.

Introduction

Irrespective of the fact, how the roles, tasks and responsibilities of the principals have evolved through the educational change and reform, there is near unanimous acknowledgement that the school principal holds the key to achieving school effectiveness in the midst of a rapidly changing educational environment. As school administrators, the principals are the vanguards of stability as well as the agents of change. In performing their duties and discharging the responsibilities, school principals approach their job in many different ways. Some are visible and voluble; at times a whirlwind of loud activity dominates a room occupied by a principal. Others glide quietly through the corridors observing more than talking, pausing occasionally for a brief chat, a complement here, a gentle nudge there. Some are dreamers, who develop visions for their schools and articulating them in such a way to make them shared visions in order to obtain commitments from other stakeholders, whereas there are some who are mechanics, endlessly tinkering with organizational nuts and bolts. There are others who are entrepreneurial and creative in their thinking in marketing their schools in highly competitive environments where the old concepts of school zones have disappeared, while others expect guidance from research findings and best practices to steer ahead safely.

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However, over the last few decades, extensive studies have been undertaken on the role of the school principal. Most scholars, researchers and school reformers have discussed the role of the school principal as the school leader, school manager, key decision-maker, facilitator, problem-solver, chief executive officer, chief learner, marketer, team leader and the agent of change (Edmonds, 1979; Clark, Lotto & Astuto, 1984; Smith & Purkey, 1983; Gamage, 1990 & 1996a and 1996c; Barth, 1991; Sergiovanni, 1991; Thomson, 1993; Caldwell, 1994).

But, the research studies, which focus on profiles and professional development of school principals, appear to be very limited. Only limited information is available about the profiles and professional development of school leaders to meet the new challenges of a rapidly changing world of the 21st Century schools. However, in recent years, with the increasing collaboration and communication among education institutions in different countries, comparative and international education scholars and those in the field of leadership and management in education have initiated a series of studies to examine and compare the different aspects of school leadership including their profiles, experiences in professional development and their views on such programs and the job itself. This paper presents the profiles and perspectives on professional development including the pre-service and in-service training of American, Australian and Japanese school principals. Implications for changes in university level professional development programs, selection and training of school principals in America, Australia and Japan are speculated.

Brief Review of Literature

In Australia, Sharpe (1976) has conducted a study on the profiles of high school principals in Australia and the United States. Later on, a project funded by the Federal Government, Chapman (1984) has prepared extensive profiles of Australian school principals. More recently, Daresh and Male (2000) designed a small-scale exploratory study of selected first-year British head teachers and American principals. They describe the preparation for the headship as the cultural shock experiences in the transition into the headship (principal-ship), and the professional support received throughout the induction period.

Until the 1970s, Japanese scholars have not given serious consideration to studies on school leadership whereas in the 1980s and 1990s, there were several efforts to relate American leadership theories to Japanese context (Ono, 2001; Hori, and Okato, 1994). Some researchers have conducted their investigations on school management, school improvement, career patterns and selection procedures (Kojima, 1991 and Ono, 1994). Maki (1991; 2001); Shimomura (2001) and Shinohara (2001) examined the leadership behaviours and roles. In keeping with the 1998 recommendation of the Central Council of Education, 95% of the Prefectures established advisory school councils by 2000. These advisory school councils were employed as vehicles for granting a higher degree of autonomy to schools necessitating an increased emphasis on studies in leading self-managing schools.

The USA, being the first country to institute university level professional development programs for school leaders, a significant number of research studies have been undertaken in improving the effectiveness of school leaders. Accordingly, pre-service training and accreditation have been made compulsory for those who aspire to be school leaders. Baltzell and Dentler (1983), Bennett (1987) and Baron (1990) have pointed out that in almost all states in the USA; one of the key criteria for appointment to a position of principal is a master's degree in educational administration. Besides, most educational administrators at senior levels have completed or are completing their doctoral degrees in education. When one observes the current trends in Australian and British systems who have adopted school-based management (SBM), it would not take too long for these two school systems to follow the American example by requiring the school leaders to have pre-service training in leadership and management. In fact, the National College of School Leadership (NCSL) in England has already planned to train 100,000 school leaders to improve the effectiveness of British schools (Mansell, 2000; Gamage, 2001a). In response to these trends, Australian universities today offer a wide array of courses and graduate programs aimed specifically at the school administrators. They are available at graduate certificate, graduate diploma, masters, and doctoral degree levels. The latest teacher training inquiry instituted by the NSW Government, in its report (Ramsey, 2000), has emphasized the desirability of recognizing qualifications in leadership and management in education for appointing candidates to principal positions. On the other hand, in Japan it is likely to take comparatively a longer period for such changes to occur as she has not adopted an effective model of SBM as yet and the bureaucratic model is still dominant.

According to Umphrey (2002), principals have the power to use their resources in building a community of learners, cultivating an atmosphere of learning and working towards the spirit of collaboration in order to realize their visions and goals of the schools. Fink and Resnick (2001) assert that professional development is not something that is separate from the administrative duties and responsibilities, rather it could be considered the centerpiece of exercising effective leadership that is totally committed to improving student learning. In the United States, the Rockwood school district in Missouri, developed and implemented an administrative professional development plan (APDP) that focuses on improving the school principals' knowledge concerning the crucial areas of effective instruction, equipping them with the skills to build effective programs for staff development and to address student needs (Peckron, 2001).

Research Methods

The data collection was based on both quantitative and qualitative dimensions of research, which included empirical surveys, discussions with school principals and documentary analyses as was appropriate. The Australian sample comprised of principals and deputy principals in 130 primary and high schools within the school districts of Newcastle, Lake Macquarie and Maitland in the State of New South Wales. As there were deputy principals only in high schools and large primary schools, 145

questionnaires were forwarded with 71% (N103) of the participants returning their responses. Japanese sample comprised of the principals and vice-principals in 130 elementary, middle and high schools within the Shizuoka Prefecture located in Central Japan, 200 kilometers South-West of Tokyo. As each school had a principal and a vice-principal, 260 questionnaires were forwarded with 45% (N118) of the respondents returning their responses. The Australian data was collected in 2000 and the Japanese data was collected in January 2003. The American sample comprised of 111 principals and assistant principals, who were working in Los Angeles County and adjacent counties and were following their master's degree programs at the California State University Northridge (CSUN) with 92.5% (111/120) responding to the questionnaire during the period 1997-99.

This collaborative project was a result of a visit by the Australian researcher to the College of Education CSUN in 1999 and to the College of International Relations of the Nihon University in Mishima in 2000. During these visits and an earlier visit to Berkeley and San Francisco in the USA in 1994 and to Hiroshima in Japan in 1999, the Australian researcher had the opportunity to visit some American and Japanese schools, interacting with school leaders to familiarize with the American and Japanese schools systems. In early 2000, the American researchers from CSUN and in 2003, the Japanese researcher from the Nihon University traveled to the School of Education of the University of Newcastle in Australia for collaborative work relating to the studies. During these visits, the American and Japanese researchers also had the opportunity to visit some Australian schools, interacting with school leaders in order to familiarize with the Australian schools system.

The questionnaire for the principals' study was based on an instrument developed at the IPDA at the California State University of Northridge (Su, Gamage & Mininberg, 2003), but with significant changes to suit the Australian and Japanese contexts. The English version of the questionnaire was translated into Japanese, and later the Japanese responses were translated into English. The survey contained both structured and open-ended questions and included sections to cover participants' background information including their profiles; pre-service and in-service training experiences as well as their own perspectives on professional development relating to the areas to be covered.

The American, Australian and Japanese school principals are comparable in that all of the respondents came from major coastal and urban areas in their nations. Within the American sample, half were secondary principals while half were elementary principals. In the Australian sample, two thirds of the school principals surveyed were primary school principals and one third were secondary school principals while in the Japanese sample, half were elementary school principals and the other half were either middle or high ,school principals. All three samples comprised of principals and their deputy/assistant/vice principals. In the discussions, analysis and interpretations, due consideration has been given to the different historical, political and social backgrounds of Australia, Japan and the United States.

Profiles of American, Australian and Japanese School Principals

Data from the survey of school principals present interesting profiles of the American, Australian and Japanese school principals. Within the sample of American principals, 58% were females while 42% were males. Amongst the Australian principals, 62% were males, and 38% were females, whereas within the Japanese sample, 91.5% were males and 8.5% were females as shown in Table I. It seems that the American and Australian school systems are moving towards more equitable distributions of leadership roles between the males and females. However, the Japanese society, still being a traditional and paternal one, there is a huge gap between the leadership roles occupied by the males and females. This appears to be prolonging the current status-quo as the opinions of the peers or the systemic authorities play a key role in appointing principals as opposed to system of merit selections. In Australia where equity levels were less than that of America, current trends show that the numbers of women occupying principal positions both at primary and secondary levels are on the rise. For example, in the school districts of Newcastle, Lake Macquarie and Maitland, out of a total of 176 principals 46 or 26% were women principals, whereas 74% were male principals. However, in Newcastle, which is the most urban district, out of 66 principals, 30% or 45% were women principals, showing the new trends in the Australian system.

TABLE 1
Australian and Japanese Principals by Gender

Gender	America	Australia	Japan
Male	42%	62%	91.5%
Female	58%	38%	8.5%

In an examination of the age distribution, the Australian principals were older than American principals, whereas the Japanese principals were older than even their Australian counterparts. Amongst the American principals, 22% were less than 40 years of age, compared to only 2% and 0.9% coming within this category amongst the Australian and Japanese principals. Amongst the American principals, 36% were over 51 years of age, compared to 37.9% amongst the Australians, whereas 77.8% of the Japanese principals were in the same age group as shown in Table II. In view of the fact that American principals were appointed on merit and not seniority, naturally they were younger than the other two groups. In Australia particularly in New South Wales' (NSW) prior to 1989, school principals were appointed on the basis of Seniority Lists (maintained by the system) based on comprehensive evaluations conducted by the school inspectors. As those lists only made them entitled to be appointed to principal positions, sometimes people had to wait for years until a vacancy occurs to be appointed. On the other hand, Japan places heavy emphasis on seniority as classroom teachers combined with the opinions of the systemic authorities and the peers in selecting people for school

leadership positions. In addition, the systemic and cultural differences in the three countries have an impact on the ground situations.

However, it is important to note that the school systems in the Australian Capital Territory (ACT) and Victoria started the selection and appointment of school principals on merit with the introduction of school-based management in the mid 1970s (Gamage, 1996b; Gamage, Sipple & Partridge, 1996). In NSW, it was the introduction of Scott reforms with community

TABLE 2
Age Distribution

Age Group	American Principals	Australian Principals	Japanese Principals
51 years and older	36%	37.9%	77.8%
41-50 years	42%	60.1%	21.3%
40 years and younger	22%	2.0%	0.9%

Participation in school management paved the way for the selection of principals on merit enabling the appointment of younger people to these positions (Gamage, 1992; 1996c). Similarly, Japanese school systems have been appointing principals based on seniority rather than on merit and this system is being continued to the present day whereas most Australian school systems have adopted merit selection processes by panels comprising of peers and community representatives. This explains as to why the Japanese principals are on a higher age bracket as against the Australians. Consequently, the Japanese principals have worked on an average of 24.9 years as classroom teachers while the period of service in the case of Australian principals have come down to 15.8, most probably as a result of moving to merit based selections since 1989. In contrast, the American principals who were selected on merit has completed an average of 13 years as classroom teachers before being appointed principals.

There are also significant differences in the academic degrees held by the American, Australian and Japanese school principals. Within the American sample, none of the participants held a bachelor degree, 90% had master's degrees and 9% doctoral degrees while 1% did not respond to the question. Amongst Australian principals, 16.4% had less than a bachelor's degree, 45.6% held bachelor's degrees, 34% had master's degrees and only 2% doctoral degrees with 2% preferring not to respond to the question. In the Japanese sample, only 2.5% of the principals possessed less than a bachelor's degree, 84.5% had bachelor's degrees while only 11.2% had master's degrees and 0.9% doctoral degrees. However, 2.9% preferred not to answer the above question as shown in Table III. Currently, it is only in America that the systemic requirements have been laid down that principals should have pre-service training in educational administration or leadership whereas other systems such as the British and Australian consider it as desirable and are being actively encouraged. Both the Australian and the Japanese systems do not require the prospective school leaders to have any pre-service training. But now significant differences are emerging within the Australian system as increasing

numbers of current and prospective school principals are undertaking university level professional development in leadership and management in education.

TABLE 3
Academic Qualifications of Australian and Japanese Principals

Academic Qualifications	America	Australia	Japan
Less than a Bachelor's Degree	Nil	16.4%	2.5%
Bachelor's Degree	Nil	45.6%	84.5%
Master's Degree	90.0%	34.0%	11.2%
Doctoral Degrees	9.0%	2.0%	0.9%
Didn't Respond	1.0%	2.0%	0.9%

Two of the key underlying reasons for this trend in Australia could be: First, a direct result of the implementation of SBM with community participation that has been taking place since the mid 1970s and the second, the adoption of merit selection processes by almost all Australian school systems as an off-shoot of the same SBM process. This trend could be noticed from the higher percentages of Australian principals holding master's degrees. The systemic authorities have been rewarding the candidates with master's degrees in leadership and management in education or educational administration with promotional positions to capitalize on this trend. Even though the academic and professional qualifications required for appointment to a position of principal remains a four-year bachelor's degree or equivalent, under the merit selection system introduced since 1989, the selection panels have been giving preference to higher degree qualifications. For instance, in 2000, all three vacancies in high school principalships in the Hunter area were filled by graduates in Masters in Leadership and Management in Education (MLMEd) of the University of Newcastle.

Australia and Japan have significant differences in the demographic compositions. In recent times, Australia has adopted an official position as a multi-cultural society whereas Japan remains a homogeneous society. But, it is clear that it has not impacted on the data presented in the paper as the school districts which were under investigation were not multi-ethnic. The Australian sample comes from an area where the population is predominantly a mainstream Caucasian group. Amongst the Australian respondents 83.5% were of Caucasian origin, 6.8% were of other ethnic groups with 9.7% not responding to this question. However, it is not difficult to stipulate that this 9.7% could also belong to the same Caucasian group as the question asked was not much appreciated as they preferred to call themselves Australians. The 1996 official demographic statistics show that in Newcastle 91%, in Lake Macquarie 95%, and in Maitland 96% were of Caucasian backgrounds, supporting the above research outcome. In contrast, in Japan all those who responded to the survey were of Japanese origin reflecting the demographic composition in Shizuoka Prefecture.

What made the respondents to accept the Principalship?

There appears to be very little research as to why people take up such a complex role as a school principalship. Very often it is a set of subjective reasons that lead to career choices. They include preferences for intrinsic or extrinsic rewards, preferences for certain occupations, and the development of a commitment to a career choice. Extrinsic rewards include what we usually think of as the rewards attached to a role and involve salary or money income, a level of prestige, other fringe benefits, and power over others, while intrinsic or psychic rewards consist entirely of subjective valuations made in the course of work engagements and setting personal goals (Lortie, 1975).

Data from the current study of Australian and Japanese school principals reveal interesting similarities and differences. The survey provided 14 reasons as to why someone was likely to decide to take up a position of a school principal and requested the respondents to indicate how important the particular reason for his or her decision was. According to the ratings done by the American, Australian and Japanese principals, the reasons, shown in Table IV, were identified as the six most important.

A comparison of the responses between the American, Australian and the Japanese principals shows that the socio-cultural factors have influenced their perceptions. When the Australian principals indicated "To have personally satisfying job" as No.1, the American principals have perceived that as the No. 2 reason showing their cultural affinity arising out of their Caucasian roots. On the other hand, the Japanese principals have placed high priority on extrinsic reasons such as "To manage the affairs of a school" and "To work with teachers in school improvement efforts" as No.1 & 2 reasons for taking up the principalship emphasizing the community or society centred values as against the individual values. When the Japanese principals have placed priority No.1 on "To manage the affairs of a school", the Australian principals have labeled it No.6, whereas the American principals have not included it within the first six reasons. On the other hand, the reasons such as "To provide effective leadership", "I like to work with children and youth" and "To work with teachers in school improvement efforts" have been included within the first six reasons by all three categories of school leaders.

Overall, it is clear from the Table IV, above that the Japanese principals have avoided intrinsic reasons whereas the American and Australian principals had mixed feelings. One reason for these differences could have been due to the fact that the American and Australian principals have gone forward for merit selections more or less as a career choice for personal advancement. As a clear contrast, the Japanese data shows that 98.3% of the principals were identified by the authorities for the position. Especially when someone was identified by the systemic authorities, naturally, he or she has to appreciate the systemic values by becoming more community oriented, thus fixing a very low priority to a reason such as "To have a personally satisfying job", which was of high priority to Australian and American principals.

TABLE 4
The Key Reasons for Choosing to be a School Principal

America	Australia	Japan
To help children and young adults.	To have a personally satisfying job.	To manage the affairs of a school.
To have personally satisfying job.	To provide effective leadership.	To work with teachers in school improvement Efforts.
I like to work with children and youth.	I like to work with children and youth.	To have an impact on school restructuring.
To make a contribution to society.	To make a contribution to society.	To provide effective leadership.
To provide effective leadership.	To work with teachers in school improvement efforts.	To help children and young adults.
To work with teachers in school improvement efforts.	To manage the affairs of a school.	I like to work with children and youth.

Another key factor in Australia is a clear distinction between the salaries of the classroom teachers and principals. The step one of a classroom teacher from July 2002 was $30,366, rising to $58,692 with 13 years of service on the basis of annual increments by January 2003 whereas a principal of a grade 1 high school can draw a salary of $95,101 per annum (http://www.det.nsw.edu.au on 09.07.2003). Thus, it is clear when a teacher becomes a school leader s/he is always likely to enjoy a higher salary and other fringe benefits. A principal of a grade 1 high school is able to draw salary of $36, 500 more than that of an ordinary classroom teacher who is at the maximum of his/her salary scale. On the other hand, in Japan, the gap between the upper ceilings of the salary between a classroom teacher and a school principal is not that great. An assistant teacher starts with a monthly salary of 150,000 (A$2143) rising up to 371,000 Yen, (A$5300) while a teacher starts with a monthly salary of 195,000 (A$2786), rising up to 469,700 Yen (A$6710). An upper secondary principal starts with a monthly salary of 417,400 (A$5963) rising up to 543,800 Yen (A$7757) (Japan, 2000: 95). When the above scales are compared, with the fact that on an average, a person has to complete 24.9 years as a classroom teacher as against an average of 15.8 years in Australia before becoming a school principal, the gap does not appear to be significant. These figures show that in Japan the gap between the maximum salary between a classroom teacher and an upper secondary principal amounts to only 74,000 Yen or A$1057 per month or A$12,684 per annum whereas in Australia, the gap between a retiring senior teacher and a high school principal amounts to $36,500 or three times that in Japan.

The written responses to the open-ended question as to why they wanted to become school principals reveal interesting insights into the thinking of school leaders in the three

countries. Within the American sample, most principals indicated that they came into school administration with their belief in the value of education, looking forward to an opportunity to enjoy working with children and people. They wanted to exert a significant influence on school reforms with the desire to make a positive difference in the lives of those involved in their schools.

Within the Australian sample, a significant number indicated that they became school leaders because they wanted to take the challenge and help to improve schools and student outcomes by implementing the educational philosophies that they believed in. They want to share their ideas, to give all students the best possible education, and train them to be good Australian citizens, who can improve society. A few Australian school leaders in our sample stated very practical reasons for becoming principals: a career change encouraged by peers and improved salary. One frankly stated, "Ego, to get a promotion, not to do play-ground duty and a challenge." Another was bold enough to state "money" as the major cause to get into the principalship.

In the Japanese sample, majority of the respondents stated that they wanted to get involved in school management and prove their abilities as school administrators. There were some who indicated that they wanted to realize their vision in education in the capacity of a principal. Some others wanted to achieve high ideals such as "to nurture children to be rich with humanity", "I thought I could contribute to people and society". One principal stated that he wanted to encourage the community to participate in school management and to improve the environment for the teachers to work at ease. A clear theme emerging from the Japanese data is that the vast majority of them have not taken up the principal-ship on their own but it was because their peers or superiors wanted them to do so. Besides, as the principal-ship is assumed as a stepping stone to retirement, very few wants to be innovative or entrepreneurial in their outlook in leading the schools. As a result, many of the Japanese principals do not seem to have given serious consideration as to what they need to achieve or what difference they want to make to the education. This is not a surprising outcome when one reviews the rigid bureaucratic model still prevalent within Japanese education system.

Principals' Visions and Views on the Job of being a Principal

Some Australian principals described their visions for school reform, emphasizing that they considered becoming principals as the positions provided them opportunities to realize their visions. They wanted to use their knowledge and skills to improve educational outcomes for pupils on a whole school basis. One stated that he could influence change as he had something to contribute. Another wanted to make a real difference to students and stay in the education process by applying the knowledge and skills that he had acquired to build a better school than the one where he had worked as a classroom teacher. These principals believed that they could influence the implementation of policy in educational practice and that they had developed sufficient skills to allow them to serve as effective leaders.

In Japanese responses, the principals indicated a range of visions reflecting on the current educational reforms and the national policy changes. Since 1997, the Japanese Ministry of Education, Science, Sports and Culture (JMESSC) has stressed "enhancement of emotional education" (Kokoro-no-kyoiku) as one of the central themes, which fosters the cultivation of rich humanity, and "zest for living" (Ikiru-chikara) "more room to grow for children" (Yutori) (Japan, 2000: 128). In 2002, the national standards for establishing schools were revised, making the schools responsible for school evaluation and openness to the community. At the same year, a five-day school week was initiated, which was used to be a five-and-a-half day school week from Monday to Saturday. The new Courses of Studies at all levels including 30% reduction of the curriculum content were implemented.

One principal has set a vision to develop the school as part of the community, where children are nurtured under the mutual understanding between the community and parents. Some others wanted to develop the school "as an educational organization within a learning society"; "A school which has an educational system that can sustain harmoniously, and open to people in the community"; "A school where teachers have a lot of time to associate and interact with children"; and "A school which is unique and tightly connected with the community." Another wants to develop a school that can provide parents and the community with education which meet their needs and a school that can provide students with enhancement of firm self-awareness as Japanese. One principal wants to develop a school where parents and people in the community show teachers respect, school also respect parents and people in the community, with the result students and teachers are surrounded by love and respect. Another has set a vision of a school where students are taught only five days a week. The school should deal with subjects necessary for group learning and subjects which can be learned individually such as sports and arts to be taught at home within the community. Smaller classes but of different sizes to suit the type of learning with adequate numbers of teachers to meet such needs with provision for teachers to participate in in-service training at the learning centre located at each city.

The American principals projected several types of ideal schools based on their visions. Some were of opinion that an ideal school is one where every child is reading, writing and doing mathematics above grade level, where children would be creative, independent and happy. Another type of ideal school would be where staff and the community would get along well together and strive for the highest achievement and success for all. Others felt that they would like to see a school where every student strives to achieve his/her full potential and every teacher strives to improve his/her teaching effectiveness. Some others were of the opinion that an ideal school is a place where all students are experiencing curriculum enabling them to achieve success and higher level thinking. A few more principals' visions suggest that an ideal school should be a place of joy and happiness, where adults and children feel good about themselves.

When the respondents were asked whether they have planned to stay as school principals for the rest of their careers, the American, Australian and Japanese principals

expressed mixed feelings. More than 42% of the American principals expressed the desire to continue in their jobs as they were of opinion that it was stimulating, challenging and satisfying. But 34% of the principals indicated that they were not interested in staying in the job while 24% were unsure what they would do. Approximately half of these principals preferred to move into administrative positions at school district level whereas the other half expressed the desire to leave the principalship due to stress and heavy work-loads. One American principal went to the extent of stating "it begins to eat me alive and wanted to be out – almost to do anything else" (Su, Gamage, Mininberg, 2003: 49).

The Australians see them as working in environment of constant change and uncertainty with many new challenges to confront. For some, the result is a sense of powerlessness and loss of controls leading to stress among some. However, in this study, the vast majority (80%) of Australian participants indicated that they prefer to stay on as principals until they retire as they enjoy the challenge and variety associated with the job. But, some wanted to make changes or move up in the administrative ladder. A teaching principal indicated that he would prefer to get into a non-teaching principal position while a deputy principal wanted to become a principal. Another principal would like to move upwards to a position of superintendent or chief education officer.

In contrast, a small number of Australian principals in the study were planning to leave their positions. One explained that he had been the principal of three schools and preferred to have a change. A female principal confirmed that she did not want to stay in the job but preferred to undertake traveling and doing volunteer work. One principal gave a definite and a negative answer when asked if he would stay as the principal, "No. I do not have a death wish, the stress levels and lack of support threatens principal's health." Another lamented, "Not sure. I believe change is important to maintain enthusiasm, interest and challenge." A few of them felt that they stayed too long and want a career change. A few more stated that they are closer to retirement and plan to retire as principals. In consideration of the comments made and the opinions expressed by some of the school leaders, it would be better for the authorities in all three systems to take appropriate action to reduce the stress levels of the principals. It is also necessary to provide professional development opportunities to renew their commitments to their work and to retain the best school leaders in the system.

In the Japanese sample only 72 responded to the question and 69 emphasized that they want to stay in the job as principals. Only one principal really didn't want to stay as principal and insisted that I didn't want to be a principal, I want to be with students, being with the students is the heart of education. The other two principals have not indicated a real desire to leave the principalship. One of them stated "I want to be a teacher because I like to work with children which is better than being a school administrator, but this job is good considering my age. The reason given by the other principal was to establish a private school which doesn't appear to be a real desire to cease to be a principal. Perhaps, it may not be incorrect to say that the other 46 principals who didn't respond to the question did not have any strong views against the continuation in the position. If they

were not in favor of staying in the job they wouldn't have hesitated to say so. In an overall interpretation of the data, none of the Japanese principals were keen to change the job or retire early. Even the principal, who stated that he prefers to return to his teaching job and be with the children, did not indicate that he is taking action to step down from the position of principal.

Pre-Service Training

In addition to the differences in their profiles and entry perspectives, the American, Australian and Japanese principals in our sample had very different experiences in pre-service training, both in length and in content. Amongst the American principals, 76% had two years, 20% one year and 4% a few months of pre-service training. When one considers the fact that currently the prospective principals are required to have three years of teaching experience and a master's degree with the completion of programs of study mandated by the respective states leading to accreditation, the survey results are not surprising. In contrast to the American experience, within the Australian sample, 66% of the principals did not have any pre-service training before they became school principals. This outcome appears to be the result of not having any pre-service requirements by the systemic authorities except being a good practising teacher. Of those who did, 4% received only 3 months of training, 2% had half a year of training, 5% received one year of training, and 9% had two years and 14% four years of training. It is obvious that those who have indicated as having one or more years of training have interpreted their own university level professional studies undertaken on their own as pre-service training as the system did not either provide or require that type of training.

In the Japanese sample, only 47 principals have responded to the question: "How long was the pre-service training?" this seems to be a clear indication that as there is no systemic requirement, they have not received any pre-service training. However, 33% (N39) of those who responded indicated that they received 1-3 months of pre-service training while 6.8% (N8) indicated that they had 3-6, 6-9, 9-12, 12+ months and two years of pre-service training. This sort of training would have been purely situational and personal rather than job specific training but interpreted as pre-service training in the context of the survey. In view of the fact that the Prefecture Boards of Education periodically conduct in-service training at different stages of a teacher's career, it is likely that some Japanese principals may have interpreted that in-service training for supervisors and coordinators as pre-service training. The fact that there is no systemic requirement to be considered for appointment to a principal-ship other than being an experienced classroom teacher, could also have been the reason why that most Japanese principals have not shown a real interest to undertake pre-service training. This very reason has made significant numbers of respondents to evade this particular question.

The only two topics that were considered to be the most important within the six topics of the pre-service training programs by the American, Australian and Japanese principals were 'contemporary administrative leadership' and 'school and community relations'. Other than the two topics agreed by all three groups, the Australian and

Japanese principals included two more topics within the six most important ones. These are: 'effective communication and decision-making', and 'management of human resources', as shown in Table V. The American principals considered 'legal aspects of educational administration' as the most important topic while the Australian principals considered 'effective communication and decision-making' as the most important whereas the Japanese principals considered 'organizational theory and organizational behavior' as the most important.

According to Callaghan (1962), the USA has a long history of university level formal programs for principal preparation. American universities have been offering programs in educational administration since the 19th Century enabling the individuals to enter the field of school management and administration preparing to take up leadership and managerial positions In contrast, in Australia, Japan and many other countries, have been using the traditional apprentice model where prospective school leaders have been prepared mostly by moving up the ranks from classroom teachers to master teachers to heads of departments, to assistant and deputy/vice principal-ships and finally to school principal-ship. Recently, there has been a shift in some of the countries to require some formal pre-service training for school administrators (Daresh and Male, 2000).

TABLE 5
Most Important Areas needed to be covered in Pre-Service Training

America	Australia	Japan
Legal aspects of educational administration.	Effective communication and decision-making.	Organizational Theory & organizational behavior.
Theory & practices of curriculum development.	Management of human resources.	Educational administration and management.
Organization and administration of elementary & secondary schools.	Contemporary administrative leadership.	Contemporary administrative Leadership.
School & community relations.	School and community relations.	Management of human Resources.
Contemporary administrative leadership.	Theory & Practice of Curriculum Development.	Effective communication and decision-making.
Administration and supervision of teaching personnel & instruction.	Management and resolution of conflicts.	School and community relations.

In England, a new initiative for improving the management and leadership skills of head teachers and other senior professionals has been launched by the British Government. Tony Blair's New Labor Government has recently published a 'White Paper on Excellence in Education', emphasizing the importance for all prospective head teachers/principals to undertake formal preparation for the position. The emphasis placed

on professional development is such that newly appointed British head teachers are entitled to a grant of 2500 Sterling Pounds, within the first two years of their appointment for the purpose of obtaining professional development, preferably at university level. The demand for educational management programs has increased to such an extent that in 1999, the University of Leicester (a medium size British University) had over 1300 candidates enrolled for its MBA in Educational Management (Gamage, 2001). Australia, which followed the British model in the past, has also begun to stress the importance of appropriate training, selection, development and rewards for principals and other school leaders with the move towards merit selection in place of seniority and apprenticeship (Caldwell, 1994).

In fact, when asked to make recommendations to improve the existing pre-service training programs, the American and Australian principals placed emphasis on the importance of connecting theory with practice for the purpose of refining and improving practice, including the observation of exemplary education administrators. They wanted to have 'more hands on experiences', 'more mentoring and shadowing by experienced principals', 'more emphasis on practical skills and real world issues that principals may face'. However, only 30 Japanese principals out of 118 in our study have opted to comment on "what recommendations would you like to make to improve pre-service training programs?" As there is no systemic requirement for pre-service training in Japan, even amongst them only a few of them considered it is important to have pre-service training. But, when they were asked about the types of training that the school leaders needed, they suggested 'Organizational Theory & Organizational Behavior' 'Educational Administration & Management', and 'Contemporary Educational Leadership', as the three most important areas to be included in such programs.

The Australian principals pointed out the non-availability of field-work and mentoring or shadowing programs for school leaders in Australia but emphasized the need for the provision of well-structured comprehensive pre-service training programs for the practicing and prospective school principals. When one considers the large numbers of those who are pursuing university level programs in leadership and management as well as in educational administration in general, it appears that this view is widespread in Australia. These suggestions have strong implications for organizing pre-service training programs both at the university and systemic levels. The systemic programs could be organized in collaboration with universities through the Training Directorates or the NSW Institutes of Teachers, which is to be established in early 2004. It is also important to consider transfers of credit between the universities and systemic programs of professional development.

The data relating to 'how one becomes a principal?' there appears to be a clear distinction between the educational administrators in the USA and Australia and that of Japan. In America and Australia, becoming a principal is a personal career choice and the candidates have to pay for all the training costs and spend their own time to complete the studies. In Japan, it is either the systemic authorities or the peers are the ones who decide whether a person needs to be appointed to a position of principal. The Japanese

data suggest that hardly any of the principals came to the position on the basis on a career choice. In fact, a number of principals have stated that they didn't want to be principals but they had to, either because of the systemic or peer pressures. It is only after one was appointed to a position of principal that s/he was provided with one to two months of training in school leadership and management.

Currently in Australia, because of the adoption of merit selections and the implementation of school-based management by almost all Australian school systems, many of the practicing and more specifically the prospective school leaders are undertaking university level professional development programs. These programs are followed either by distance learning mode or by attending university campuses in the evenings after school, similar to what is happening in the USA and Britain. Since 1998, in most university campuses, the course-work graduate level programs are being offered only on the full-fee paying basis. In the Australian systems, seeking a promotional position is purely a personal decision. In this context, the Australian participants have no alternative but to pay for their own professional development. However, in 2001, the Federal Government in Australia established a fund to award interest free loans for those who wish to undertake such programs. In addition, during the 2003 General Election campaign in NSW, the Government in power pledged to allocate a sum of $700 per teacher for professional development and when the very same government was elected, this has now become a reality (Gavrielatos, 2003). However, in the Japanese system, it seems that there is a long way to go as the systemic authorities or the school leaders haven't been convinced on the need to provide pre-service training in leadership and management in education. But, there is a silver lining as some of the principals who participated in this study have indicated the need for such professional development and gone to the extent of recommending the topic areas that need to be covered in such programs.

In-Service Training

In America 48% of the principals received two years of in-service training, 29% one year of training and 17% a few months of in-service training whereas only 7% received over two years of training. Most of these American in-servicing are more formal, more structured and developed and located in university campuses. But, in NSW in Australia until recently, the newly appointed principals were provided with a two-day induction program at the beginning of the year, but those who had to take up their positions in mid-year had to miss out on this program. Currently, no such program exists but training and development directorate has organized a number of relevant programs and these are provided on-line to be followed by the current and prospective principals, if they choose to do so. The Institutes of Teachers established by the states such as Tasmania and Victoria have already started offering such professional development programs for school leaders and in New South Wales, action is being taken to establish another by 2004. However, depending on the NSW Government's prioritized agenda for each year such as child protection legislation, creation of learning organizations, getting the foundation

right, excellence in teaching and learning, partnerships in public education, a fair go for all; the principals are in-serviced at the district level, requiring them to provide in-service to their staff at the respective schools.

In contrast, in the Japanese sample, 74.6% (N88) principals stated that they had 1-3 months in-service training 5.2% (N6) 9-12 months in-service training, one more than 12 months and two others unspecified periods of training whereas 21 did not answer the question. In Japan in-service is provided by JESSC, the Prefecture or the local education authority but is limited in scope. Japanese principals may not participate in in-service training on a regular basis even though the Prefecture Board is required by law to be responsible for planning and encouraging local public schools to conduct in-service training on a regular basis.

TABLE 6

Most Important Areas Needed to be Covered in In-Service Training Programs

America	Australia	Japan
Information technology & information management.	An induction program;	Contemporary public policy issues in educational administration
Ethics, morals and values for educational leaders.	Information technology & information management	Practicum in educational administration
Organization and administration of multi-cultural programs.	Ethics, Morals and Values for educational leaders	Ethics, morals and values for educational leaders
Assessment of candidate competency.	Contemporary public issues in educational administration	Information technology and information management
Practicum in educational administration.	Assessment of candidate competency.	Introduction & management of reforms/change.
Non-university based activities	Practicum in educational administration.	An induction program.

When the American, Australian and Japanese principals were asked to rate the topic areas that should be covered in in-service training, they selected the topics included in Table VI as the six most important areas to be covered in in-service training programs. All three groups of principals agreed to the inclusion of 'Information Technology & Information management', 'Ethics, morals & Information management', and 'Practicum in educational administration' in in-service programs. The Australian and Japanese principals were in agreement on the inclusion of 'Induction program' and 'contemporary issues in public education policy issues in educational administration'. The American and Australian principals were in agreement on the inclusion of 'Assessment of candidates'. Thus, it is clear that the three groups are on common grounds on a majority

of topics coming within the six most important areas to be covered in in-service programs.

The other topic areas that were included within the six most important had been more contextual. The American principals flagged the 'organization & administration of multicultural programs', to be included. As the American sample has been drawn from the Los Angeles area in California, which is the home to hundreds of ethnic groups and the largest concentration of migrants, this is not surprising. Then their preference for 'non-university based programs' is also understandable as almost all pre-service and in-service programs are university based. The Japanese principals wanted to include 'Introduction & management of education reforms/change', as the introduction and institutionalization of educational reforms had been proved to be pretty difficult in Japan. On the other hand, the Australian and Japanese groups rated "organization and administration of multicultural programs" as one of the least important topics reflecting the demography of the areas from which the respondents were drawn.

In making recommendations for improving the existing in-service training programs, the Australian and Japanese differed in their opinions in the timing of the in-servicing. The Australian principals preferred these programs to be organized during school days but in a clear contrast, the Japanese counterparts insisted that such programs should not take them away from the schools where their presence was essential. They even went to the extent of suggesting that in-service training should be organized during school holidays. Both groups of school leaders preferred more practical orientation with actual school situations/cases and better connections between theory and practice

Recognizing the fragmented nature, the short duration and the casual nature of their in-service training, the Australian principals suggested that the future programs be organized in a more consistent, structured and comprehensive manner with more emphasis on up-to-date knowledge and on practice. They also wanted to have more opportunities to share information with colleagues both at home and abroad, and they were particularly interested in lessons of school reform from other nations. They anticipate and expect more and more e :changes and communication between educational administrators in Australia and other countries.

Conclusion

In an examination of the results from the data analyses, most of the American and Australian school principals in our sample have chosen to enter leadership positions primarily for altruistic and intrinsic reasons whereas the Japanese principals have taken the principalships for extrinsic reasons rather than as career choices. They placed more emphasis on service to the community and helping in school management. But the American and Australian principals have experienced more stress than their Japanese counterparts, and as a result, 34% of the American principals did not propose to continue in their jobs while another 24% were unsure whether to stay in their jobs. Similarly, 20% of the Australians in our sample intend to leave educational administration whereas almost all Japanese principals plan to remain in their positions. Some Australian

principals expressed feelings of powerlessness and stress in coping with the job. However, it is important to understand that these differences are mainly due to cultural and systemic differences between the Western and Japanese societies. In Australia within the next four to five years, the predictions are that there could be a big shortage of principals particularly in New South Wales because of many school leaders reaching the age of retirement. It is important for educational policy makers to reflect on the findings of this and other related studies in developing strategies to recruit and retain high-quality school leaders.

Another major finding from the study shows that the Japanese school principals tend to be more senior in age and teaching experiences than the American and Australian principals but lower in academic degrees than their American and Australian counterparts. Apparently, seniority plays a more important role in the selection and appointment of school leaders in Japan whereas all American and most Australian school systems place more emphasis on merit-based selections giving preference to graduate-level university-based professional development. In contrast, almost all Japanese principals have little or no pre-service training before accepting their positions. Currently, most prospective principals in Australia have started to undertake university level professional development programs while the Japanese principals have not given serious consideration to pursue such studies.

For years, scholars in different parts of the world have debated the issue of whether or not people could receive adequate professional preparation for the principalship through academic experiences on university campuses. In the past, the Australian, British and Japanese views have been that there was no better preparation for leadership than on-the-job experience as a head of department, member of a senior management team, and a deputy headship. They did not feel that pre-service training as something that should necessarily take place on a university campus. Increasingly, British and Australian educational systems are encouraging the candidates for principalship to have higher degrees in educational leadership and management similar to that in the United States. The Teacher Education Inquiry established by the NSW Government in Australia expects that more and more Australian universities will offer formal and graduate-level training programs in educational administration (Ramsey, 2000). In Australia, the federal government has recognized this necessity by establishing a loan fund for those who want to undertake university level post-graduate course-work programs.

In making recommendations for the improvement of pre-service and in-service training programs for school principals, the American, Australian and the Japanese principals have much in common than the differences on the type of topic areas which are considered to be most important to be covered. They have placed emphasis on connecting theory with practice and especially on the observation of exemplary educational administrators and group-work. The principals' views and voices have strong implications for developing and restructuring the existing training programs for school principals and call for much closer links between the schools and the universities.

Findings from this project and other recent comparative studies of school principals demonstrate that nations continue to differ both in theories and practices in preparing their educational leaders although they have recognized that principals are at the centre of school improvement efforts. Educational policy makers and reformers should draw some lessons from this comparative study in their efforts to recruit and prepare more and better principals, who are committed to confronting the challenges of the 21st Century that are demanded by the changing societies and advances in technology. After all, the effective principals are the ones who create effective schools where the future generations can be educated and trained to take their place in an ever-changing world. However, the author wishes to emphasize that it may not be possible to generalize these findings due to the small size of the samples and it is desirable to undertake research with larger samples to have better insights to the world of school principals.

References

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Barth, R. (1991). *Improving Schools From Within.* San Francisco: Jossey Bass.

Baltzell, D. C. and Dentler, D.A. (1983). *School Principal Selection Process: Five Cases Studies.* Washington: National Institute of Education, ED319107.

Baron, M. A. (1990). *A Preliminary Investigation of Superintendents' Perceptions Regarding Recruitment and Selection of Principals.* ED 3279730.

Bennett, J. W. (1987). *Principal Selection Guide.* Washington: Office of Educational Research and Improvement. ED 282358.

Brady, L. (1996). "Peer Assistance for Principals: Training, Observation, and Feedback", *Journal of Educational Administration*, 34(2), pp.54-63.

Caldwell, B. J. (1994). "Leading the Transformation of Australia's Schools", *Management and Education*, 22 (2), pp.76-84.

Callaghan, R. (1962). *Cult of Efficiency in Education in America.* Chicago: Chicago University Press.

Chapman, J. D. (1984). *Selection and Appointment of Australian School Principals.* Canberra: Commonwealth Schools Commission.

Clark, D., Lotto, L. and Astuto, T. (1984). "Effective Schools and School Improvement: A Comparative Analysis of Two Lines of Inquiry", *Educational Administration Quarterly*, 20 (3), pp.41-68.

Daresh, J. and Male, T. (2000). "Crossing the Border into Leadership: Experiences of Newly Appointed British Headteachers and American Principals", *Educational Management and Administration*, 28(1), pp.89-101.

Edmonds, R. (1979). "Effective Schools for the Urban Poor", *Educational Leadership*, 37 (1), pp.15-18, 20-24.

Fink, E. and Rensnick, L. B. (2001). "Developing Principals as Instructional Leaders", *Phi Delta Kappan*, 82(8) p.598.

Gamage, D. T. (2001a). "British Reforms in School Management: A Decade of Experience with LMS", *Studies in International Relations*, 22(2), pp.23-54.

_____ (2001b). "School-Based Governance: An Australian Experience 1974-2000", *Studies in International Relations*, 22(1), pp.63-92.

_____ (1996a). "The Impact of School-Based Management and New Challenges to School Leaders", *Perspectives in Education*, 12 (2), pp.63-74.

_____ (1996b). "An Australian Alternative in Creating More Effective Schools", *The Educational Forum*, 60 (4), pp.361-368.

_____ (1996c). "Institution of School-Based Management in New South Wales", in D. T. Gamage, *School-Based Management: Theory, Research and Practice*, Colombo: Karunaratne & Sons.

_____ (1992). "School Centred Educational Reforms of the 1990: An Australian Case Study", *Educational Management and Administration*, 27 (1), pp.1-10.

_____. (1990). "Changing Role of Leadership of the Australian High School Principals", *Perspectives in Education*, 4 (2), pp.95-108.

Gamage, D. T. Sipple, P. and Partridge, P. (1996). "Research on School-Based Management in Victoria", *Journal of Educational Administration*, 34 (1), pp.27-43.

Gavrielatos, A. (2003). The Promises that Labor Must Keep, *Education*, March, p.3.

Japan, Ministry of Education, Science, Sports and Culture (2000). *Education in Japan 2000*, Tokyo: Gyosei.

Kojima, H. et al. (1991). "A Study on the Self-Renewal of School and Principal's Leadership", *The Bulletin of Education*, 13(19), pp.17-45.

Lortie, D. (1975) *Schoolteacher.* Chicago: University of Chicago Press).

Maki, A. (2003). "School Managers in the Period of School Renewal", *Gakkoukeiei* (School Improvement) 48(2), pp.18-24.

Maki, Y. (Ed.) (1991). *Gakkokaizen-to-Kocho-no-Leadership* (School Improvement and Leadership of School Principals. Tokyo: Daiichihoki.

Mansell, W. (2000). "Leader College Hailed", *The Times Educational Supplement*, Nov. 24, Issue 4404, p.4.

New South Wales Department of Education and Training (NSWDET) (1996). *Annual Report 1996.* Sydney: NSWDET.

Okato, T. (1994). *Suku-re-da-toshiteno-kanrishoku* (Manager as School Leader). Tokyo: Toyokan.

Ono, Y. (2001). "Reviews of Leadership Studies of School Principals in Japan", Nihon-Kyoiku-Keiei-Gakkai-Kiyo (The Bulletin of Japanese Educational Management Association, 43, pp.230-239).

_____ (1994). Gakou-noKasseika-o-mezasu-gakkou-keiei (School Management Aiming at Revitalization of Schools). Tokyo: Daiichi Kohosha.

Peckron, K. B. (2001). "Principal Leadership", *Journal of Staff Development*, 22, 4, pp.44-45 & 48.

Ramsey, G. (2000). Report of the Review of Teacher Education. Sydney: Government Press.

Sergiovanni, T. J. (1991). *The Principalship*. Boston: Allyn and Bacon.

Sharpe, P. (1976). "Selecting a High School Principal in the US and Australia: A Comparative Study", *OSSC Bulletin*, 19(9), pp. 21-32. ED123739.

Shimomura T. (Ed.) (1994. *Gendai-kocho-gaku* (The Current Study of School Principals). Tokyo: Toyokan.

Shinohara, A. (2001). Leadership of School Principals during the Educational Reform' Gekkan-koukoukyoiku. *Journal of High School Education*, 12, pp.84-87.

Smith, M. S. and Purkey, S. C. (1983). "Effective Schools: A Review", *The Elementary School Journal*, pp.427-452.

Su, Z., Gamage, D. T. and Mininberg, E. (2003). "Professional Preparation and Development of School Leaders in Australia and the USA", *International Education Journal*, 4(1), pp.42-59.

Thomson, S. D. (Ed.) (1993) Principals for Our Changing Schools: *Knowledge and Skill Base*, a publication of the National Policy Board for Educational

Administration. Lancaster, PA: Technomic Publishing Company Inc.

Umphrey, J. (2002) Talking in School" *Principal Leadership*, 2(7), p.4.

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RESEARCH NOTES/COMMUNICATIONS

Status of Information Technology in Private English Medium Indian Schools

Lessons for School Principals

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Abstract

Indian schools have been teaching and using information technology (IT) for quite some time. However, there is not much information regarding how they are doing with respect to various aspects of IT in schools. Data, collected from 56 private English medium schools of the country about the use of IT in education, various aspects of education of IT, and the use of IT in school administration, suggests that there are large gaps between what is done and what needs to be done. It is suggested that schools need to draw a comprehensive strategy in terms of resources and processes to be followed.

Introduction

In India, the teaching of computer skills began in private English medium schools approximately in the late 80s. Most schools opted for outsourcing faculty, computers, and curriculum from upcoming computer training organizations. However, this had its own limitations and schools had to rethink their strategies. In addition, this approach limited itself to only providing IT education, which is only one of the aspects of IT in schools.

It is proposed that IT in schools has three components: IT education, IT in education, and IT in administration. All the three components require a minimum level of IT infrastructure such as computers, peripherals, network, and software etc. The next three paragraphs detail what is meant by each of the facets of IT in schools.

IT Education

IT education refers to teaching IT skills that can make students IT literate, enable them to perform basic functions like word processing, making electronic presentations and also aid in problem solving. Adequate IT education has three fundamental requirements – appropriate IT syllabus, effective pedagogy, and competent teachers. IT syllabus, like

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any other subject, needs to be designed keeping in view the cognitive ability of the children and its ability to meet the demands of the changing world where students will work and live (Keen, 1992). In addition, it is also important to balance between teaching of fundamental concepts and the ever changing IT skills made necessary by the fast paced changes in information technology. Effective IT education also needs well-trained, creative, and competent teachers who are willing to use different pedagogies to make the teaching and learning of IT interesting.

IT in Education

The use of IT in education includes the use of computer related technology in teaching and learning of various subjects such as Mathematics, Geography, English, etc. Internet and multimedia can provide students with active learning experiences and can help them to understand abstract concepts better (Ranjan & Arul, 2001). Rajsekhar and Bhattacherjee (2000) also found that students rejected the idea of mindless cramming in the Internet era. The interactive content of Internet was found to be more interesting than what was delivered through the method of chalk-and-talk. Online helpers made self-study easier. A meta-analysis by Kulik (1994) also showed that computer-based learning helped students to learn more in less time. However, several studies also have shown that technology assisted teaching does not bring significant differences in student performance in comparison to lecture-based teaching (Russel, 1999). Bates (2000) argues that if technology is used to simply replicate the older method of didactic lecture, then it would not be possible to realize the advantages offered by the use of IT.

IT in School Administration

As has been found true for businesses, productivity can be enhanced by deploying IT (Telem, 2001) in schools. IT could especially enhance productivity of those functions that are repetitive in nature. For example, payroll data of teachers, accounts, examination results of students, school inventory etc. can be easily automated. With the use of IT, schools would be able to provide instant information about a child at a much lower cost.

Aim of the Study

The present study aimed to understand the current status of IT deployment in private English medium Indian schools and draw lessons to help school principals to fine-tune their school IT strategy and deployment processes. The study examined various issues related to the three facets of IT in schools: IT education, IT in education, and IT in school administration.

Sample

To enable a representative audit of IT presence and usage in private English medium schools in India, it was decided that data would be collected from principals, school teachers, and students of top well-known schools all over India. Given the vastness of the sample, various means were used to choose the sample and several methodologies

were used as deemed appropriate for the study. The following were the different samples used for the audit of IT in Indian schools.

1. 75 principals of top CBSE (Central Board of Secondary Education) schools from all over the country attending a one-week Management Development Programme (MDP) at Indian Institute of Management (IIM), Ahmedabad in September 2001 were administered a comprehensive questionnaire during the programme which assessed school IT resources and programmes. The questionnaire was distributed in the first day of the programme and was collected back on the last but one day. Some principals had to ask for information regarding details from their schools. 56 completed responses were received and formed the basis of the results presented in this study.
2. 224 students of classes VIII and XI, and 65 teachers of 3 schools in Delhi were also administered a custom designed questionnaire for each group. Both the questionnaires assessed the IT skills of the respondents, their liking and disliking of IT and their suggestions to improve the present IT related infrastructure of their schools. The students were administered the questionnaire during class time in their respective classrooms. The teachers were all gathered in the staff-room for about thirty minutes (through a notice issued by the principal) during which time the questionnaire for teachers was administered and collected back immediately.
3. Personal interviews of the principals and computer teachers of 6 private English-medium schools in Delhi, Baroda, and Jamnagar were taken. The author visited the schools personally and documented the IT infrastructure and its usage in each of these schools. The author also interviewed the principal and the computer teachers on various issues related to procurement and usage of IT. In all 6 principals and 14 computer teachers were interviewed. Though the data from the interviews is not directly reported in this study, insights from those interviews and quantitative data are used for generating suggestions for school principals with respect to IT in schools.

Measures

Questionnaire for Principals: Principals were asked questions about IT infrastructure in schools, IT syllabus, computer teachers, IT skills of subject teachers and school information system.

Questionnaire for Students: Students were asked questions about topics learnt/ liked/disliked, availability and usage of computers at school, and availability of computers at home.

Questionnaire for Teachers: Teachers were asked questions about their IT skills, its usage in their teaching and positive/ negative impact of IT.

Results & Discussion

The data from the principals and students was analyzed using frequency counts, means, and percentages. However, the entire data that was collected is not presented in this paper. Only data that fit into the scope of this paper is included. The data is presented under five headings: IT Infrastructure, IT Education, IT in Education, IT in Administration and Some Strategic/Operational Issues.

IT Infrastructure

The foremost necessity for initiating IT driven curriculum or administration in a school is adequate IT infrastructure. As mentioned earlier, computers, peripherals like printers, scanners etc., networking and Internet connectivity etc. constitute IT infrastructure of a school.

Computers and Peripherals

1. Number and Types of Computers

In the 56 schools for which the principals filled the questionnaires, the total student strength was 130767 and the total number of computers was 2576. This means the average number of computers per school was 46 and student computer ratio was 52:1. This ratio seems inadequate because even if there is an average of 30 students in a section, not even two sections can be working in the computer lab at a given time.

The data provided by the principals with respect to computer hardware is presented in Table 1. It was found that schools were using machines ranging from 80386 to Pentium-IV based computers. The number of Pentium-III systems and servers are same (49 each), which could imply that possibly Pentium III systems were used as servers in the school network. Interestingly, even though Pentium-IV came into the market only in the early part of 2001, two schools had already bought them by mid of 2001. This indicates that some schools were investing considerable sum of money in procuring new products as soon as they were introduced in the market. Such investments may not always be prudent as higher technical skills may be needed to explore their potential and they are also prohibitively expensive. Schools can procure more hardware for the same cost if they make wise decisions about buying relevant hardware.

The data collected from students also showed that the students were dissatisfied with both the quantity and quality of their hardware. In fact, it was one of the major concerns of the students who responded to the questionnaires. 74% of them wanted computer time to be increased; only 27.68% wanted it to be 2-4 hours per week, 34.38% wanted it to be 5-8 hours per week and approximately 22% wanted the computer time to be more than 8 hours per week.

TABLE 1
Summary Status of Computers & Peripherals Possessed by Schools

Item	*Number*	*%age*
Server	49	87.50
DMP	56	100.00
Inkjet Printer	52	92.86
Laser Printer	31	55.36
Digitizer	2	3.57
Scanner	36	64.29
Digital Camera	9	16.07
Plotter	0	0.00
CD Writer	17	30.36
LCD Projector	25	44.64

2. Printers

52 schools had inkjet printers while all schools possessed dot matrix printers (DMP). Inkjet printers have replaced dot matrix printers especially because of graphical interface of Microsoft Windows environment. Thus, the use of inkjet printers has become a necessity in most cases. Only 31 schools owned laser printers. Though the initial cost of a laser printer is higher than an inkjet printer, its running cost is much lower than the inkjet printer. Also, a laser printer is much faster and sturdier than an inkjet printer. Schools should use laser printers where high volume printing is necessary. For example, high-speed laser printers can be connected to the school network for use by students and teachers.

3. Other Peripherals

HTML programming, web page design, and multimedia-based lessons have made use of scanners quite popular in schools. Approximately 63% of the schools owned scanners. For similar reasons CD writer is also becoming popular in schools. Though 17 schools had CD writers, not many were preparing their own CDs with subject related lessons. Not many schools (only 2) were using digitizers and no school used plotters as was expected. Digitizers and plotters do not have much usage in schools.

Another handy tool for schools is the digital camera which can be put to many uses such as capturing photographs of school events for the school website. Students can also use it to develop some interesting projects. Thus, having at least one digital camera, a scanner, and a CD writer is recommended as essential for each school.

4. LCD Projectors

Approximately 50% of schools had LCD projectors that were used to project educational CDs and PowerPoint lessons prepared by teachers. Most schools had only 1

or 2 LCD projectors. This number may not be sufficient to service a large number of classes. But, the cost of procuring and setting up a LCD projector is high. However, to be able to really use multimedia-based teaching, schools have to find resources to procure LCD projectors. In many cases, schools had set up exclusive audio-visual (AV) rooms to use LCD projectors. This exclusivity costs money and resources and also it wastes student time in going from classroom to the AV room.

To calculate how many projectors are required in a school, let us assume that each class has an average of six subjects and there are 3 sections per class. Also assume that there are 8 periods in a day, classes are held 6 days per week, and the school is from class I to XII. Now, if each subject has to have one multimedia class per week, the school has to procure 5 to 6 ((6*3*12) / (8*6)) LCD projectors. It would require more than 1 million rupees to buy these number of LCD projectors. One suggestion to overcome this high cost is that schools should put a computer and a projector on a trolley so that it can be moved from one classroom to another as per need. This would make it possible to meet the need with fewer LCD projectors.

Software

It is the software that makes a computer work. A computer is a generic tool that can perform specific functions as directed by the software. Schools need to possess various kinds of software to help in teaching-learning processes.

1. Generic Software

Most schools possessed software like MS-Office (84%), FoxPro (59.6%), C/C++ (70%), Windows (30%), BASIC (43.86%), and LOGO (40.35%) as shown in Table-2. Other important software available with schools was Oracle/SQL Plus (24.56%), CorelDraw/PageMaker (24.56%), and Visual Basic (24.56%). The data show that many schools did not even have generic software like MS-Office. It is argued that all schools should have basic software such as MS-Windows, MS-Office, C/C++ compiler, and LOGO, etc. From the data it is not known whether schools had legally authorized software or not. As per the copyright rule, schools must have as many copies as the number of machines they have.

2. Teaching Software

The high storage capacity of CD has facilitated rapid growth of multimedia based tutorials and teaching software. CDs in this context refer to those tutorials and computer based learning software available in CDs. Approximately 84% of schools confirmed that they possessed a CD library as shown in Table 3. Most schools possessed titles in science (87.23%), mathematics (78.72%), and encyclopedias (38.40%). Further analysis showed that 31.91% of schools had 0-5 CDs in mathematics, 36.17% and 23.4% of schools had same number of CDs in science and in English respectively. Overall, it can be said on the

basis of the data that the schools did not have well stocked CD libraries. One of the reasons may be the lack of availability of locally published CD titles. Foreign CDs are not always appropriate to Indian school curriculum. According to Balsubramaniam (2002), the contents of CDs should coincide with socio-cultural settings, curriculum objectives, and degree and type of teacher training. Foreign CDs don't match our context and requirements. In such a scenario, schools will have to increase their own efforts and encourage teachers to prepare multimedia lessons for classroom use.

TABLE 2
Software Owned by Schools

Item	*Frequency*	*Percentage*
Software for Teaching and Learning		
MS Office	48	84.21
C++/C	40	70.18
FoxPro-DBMS/ Programming	34	59.65
Windows	30	52.63
BASIC	25	43.86
Logo	23	40.35
Oracle-SQL Plus	14	24.56
Corel Draw/Page Maker	14	24.56
Visual Basic	14	24.56
Dbase	11	19.30
Visual Studio	11	19.30
DOS	10	17.54
Adobe PhotoShop	7	12.28
Java	5	8.77
Macro Media Director	4	7.02
ILEAP (regional language)	3	5.26
Microsoft Publisher	2	3.51
Broderbund Kid Pix Studio	2	3.51
Pascal	2	3.51
Microsoft Web Publishing	2	3.51
HTML	2	3.51
MS-FrontPage	2	3.51
Software for School Administration		
Tally	25	44.64
LIBSYS	11	19.64
Fees Monitoring System	9	16.07
SIMS	6	10.71
Time Office	4	7.14

TABLE 3
Subject-wise CD Rom based Lessons Possessed by Schools

Topic	*Range*	*Frequency*	*%age*	*Total %age*
Mathematics	0-5	15	31.91	78.72
	6th-10	9	19.15	
	>10	13	27.66	
Science	0-5	17	36.17	87.23
	6th-10	8	17.02	
	>10	16	34.04	
English	0-5	11	23.40	48.94
	6th-10	8	17.02	
	>10	4	8.51	
Encyclopaedia	0-5	10	21.28	38.30
	6th-10	2	4.26	
	>10	6	12.77	
Computers	0-5	5	10.64	23.40
	6th-10	2	4.26	
	>10	4	8.51	
Social Science	0-5	4	8.51	19.15
	6th-10	3	6.38	
	>10	2	4.26	
Language	0-5	3	6.38	8.51
	6th-10	0	0.00	
	>10	1	2.13	
General Subjects	0-5	9	19.15	53.19
	6th-10	5	10.64	
	>10	11	23.40	
Social Studies	0-5	9	19.15	38.30
	6th-10	4	8.51	
	>10	5	10.64	

Networking

Networking is a mechanism by which stand-alone computers can be connected through cables or wireless links so that these computers can communicate with each other and also can share common resources like software, data and peripheral devices. Networking reduces computing and storage costs and makes communication faster. Internet in reality is a large network spread all over the world. Local area network (LAN) refers to a network that is limited to computers in a building or several buildings in a campus. Each user on a LAN uses his/her login name and password to enter into his/her own hard disk

space from a workstation works on an application from there, and then stores the data and documents generated in his/her allotted disk space.

TABLE 4
Network Infrastructure and Net Connectivity

Item	*Number*	*Percentage*
LAN	**51**	**91.07**
No. of computers on the LAN		
All computers	2	3.92
> 75% of computers	3	5.88
50%-75% of computers	32	62.75
25%-49% of computers	14	27.45
<25% of computers	0	0
Hard Disk Space on LAN for Teachers	21	37.5
Internet connectivity	**53**	**94.64**
Type of connection		
Dial-up net connectivity	49	87.5
Leased line	4	7.1
No. of Computers on Net		
All computers	2	3.51
10%-15% computers	24	42.11
15%-25% computers	10	17.54
>25% computers	17	29.82
Net Policy	**20**	**35.71**
School Website	**17**	**30.36**

Data regarding network infrastructure and net connectivity, presented in Table 4., reveals that 91% of schools had networked their computers. But only 3.97% of schools had connected all their computers using the LAN. 5.88% had more than 75% of their computers (not all) connected on the LAN, 62.78% had 50% to 75% of their computers connected, and 27.45% of schools had 25%-50% of their computers on the LAN. Visits to several schools revealed that in most cases only computers in the lab were networked. Office computers and computers in staff room or principal's office were often not connected to the school LAN. Some schools had set up separate LAN for each of their labs.

37.5% of schools claimed that they provided to their teachers independent user accounts and hard-disk spaces in the school LAN. However, in several schools further probing revealed that this was a future plan rather than being in practice already.

Internet Connectivity

Internet by virtue of connecting millions of computers all over the world gives access to a huge amount of information to users. Today Internet is the biggest storehouse of information and schools must allow students and teachers to benefit from it. Many educationists have claimed that every child should have access to a computer with internet facility at all times (Warhadpande, 2001).

Though most of the schools (95%) possessed Internet connectivity, 87.5% of them had dial-up connectivity. The data also shows that only 3.5% of schools had all computers connected to the net while 42% of schools had 1 to 5 computers connected to the net. In the three schools where indepth data was collected during personal visits, the net usage by students was found to be less than 1 hour per week while it was less than 1 hour per day for teachers.

Such limited access makes doing net-based projects by many students a difficult proposition. A July 2002 study by Pew Internet and American Life Project showed that one of the major roadblocks to the use of Internet in schools was the lack of quality access to Internet. Thus, for exploiting the benefits of Internet, schools have to look at 2 factors: access speed and number of computers connected to the net. To have reasonable access speed and to connect many computers to the net, schools must opt for lease line connectivity. The dial-up mode is appropriate for individuals only. Presently, the net connectivity for 20 machines calls for a cash outflow of rupees 0.4 million annually, while it is rupees 0.8 million approximately for 50 machines (data collected from IceNet, an internet service provider in Gujarat). In addition, there is also a first time installation cost of rupees 0.4-0.7 million for buying necessary hardware. Obviously, this would impose additional cost on the students who already pay a monthly fee of Rs.40/- to Rs.150/- towards computer fee, over and above the normal tuition fee. Cheaper alternatives need to be thought of or else the schools will have to find resources to pay for some of the fixed costs of connectivity. One such alternative can be that schools explore with corporate houses in the neighbourhood if they have excess net capacity and are willing to share it with schools.

IT Education

Curriculum

In response to the question "give details of the IT courses taught in your school", the data obtained show that LOGO, Paint Brush etc. were preferred topics in junior classes (I to V), MS Office and BASIC for classes from VI to X, and for XI and XII, it was the syllabus as prescribed by CBSE (data presented in Table 5).

TABLE 5
Three Most Frequently Taught IT Topics in Primary, Secondary, and Higher Secondary Classes

Classes	*Topics*	*Frequency*
Class I-V	LOGO	60
	Paint Brush	23
	BASIC	19
VI-VIII	MS-Office	54
	BASIC	31
	Windows	28
IX-X	MS-Office	47
	HTML	24
	CBSE Syllabus	17
XI-XII	C++	15
	SQL-Plus	8
	MS-Office	7

One of the major areas, which need serious deliberation, is curriculum for IT education. Discussion with several principals, who attended the week long MDP at IIM, Ahmedabad, made it quite evident that they were not sure as to why a particular topic was being taught and why some other topic was not being taught. Also there was no clarity about the level at which a particular topic should be taught. Indian schools seem to have followed a similar pattern as schools in USA in choosing topics to be taught in various classes. Results of Becker's longitudinal study (1994) with respect to IT topics taught in USA schools revealed that topics were chosen on the basis of popularity of a topic rather than its appropriateness in the overall curriculum. For example, in the late 80s, IT education was synonymous with learning programming languages, while today schools are more likely to teach HTML, a currently more popular computer skill. A programming language like LOGO teaches problem solving skills (Salomon & Perkins, 1987) while a software tool like HTML editor helps to design web pages. Both software are unique in their contribution to learning and can not substitute each other. In reality both the problem solving skills and skills of designing web pages are relevant in today's context. It is in this context that Kennewell, Parkinson, and Tanner (2000) argue that though multimedia software allows students to explore, hypothesize, and evaluate information they have obtained, there is still place for devising a sequence of instruction to achieve a particular goal.

When asked, "do you (as Principal) take an active role in designing of syllabus for IT courses", only 34 principals said that they provided some guidelines. However, it cannot be denied that principals must take an active role in the designing of IT syllabus as they would be more suited than the IT teachers to understand and direct how each course fits

in the overall scheme of all-round development of a child. The principals need to work with the IT teachers in deciding the content and the level of the teaching for each class.

Pedagogy

The content of a course alone is not sufficient. Courses also need to be taught effectively. A number of pedagogical tools have been developed by educational scientists for effective teaching. It is necessary that to teach a rapid developing subject like IT, teachers adopt other pedagogical tools apart from the 'talk and chalk method'. Duckworth (1996) claims that a project-based curriculum improves the environment for learning in schools. It gives students a fuller spectrum of opportunities for building their strength and confidence as learners. The variety of pedagogies used by schools is shown in Table 6. In most of the schools (67.80%), 'projects' seem to be the preferred pedagogical tool for IT teaching.

TABLE 6
Methodologies Used for IT Teaching

Tool/ Methodology	*Frequency*	*Percentage*
Projects	38	67.86
Slides	14	25.00
Field trips	13	23.21
Scrap books	12	21.43
Projector/Audio Video	10	17.86
CD Software	8	14.29
Seminars/guest lectures	8	14.29
Assignments	8	14.29
Inter house/school competition	6	10.71
Quiz/Debate	4	7.14
Internet	4	7.14
IT Magazines	2	3.57

Other pedagogical tools used by schools are 'use of PowerPoint slides' and 'field trips to industries' (25% and 23% respectively), etc. The data show that not all schools were experimenting with various pedagogical tools to make learning both interesting and effective. IT teachers should attempt to mix and match various pedagogical methods to enrich classroom teaching.

Computer Teachers

The quality and competence of computer teachers are the backbones of IT education in schools. Hiring and retaining IT faculty is an area of concern. Data collected from the principals show that there were a total of 208 computer teachers making it an average of

4 computer teachers per school. Roughly this indicates that the computer teacher to student ratio is 629:1, which is very high and points to the need of hiring more computer teachers. Majority (42%) of the schools had 3 to 5 teachers (up to 1-3 teachers for junior and 2 teachers for senior sections), 9% of the schools had 6-8 teachers and only 12% of schools had more than 8 teachers.

Data with respect to qualifications, experiences, and training of computer teachers is presented in Table 7. 36.5% had completed postgraduate diploma in computer applications (PGDCA), while 9.5% possessed masters in basic sciences, and 5.7% had post graduate degrees in Arts or Commerce. 11.3% of computer teachers were MCAs and BEs, while 1.29% of them had completed their Masters in Business Administration. The remaining 35.7 % were simple graduates who had acquired computer skills by their own efforts or through some informal training.

TABLE 7
Computer Teachers

Range/ Category	***Frequency***	***Percentage***
No. of teachers per school		
One-Two	8	14.29
Three-Five	24	42.86
Six-Eight	11	19.64
>8	7	12.50
Qualification distribution		
PGDCA	142	36.50
BA/BSc	132	33.93
MSc	37	9.51
MCA/MCSE	30	7.71
M.Com/MA	22	5.66
B.Tech	14	3.60
GNIIT	7	1.80
MBA	5	1.29
Experience Distribution		
One-3 years	84	46.67
4-6 years	48	26.67
7-10 years	35	19.44
more than 10 years	13	7.22
Methods used to train IT teachers		
Workshop/seminar/training	44	78.57
Update through latest books/experts	8	14.29
Staff deputed for further studies	5	8.93
Building the library with CDs/books	5	8.93
Self upgradation	5	8.93

Data with respect to qualifications, experience and training of computer teachers is presented in Table 7. 36.5% had completed postgraduate diploma in computer applications (PGDCA), while 9.5% possessed masters in basic sciences, and 5.7% had postgraduate degrees in Arts or Commerce. 11.3% of computer teachers were MCAs and BEs, while 1.29% of them had completed their Masters in Business Administration. The remaining 35.7 % were simple graduates who had acquired computer skills by their own efforts or through some informal training.

Barring a few, for most of the PGDCA's teaching in school was not often their first choice. These PGDCAs typically had studied at computer institutes like NIIT and Aptech etc. (Maheswari, 2000). Though these organizations do an excellent job of training, it must be kept in mind that their courses are designed to train software professionals and not computer teachers.

Most schools had waived the requirement of Bachelor of Education (B.Ed.) qualification for computer teachers to overcome the difficulty of finding people with both IT skills and B.Ed. qualification. This supports Bromley's (1994) assertion that educational computing has been more technology oriented rather than curriculum driven. Informal interactions with computer teachers from various schools also revealed that they were more often interested in learning latest computer technologies, which might not even have anything to do with the school syllabus. To overcome the lack of formal training in teaching methods, schools must provide appropriate training to computer teachers. According to Davis (1997), IT teachers also should be trained to help subject teachers to use IT in their classrooms. In fact, concept such as team teaching should be encouraged among subject and IT teachers.

Only 7% of computer teachers had experience of more than 10 years, 19.4% of the teachers had experience of 7-10 years, 26.67% had experience of 4-6 years, and balance 46.67% had experience of 1 to 3 years. This implies that majority of the computer teachers are young and inexperienced in teaching. Thus, one of the challenges before schools is to attract some experienced computer teachers or groom these young instructors to develop as good teachers.

To enhance both subject knowledge and pedagogical skills of the computer instructors, schools had started taking some initiatives. When asked about the most preferred method for training, 77% of schools indicated that they were using workshops and training programmes to train their computer teachers.

IT in Education

Familiarity of Subject Teachers with Computers

To exploit the potential of IT, subject teachers should also be computer proficient. According to Grewal (2000), the effectiveness of IT as an enabler of teaching and learning processes largely depends on the interest and preparedness of all teachers in using IT for teaching their subjects. Siegel (1994) argues that teachers should not only need to be trained in the use of hardware and software but also need to learn how to use

technology in teaching and learning processes. However, data showed that, on an average, only 48% of teachers were computer literate. 45.6% of schools claimed that all their teachers were computer literate. In 12% of the schools, only three to four teachers were computer literate. Considering that data in this study were from top schools of the country, the figures are not very promising.

In most cases, teachers were imparted basic training to make them computer literate. However, after teachers are given initial computer training, it is necessary that they should have access to some trouble shooting help when they start using the technology. Computer teachers are often not in a position to extend such support. Schools in Australia and United States have begun to hire instructional technology consultants to help their subject teachers. An instructional technology consultant is someone who has both the requisite knowledge in technology issues and teaching skills. He/she can both trouble shoot hardware and software problems faced by other subject teachers and also team-teach with subject teachers. In fact, this requirement was articulated by the participants in the Annual Meeting of American Education Research Association (AERA) in April 2000. The instructional technology consultant even may help in enhancing the learning effectiveness of information technology courses. Indian schools need to experiment with this concept. Schools must look into strategies that have been outlined by Bobowick (2001) for making subject teachers IT savvy. Considerable investment of resources in training of school teachers is needed to be able to exploit the benefits of IT in education.

E-learning and Virtual School

The facility of Internet and intranet enables e-learning that facilitates anytime and anywhere learning. E-learning is a student-centered learning approach and can complement class room teaching too. Virtual school is an extension of e-learning facilities. In Australia and Canada, some virtual schools have already been established, whose students need not go to a physical place; they can sit at home and learn using Internet. Students, parents, and teachers all like the virtual school system (Rajsekhar et al, 2000). Teachers feel that there is no need to dictate notes. Digitized content can be uploaded at anytime. Parents feel that from the school website, they can find out the homework given to their children and also can contact teachers any time, if required, through e-mails. In India, companies like classteacher.com and e-gurucool.com are promoting Internet based e-learning modules or virtual school facilities. Considering that most of our students can not afford net connectivity at their homes, schools should opt for Intranet based e-learning to supplement their classroom teaching. It was found that no school had initiated any e-learning modules while 59.6% of the schools were planning to initiate some kind of e-learning programs in near future. However, it may be emphasized that in the Indian context virtual school facility can be only used as a complement to classroom teaching. A teacher can never be replaced in the school context.

IT in School Administration

Most schools were using few applications like Tally (43.8%) for accounting, MS Office (36.8%) for word-processing and making presentations, and LibSys (19.3%) for library management. Very few schools were using fees monitoring system (15.7%) and school information management system (10.5%). This shows that usage of IT in school administration seemed to be at a very minimal level. Unlike businesses, schools seemed to neglect use of computers in administration.

A SIS (School Information System) is a specialized management information system (MIS) that "matches the structure, management tasks, instructional processes, and special needs of the school" (Telem & Avidov, 1994). It covers the entire gamut of administrative activities of the school. For example, it can maintain profiles of all students starting from the day they join the school. This will help to track performance of students and their overall growth. From this data, one can also assess the strength and weakness of a particular student and accordingly work out a custom-made remedial training package for him/her. Also such detailed student profiling can help in providing effective career counseling. SIS also can be enhanced to work as a virtual school where students can download assignments, e-mail their teachers for clarifications, and participate in-group discussions. Schools must opt for this integrated software solution to enhance their productivity.

Some Strategic/ Operational Issues

Schools need to resolve certain operational and strategic issues in order to curtail cost of IT deployment and enhance its output.

Own or Outsourced

Instead of owning the IT infrastructure, schools can outsource the same to reduce high capital cost of ownership and recurring cost of upgradation because of rapid obsolescence. On the other hand, not having own IT infrastructure, especially hardware, software and teachers, limits the freedom to experiment with new technology. It was found out that 13% of schools outsourced their entire IT infrastructure, while another 10% of the schools outsourced a part of their infrastructure requirements. Good service (26%), familiarity (10.5%), and reputation (19%) of the vendor are the three most often used criteria by schools for selecting a particular vendor for outsourcing.

Net Policy

As schools expose students to Internet for longer duration, many consequent problems are likely to arise. Thus, schools must establish a well-thought out net policy so that misuse of the net can be minimized and students can be made responsible for their usage of the net facility. In fact, when teachers were asked about the negative impact of

computers, their main concern was misuse of Internet. Only 35% of schools had some kind of net policy.

In addition to net policy, schools can also use several net security software packages like Netnanny and CyberPetrol that can prevent students from accessing unwanted sites. These software, keep track of the sites visited by the students so that later on teachers can check if a particular student tried to get into restricted sites. Awareness about such software is low among schools. Schools do need to get concerned about net security.

Tie up

As technology is changing at a rapid pace and newer concepts are emerging, it may be prudent on part of schools to collaborate with outside technology providers. When asked, 57% of schools affirmed that they had some linkages with outside agencies. Schools indicated NIIT, Aptech, and their hardware/software suppliers as the agencies with whom they were interacting. In recent times, IT companies like Intel, e-gurucool.com, classteacher.com, and SchoolNet are providing interesting services for schools. Not many schools had partnered with these service providers.

Collaboration

Collaboration is the key to success in today's business world (Arzoumanian, 2001). This is also true for schools today. By networking with other schools and carrying out joint programmes, they can learn a lot from each other. Keane (2002) emphasizes that teachers from various schools can benefit by collaborating with each other. Bates (2000) argues that "partnership and collaboration are strategies for sharing the costs and leveraging the benefits of technology-based teaching". Not many details of the nature of the collaboration were made available by the participating schools. But only 26.8% of schools responded positively to the question of collaboration with other schools.

At the individual level also, students need to learn to collaborate and work effectively in teams. Teamwork opportunities across schools can be made possible by asking students to work on group projects for which a part of the information has to be gathered from Internet and another part from students of other schools. These schools can be from within the country and/or from outside of the country. This would help students to learn to operate in a virtual environment. When asked about the extent of collaboration at the student level, only 46.4% of schools responded affirmatively. Even in these cases, collaboration was limited to sharing of information about projects with students of other schools.

E-group is an effective medium for sharing of views and information among internal stakeholders and also engaging in dialogues with external groups. But only 16% of schools were using this facility.

Lessons for School Administration

Based on the data presented in this study and from the experience derived from personal interviews and school visits, the following can serve as wise suggestions or lessons for school principals regarding IT acquisition and utilization.

- For effective conduct of classes, adequate infrastructure in terms of computers, printers, networking, and Internet facility need to be provided (Bates, 2000). Schools have to decide on optimal computer time for students and, in addition, find the required infrastructural facilities. It would be useful to install computers in the classrooms (many teachers made this suggestion). These computers can then be effectively used in teaching, especially if they are also part of the school LAN (Local Area Network), have net connectivity, and are connected to LCD projectors. Schools may have to find creative ways of meeting the increased computing requirements of students and teachers.
- While procuring equipments it is not only necessary to buy the latest technology but also to examine the fit, with the learning requirements. Opting for a little older technology may be cheaper and may enhance access to computers for students. However, schools must also be vigilant of buying outdated technology, partly because the support for such technology can become expensive. Thus, it is important to strive for a balance in deciding the right technology. The principals may thus discuss with a few teachers or other knowledgeable people (e.g. parents of school children) before making hardware decisions. Another option is to use the service of IT consultants before making procurement decision about hardware and software. Having an IT consultant is, however, expensive and sometimes the IT consultant may not understand the requirements of a school.
- Networking provides the benefit of cost and access. Though most of the schools have opted for networking, they are yet to exploit the benefit of it. For example, to benefit from networking, schools must opt for a campus-wide network rather than having separate small LANs or leaving out several of the computers unconnected to the School LAN. Peripherals like high-speed printers and scanners then can be connected to this campus LAN so that everybody can make use of these devices. On an overall and long-term basis, this arrangement would be cheaper.
- IT curriculum often has no link with the cognitive development of students and also with other subjects being taught. Discussions of the author with the participating school principals and computer teachers strengthened this assertion. Schools did not often set learning goals for IT education. Even in those cases where goals were set, not much effort was put in deciding which topics would help in achieving those goals. IT teachers do not relate to other subjects while teaching IT topics. For example, while teaching programming, problems from mathematics, geometry and other subjects can be solved to reinforce the understanding in those subjects. It would help the child to connect knowledge in

one subject with another subject. Bellack (1969) has argued that one must not only look into a subject independently, but must also explore connections with other subjects while designing the curriculum. Sinko and Lehtinen (1999) argued that ICT can make a difference, if only the design and pedagogical use of ICT application is based on cognitive needs of the students. Thus, IT curriculum should be revamped to include links between IT topics, cognitive development of students and other subjects. Help of instructional consultants may be taken in this context.

- Innovative ways must be thought of attracting and retaining computer teachers. Investment in training the art of teaching should be made. Teachers are the fulcrum around which the use of IT will be centered in schools. Thus, adequate amount of thinking needs to go into the hiring and training of IT teachers.
- For effective use of IT in teaching and learning processes, though schools have started training their subject teachers on the use of IT, more needs to be done by way of providing adequate infrastructure, training and incentives to develop their skills (Egnatoff, 1996). Even improper infrastructure can deter teachers to make best use of IT. For example, it was observed that most schools do not provide independent space to teachers in the network server. Without this facility, teachers are forced to use floppy disks to store their work. Floppy disks are unreliable and get corrupted easily which means there is always a danger of losing data. Similarly, some schools opt for storing data in local hard disk of the PCs made available in the staff room. However, unless proper security arrangements are made, there is a risk of data being read or deleted by another person. All these small but significant hassles may lead to teachers not embracing computer technology fully in their day-to-day work.
- As there is a paucity of good multimedia-based lessons, teachers must be encouraged to develop them. It enhances the learning processes and help teachers to discover new methods of imparting knowledge. To avoid duplication of efforts and share quality products, a mechanism of exchange of these lessons among schools must be set up.
- Internet is a powerful medium for information retrieval and collaboration. It also provides a lot of free software and other resources that schools can use. Schools must appreciate the power of Internet and exploit it accordingly. Certain teachers or students must be deployed to exploit and catalogue the resources.
- School website is not only a powerful medium for information dissemination, it can also be used as an effective learning tool. But, very few schools have their own websites. In fact, only 30.36% of schools had websites of their own. Even in most of these schools, they were electronic versions of the school brochures. In many instances, they were not regularly updated. Schools need to innovatively think about ways to put their websites to their many and varied uses. As far as Intranet is concerned, it is yet to find its presence in school environment. If schools intend to complement traditional classroom teaching with e-learning

initially, they must use the intranet approach rather than an Internet based approach.

- Administration is one area where IT can make a big difference in the running of the school. Most schools have not yet fully exploited this potential of IT. In fact, schools should computerize their various activities like admission, fee collection, accounts, examination result processing and other day-to-day activities on a priority basis.

In conclusion, principals in most schools have been enthusiastic regarding the use of IT in their schools. However, systematic efforts to get the most of this technology have often been missing. Lack of financial resources is often cited as a primary reason for inability to exploit IT. This is not only true for India but is a worldwide issue (Cole, 1997). However, inadequate understanding of the potential of IT is what really impedes its usage. Many principals also feel that IT is not their cup of tea; so it is best left to professionals. But being the leaders of their organizations, principals have to acquire basic understanding of this technology. They should not only take an active role in designing and implementing IT programmes in their schools, rather, they must also try to measure and understand the impact of such programmes so that corrective measures could be taken at an appropriate time or future programmes can be made more effective. The principals will do well to learn from the experience of IT deployment in businesses. It has been shown that for successful deployment of IT in commercial organizations, the active participation of top management is a must (Doll, 1985). This is also going to be true for schools. If school principals fail to understand the true potential of IT and facilitate both strategic and operational processes of IT deployment in schools, the many benefits of IT can not be achieved.

Reference

Arzoumanian, M. (2001). How to win more business : Converters ponder strategies for success at PPC's Annual Spring Meeting. *Paperboard Packaging Council, March 18-20 Chicago Meeting*. Retrieved on August 21, 2002 from World Wide Web: www.findarticles.com/m3116/5_86/74362761/p1/article.jhtml

Balsubramaniam, N. (2002). Need for computer education in teacher training curriculum. *Edutracks*, April issue, 16-18.

Bates, A. W. (2000). *Managing Technological Change*. San Francisco: Jossey-Bass Publishers.

Becker, H. J. (1994). *Analysis and Trends of School Use of New Information Technologies*. Irvine, CA: University of California, Irvine, Department of Education.

Bellack, A. A. (1969). History of curriculum thought and practice. *Review of Educational Research*, XXXIX, 283-292.

Bobowick, E. (2001). Building technological expertise among teachers. In B. Kallick & J. M. Wilson III (Eds.), *Information Technology for Schools (pp. 75-91)*. San Francisco: Jossey-Bass.

Bromley, H. (1994). The social context of educational computing. *Computer Professionals for Social Responsibility*, 2(12), 34-36.

Cole, G. (1997). Funding: The final frontier. *Times Educational Supplement*, 4247, 5-11.

Davis, N. (1997). Strategies for staff and institutional development for IT in education: An integrated approach. In B. Somekh & N. Davis (Eds.) *Using Information Technology Effectively in Teaching & Learning* (p.255-268). London: Routledge.

Doll, J. (1985). Avenues for top management involvement in successful MIS development. *MIS Quarterly*, March issue, 17-35.

Duckworth, E. (1996). *The Having of Wonderful Ideas and Other Essays on Teaching and Learning*. New York: Teachers College Press.

Egnatoff, W. J. (1996). *Preparing Teachers for Effective and Wise Use of the Internet in Schools.* Retrieved on October 12, 1999 from the World Wide Web: http://info.isoc.org/isoc/whatis/conference/inet/96/proceedings/c9/c9_5.htm

Grewal, T. J. (2000). Technology-savvy schools. *Business 2.0*, 5(17), 272-273.

Keane, J. (2002). Teacher vs. computer: Where educators stand in the technology revolution. *T.H.E. Journal* , August issue. Retrieved on August 21, 2002 from the World Wide Web: www.thejournal.com

Keen, P. (1992). Developing an IT education plan. *I/S Analyzer*, 30(9).

Kennewell, S., Parkinson, J., & Tanner, H. (2000). *Developing the ICT-Capable School (*pp. 68-87). Philadelphia: Routledge/Falmer.

Kulik, J. A. (1994). Meta-analytic studies of findings on computer-based instructions. In E. L. Baker and H. F. O'Neil, Jr. (Eds) *Technology Assessment in Education and Learning*. Hillsdale, NJ: Lawrence Erlbaum.

Maheswari, S. N. (2000). IT education in India – Incorporation of quality. *Journal of Public Administration*, XLVI(3), 364-374.

NCES Statistical Analysis Report (2001). *Overview of Public Elementary and Secondary Schools and Districts: School Year 1999-2000*. Retrieved on August 21, 2002, from World Wide Web: http://nces.ed.gov.

Rajsekhar, M., & Bhattacherjee, P. (2000). Education: The next chapter. *Businessworld*, 27 November issue, 30-33.

Ranjan, J., & Arul, S. (2001). Online teaching. *University News*, 39(3), 12-17.

Russel, T. (1999). *The No Significant Difference Phenomenon*. Raleigh: North Carolina State University Office of Instructional Telecommunications.

Salomon, G., & Perkins, D. N. (1987). Transfer of cognitive skills from programming: When and how? *Journal of Educational Computing Research*, 3(2), 149-169.

Siegel, J. (1994). Teach your teachers well. *Electronic Learning*, 13(7), 34.

Sinko, M., & Lehtinen (1999). *The Challenges of ICT in Finnish Education*. Arena: Jyvaskyla.

Telem, M. (2001). Computerization of School Administration: Impact on the Principal's Role - A Case Study. *Computers & Education*, 37, 345-362.

Telem, M. & Avidov, O. (1994). Management information system (MIS) impact on the loosely coupled nature of a high school: A case study. *Planning and Changing*, 25(3/4), 192-205.

Warhadpande, A. N. (2001). *Information Technology in Schools in the New Millennium.* Retrieved on November 14, 2001, from the World Wide Web: http://learning.indiatimes.com/forum/article.htm.

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Scenario of Primary School Attendance: A Study of Less Developed States in India

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Abstract

Primary education is one of the corner stones of development. As education is considered to be a booster agent for solving population problems, a catalyst for women empowerment and a powerful tool for channeling a host of other socio-economically relevant issues in a positive direction, it is the prime aim of the governing bodies to provide basic education to the teeming millions. However, since independence, in spite of a series of government initiatives, still millions are lacking basic education. Situation in this respect has definitely improved over time with the development of primary schools and provision of incentives. But the condition of the backward states in India with respect to primary education is still a matter of concern not only because of the fact that they share major burden of child population in the country but also experience a wide differentials in primary education by caste, gender, living standard and many other factors.

Introduction

Today, the world is going through rapid changes in all dimensions of development. In this era of rapid social transformation and technological revolution, education has become the cornerstone and main machinery of development in many countries. In broad view, development aims at the holistic improvement of the physical, social and spiritual attainment in human life leading to better quality of life and prosperity (Chaugh, 2004). Notable all the transformation and slogans taking place at the global level, such as human rights, fertility reduction, mortality reduction, liberty, democracy, welfare, and gender equality can be accomplished only by mass transformation through education.

Education has been assigned high priority among many national objectives in India. Article 45 of the Directive Principles of the Constitution urges to provide free and compulsory education for all children until they complete the age of fourteen years (Probe-page3) as education has influenced on the various side of human personality as well as society. Since the time of Independence, the Indian government has done its level best to implement the vision of education embodied in Article 45 of the constitution, which states free and compulsory education for all children until the age of 14. The

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Indian National Education Policy (1968) recommended that education should be made available to people of all children, caste and the community. To cover all the children in the age group 6-14 under the umbrella of elementary education, government decided to provide incentives such as midday meal, free textbooks, stationery and uniforms to poorer pupils.

Even after fifty-seven years of Indian independence, the goal of universal elementary education has not been achieved so far. About 10 million children of school going age are not attending elementary schooling even today (Aggarwal, Vol 2, 2002), in spite of the fact that in the year 1986 a new education policy was adopted and efforts had been made through successive Five Years Plans to achieve the target of 100% literacy through compulsory and free education for the children. The main causes of the non-implementation of this basic objective of our national policy are well known, viz., (1) financial inadequacy; (2) non-availability of a sufficient number of suitable teachers; (3) lack of motivation and; (4) poverty (Aggarwal, Vol.3, 2002).

However, India is not the only country facing difficulty in universalizing basic education. Despite a series of efforts by the Indian government, there exist numerous problems in achieving cent percent elementary education in the country. Moreover, disparity in the levels of attendance of primary schooling across the various socio-economic groups and gender differentials are also other vital points of concern. This variation is more pronounced in the less developed states of India. Hence, the study thus grows on the situational analysis of primary education in the selected less developed states of India namely Bihar, Orissa, Uttar Pradesh, Rajasthan and Madhya Pradesh. An investigation into the determinants of primary schooling can potentially benefit the quest for knowledge in research, especially since most of these states are expending significantly on primary education. According to official estimates as early as 1978, at least 93 per cent of the population in India was to be served by a tuition free primary school within one-kilometer radius (NCERT, 1989); accessibility of the primary school if not reduced in its service circle, perhaps has remained unchanged. To understand why are so many children out of school, in spite of apparent access, is the basic aim of the study.

Objectives

Keeping the above facts in view, this paper has tried to understand the overall scenario of primary schooling in the less developed states of India, namely MP, Bihar, Orissa and Rajasthan[1]. The major areas of thrust of this paper are on the proportion

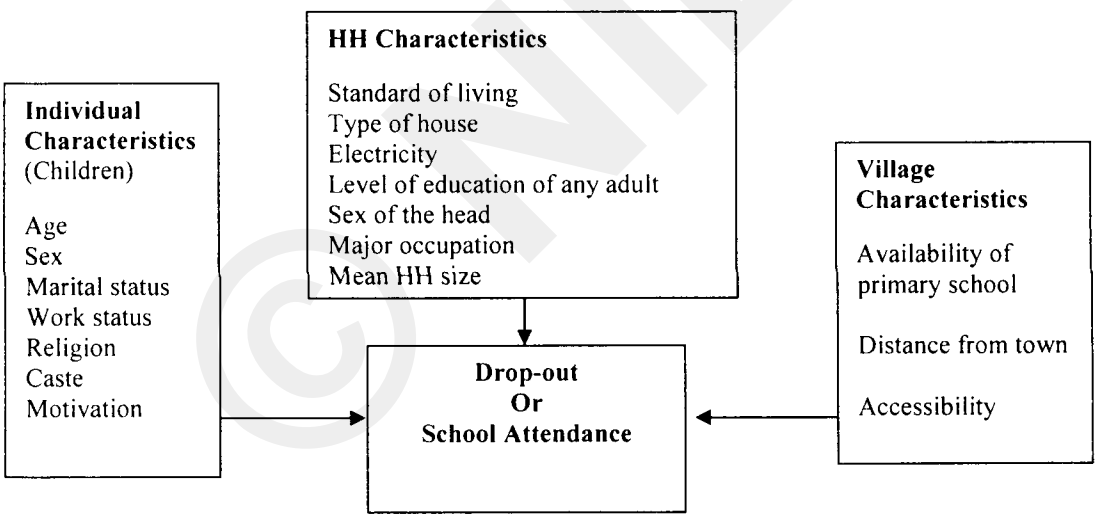
[1] These states are worst performing in terms of elementary education. Nearly two- third (63 per cent) of males and only about one-third (35 per cent) of females age six and above are literate in Bihar. Sixty-three per cent of children age 6-14 are attending school. Seventy-six percent of children age 6-14 currently attend school in Rajasthan. The proportion of children attending school has increased for all age groups, particularly for rural girls, but girls still lag behind boys in school attendance. Moreover, the disparity in school attendance by sex grows with increasing age of children. At age 6-10, 88 per cent of boys attend school, compared with only 29 per cent of girls. Madhya Pradesh is one of the most educationally backward states in India (NFHSII).

attending/not attending primary school, differentials in primary gross and net enrollment ratios, causes and chances and determinants of primary school drop-outs. The specific objectives are as follows:

1. To understand the variation in primary school attendance and enrollment across the less developed states.
2. To explore the gender differentials in primary school attendance.
3. To calculate the chance of drop-outs by classes/standards and search for the causes.
4. To identify the determinants of school attendance in rural and urban areas.

Conceptual Framework

School attendance/non attendance and drop-outs at the primary level are an out-come of a mix of several factors. In other words, it is a combination of socio-economic factors at individual and household level, demographic attributes of developmental aspects of the village as well as motivation of the individual and developmental plans at macro level. The following model simplifies how drop-outs/non-attendance of schools is influenced by a series of independent factors:



Sources of Data and Methodology

The data source for the present study is NFHS II (1998-99). In NFHS II, information were collected for each household member about their level of schooling, the total years of education and the reasons for which they are not currently going to school even though earlier they had attended school, if applicable. In this study, primary drop-outs have been defined as those in 6-10 years of age who ever attended school but at the time of

interview, they were not attending the school. Person file is made from the NFHS II household file to analyse the scenario of school attendance. The major definitional terms used in the study are explained as follows:

Drop-out= used to go to school but not going now.

$$\text{Primary Drop-out ratios} = \frac{\text{Incomplete primary (age 6-10)}}{\text{Attending primary school + completed primary (6-10)}} * 100$$

$$\text{Primary Gross enrollment ratio} = \frac{\text{No. of students in primary grade}}{\text{No. of children 6-10 in population}} * 100$$

$$\text{Primary Net enrollment ratio} = \frac{\text{No. of students in primary grade 6-10 years}}{\text{No. of children 6-10 in population}} * 100$$

Drop-out rate of a synthetic cohort (aged 6-10 in this study) at grade /class x =

$$\frac{d_x}{d_x + \frac{1}{2} s_x + c_x}$$

where d_x = drop-out in class x of a synthetic cohort
s_x = studying in class x of a synthetic cohort
c_x = completed class x

It is better to mention here, that in NFHS, it is not possible to identify the parents/siblings of the children in the household. Hence, education level of the family member of the children is not taken into consideration. No variable is found suitable to capture the motivation of the children or parents thus ignored in the multivariate analysis. The sample sizes of working children and married children of this age group are too small at state level to be included in the study. The following variables are incorporated in the regression analysis:

a) Individual factors: age, sex, religion, caste
b) House Hold factors: SLI, availability of electricity, type of house, sex of the HH head.
c) Village level factors: availability of primary education, distance from nearest town, distance to available transport services.

Analysis and Discussions

India's National Education Policy recognizes the existence of gaps, defined as differences between two groups with respect to some indicators. For education, the indicators of interest are enrollment, attendance, drop-outs/ retention and learning achievements. It may be interesting to analyze the gap between states, gender and other important characters in terms of attendance, enrollment and drop-out.

Differentials in Primary School Participation: India and Less Developed States

As shown in Table 1, among all the educationally backward states, the proportion that never attended school in the age group 6-10 years is highest in Bihar.

TABLE 1
Interstate Difference in Primary School Participation Ratios by States: Children Aged 6-10 Years

States	% *Never attended school*	% *Attending school*	% *Drop out*	*Drop-out ratios*	*Gross enrollment ratio*	*Net enrollment ratio*	N
Bihar	36.2	62.5	1.3	1.92	88.43	61.76	6068
MP	17.0	80.0	3.0	3.24	107.48	79.77	5642
Orissa	14.6	83.3	2.2	5.64	105.88	83.24	2855
Rajasthan	19.5	79.0	1.5	1.73	104.53	77.73	5625
UP	18.0	79.9	1.8	2.20	100.12	78.28	8233

While in the rest four states this proportion varies from 19 to 14 per cent, Bihar accounts for 36 per cent of such children aged 6-10 years who never attended school. On the other hand, Orissa stands at the opposite end with its maximum proportion (83 per cent) of 6-10 year children attending school, followed by MP (80 per cent). However, the problem of retention of such children in primary school is also the highest in both of these two states. While MP shows the maximum percentage drop-out (3 per cent), Orissa trails at 2.2 per cent of primary dropouts.

The calculated primary drop-out ratio is nothing but the ratio between the incomplete primary education of children aged 6-10 and the cumulated attending primary and completed primary of the same age children. In other words, the attribute entails the magnitudes of retention-problem among primary school goers up to the end of its term. The ratio is the highest in case of Orissa (5.64), followed by MP (3.24) and UP (2.20). The maximum proportion of drop-out ratios in the case of Orissa and MP shows that though children aged 6-10 years entered into primary school education, many of them actually do not complete it. Though these children can be considered as ever-attendees of elementary education, the impact of primary education cannot be assessed in them, as they were out of school before the scheduled term. In regard to dropout ratios, Bihar stands as the last but one (1.92) among all the five, indicating the existence of retention-problem in primary school along with its lowest attendance proportion.

As shown in Table 1, Gross Enrollment Ratio, which depicts the proportion of children in primary grade against those aged 6-10 years, is the lowest in Bihar (88 per cent) and the highest in MP (107 per cent). However, in Bihar, apart from lower enrollment proportion of 6-10 aged children, such situation may also be resultant of lesser proportion of primary school goers above age 10. To make the scenario clearer, Net

Enrollment Ratio is calculated, which is a refinement over the gross enrollment ratio by considering only the primary grade pupils of 6-10 years as the numerator. The calculated Net Enrollment Ratio, however, shows again that Bihar stands the lowest (62 per cent). While Net Enrollment Ratios in UP, MP and Rajasthan vary within 78 to 80 per cent, Orissa stands the highest with a whooping Net Enrollment value of 83 per cent. Hence, Orissa illustrates to have an overall better situation than the other four states, where 83 percentage of children aged 6-10 years are enrolled in primary grade against only 62 per cent in case of Bihar.

To understand the backdrop of enrollment scenario, we have analyzed a little more in depth. Table 2 gives a more comprehensive illustration of gross and net enrollment ratios according to some selected predictor variables. It shows the difference between gross and net enrollment ratios for less developed states and also at the country level.

TABLE 2
Differentials in Gross and Net Enrollment Ratios of India and Less Developed States by Some Background Factors

Attributes	Gross Enrollment		Net Enrollment		Sample	
	Less developed states	*India*	*Less developed states*	*India*	*Less developed states*	*India*
Education Facility Within Village						
Yes	101.46	110.35	75.02	80.48	20613	42523
No	97.14	107.45	70.57	74.37	2456	4077
SLI						
Low	85.61	95.03	62.51	69.89	11050	20664
Medium	99.71	119.59	83.00	89.10	13270	31023
High	122.60	123.18	96.05	97.43	3728	11613
Sex of the Child						
Male	124.47	118.16	81.97	85.79	14789	33191
Female	93.13	106.03	70.72	78.86	13557	30947
Place of Residence						
City	114.60	118.94	86.40	92.03	2075	9385
Town	112.79	117.48	85.65	89.08	3150	7938
Village	100.88	117.17	74.11	81.13	23121	46815

First, talking about gross enrollment ratio in less developed states, as it is evident, the villages where educational facility exists within the village, gross enrollment ratio for primary education lags by 9 percentage points in comparison to all India. The differential is slightly more (10 percentage points) in case of villages with no education facility. Evidently, villages with schools possess higher gross enrollment values than their counterparts, both in case of five less developed states and at the country level. As

according to the standard of living, in the less developed states, the households with medium standard of living (SLI) show highest (20 percentage points) differentials as compared to all India. Gross enrollment situation within five selected villages increases steadily from low to high SLI groups, which is also consistent while observed for all India.

It is to be noted that, though in case of male children the poor states have positive differential value by 6 percentage points as compare to all India, for female children the states again have a negative difference of 13 percentage points, which, however, could be resulted by the fact that, male children over 10 years studying in primary grades, are proportionately higher than female primary graders aged over 10 years in these selected five states. If seen sex differential in gross enrollment within these five less developed states, it is quite higher (31 percentage points) in comparison to all India (12 percentage points).

According to the place of residence, the highest differential of gross enrollment (16 percentage points) is observed in case of the villages belonging to less developed states, in comparison to all India. The city or town dwellers as well, however, show negative differential values than the country level, through with lesser degrees. While gross enrollment differential for all India between city, town and village is only marginal, it is of considerable extent while talking about these five less developed states.

Nevertheless, gross enrollment ratio is only a crude method and cannot be a basis for firm conclusion. Hence, it is always better to look at the net enrollment ratios to understand the differentials between parameters. Here, differential in net enrollment ratios, both in case of with or without educational facility within the village belonging to less developed states and in country level, stands around 5 percentage points, naturally, favouring the differential value for the villages with educational facilities within. Interestingly, the less developed states show lower differential value (4 percentage points) of net enrollment between the villages with and without educational facility as compared to country level (6 percentage points).

Among the three standard of living (SLI) groups, the household belonging to high SLI shows the least differential value between all India and the less developed states (of only 1 percentage point). While in case of households belonging to low and medium SLI, it is quite higher around 6 and 7 percentage points respectively. Differential in net enrollment within the three SLI groups of less developed states and also at India increase steadily with SLI. Poverty has often been highlighted as one of the determining factors for school enrollment and also for retention. Generally, children from the poorer household are educationally disadvantaged as compared to those from wealthier households. This can also be inferred from the present analysis, while taking SLI as a proxy variable of economic status.

The gender differential in net enrollment ratios for primary grade persistently shows an adverse value for female children, both in case of less developed states and in India. However, the differential is higher (11 percentage points) in case of less developed states as against 7 percentage points in case of India. According to place of residence, less

developed states show a declining pattern in net enrollment from city to village, persistent with the pattern emerging for all India. While making a comparison between India and the five states, both in case of city and villages, the differential of net enrollment ratios shows a value more than 6 percentage points in case of towns which is found as the least (4 per cent).

Inter-State Gender Differences in Primary School Participation

Table 3 shows the gender differentials for 6-10 aged children belonging to five study states in case of primary school attendance/never attendance and drop-out.

TABLE 3
Gender Difference in Primary School Attendance by States

States	% *Never Attended School*		% *Attending school*		% *Drop-out*		*Sample*	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Bihar	29.3	43.5	69.5	55.0	1.2	1.5	3138	2930
MP	14.5	19.7	82.7	77.2	2.8	3.1	2921	2721
Orissa	12.4	16.8	85.3	81.2	2.3	2.0	1458	1397
Rajasthan	11.4	28.5	87.6	69.5	1.0	2.1	2945	2680
UP	13.7	23.2	84.7	74.6	1.5	2.2	4371	3862

As for the children of age group 6-10 years who never attended primary school, Rajasthan shows the highest gender differential of 17 percentage points, followed by Bihar (14 percentage points) and Uttar-Pradesh (10 percentage points), though Madhya Pradesh and Orissa show much lesser gender gap in this regard. It implies that, perhaps, in Rajasthan a better proportion of male children aged 6-10 years goes to school than their female counter-parts.

The existing significant gender-gap in primary school attendance in case of Bihar confirms that, not only the state possesses a lower attendance rate of primary school goers, it is also characterized by gender biases, unfavourable for female children. Looking the scenario across the states reveals that Bihar, which has the highest percentage of illiterate (never attended school) male children (29 per cent), has a much higher value of illiteracy for female children aged 6-10 years (44 per cent). This accentuates a grave concern for Bihar about its primary education scenario. Talking about Rajasthan, which has got the highest gender gap among the children who never attended schools, (in other words, illiterate children), shows least percentage of illiteracy among male children (11 per cent) among all the five states, while illiteracy among female children stands at the second highest (29 per cent). It can be said that for Rajasthan, the problem of primary school attendance amasses more for female children than for their male counterparts.

Gender gap in illiteracy, however, is found the least (5 percentage points) in Orissa followed by MP (6 percentage points). With the highest net enrollment ratio in primary

school, the state of Orissa remains at the bottom in case of 6-10 years female never attended school children (17 per cent), which is closely followed by MP (20 per cent). This gives a feeling that, perhaps Orissa and MP enjoy a better primary schooling situation among all the five less developed states.

In case of children aged 6-10 years, who are currently attending primary school, again Rajasthan shows the highest gender-differential (18 percentage points), followed by Bihar (15 percentage points) and Uttar Pradesh (10 percentage points). The state of Rajasthan possesses the highest percentage of male children aged 6-10 years attending primary school among all the five states (88 percentage), but in case of female children, the state ranks as last-but-one (70 per cent). However, with only 55 per cent of primary school going 6-10 years female children, Bihar stands last among all the five, where gender gap is found quite high around 15 percentage points. Again female primary school going children from Orissa form the highest percentage among all the five states (81 percent), and resultantly, gender differential here is found the least (4 per cent).

In case of drop-out primary, gender gap is found the maximum in Rajasthan (1.1 per cent), followed by UP (0.7 per cent). Except Orissa, the rates in the rest four states show drop-out scenarios unfavourable for female children. The drop-out primary value for Madhya Pradesh shows the highest, both in case of male and female children with 3 and slightly more than 3 percentage points respectively.

TABLE 4
Gender Difference in Primary School Enrollment by States

States	*Gross enrollment ratio*		*Net enrollment ratio*		*Sample*	
	Boys	Girls	Boys	Girls	Boys	Girls
Bihar	99.17	77.206	69.63	54.91	3138	2930
MP	114.24	100.84	82.91	77.03	2921	2721
Orissa	111.17	99.21	85.45	81.46	1458	1397
Rajasthan	118.43	89.02	84.34	89.62	1945	2680
UP	117.24	100.60	85.18	75.18	4371	3862

Except Bihar, the gross enrollment ratio values show more than 100 per cent in case of male children and at the same time higher than female children, across all five states. It indicates two facts: first, there is higher percentage of male children in comparison to female children aged 6-10 years enrolled in primary schools in the rest four states. And secondly, there remains higher proportion of male children over aged 10 years enrolled in primary grade than the proportion for female children over 10 years. This calculated gross enrollment ratio shows the highest gender gap for Rajasthan (29 percentage points), followed by Bihar (22 percentage points) and Uttar Pradesh (17 percentage points).

In case of female children, except MP and UP, rest of the three states fall below 100 per cent gross enrollment in primary school; indicating, that either lesser proportion of female children aged 6-10 years is enrolled in primary grade or lesser proportion of girls

beyond age 10 years remains in primary grade in the rest three states as compared to MP and UP.

However, the gender differential in Net Enrollment Ratio can be glanced to get a more apparent picture. The primary Net Enrollment Ratio, nevertheless, gives a very interesting insight showing a favourable gender differential for female children aged 6-10 years only for Rajasthan, by slightly more than 5 percentage points. Among all five-study states, Rajasthan also shows the highest (90 per cent) percentage of female children aged 6-10 years enrolled in primary grade. It is to be noted that, though Rajasthan is found to have the highest value of gender-differential in case of never attended and currently attending primary school (both unfavourable to female children), perhaps in actual the male primary school goers in this state over aged 10 years are proportionately much higher than for their female counter part.

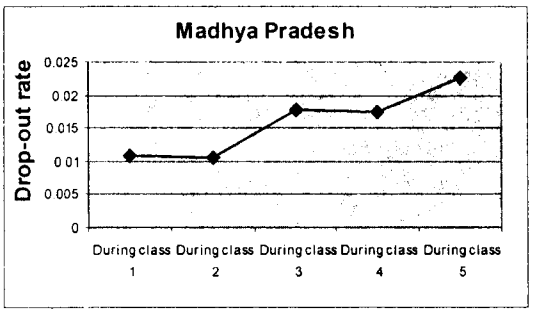
Bihar shows the highest gender gap in net enrollment ratio (15 percentage points) unfavourable for girl children, aged 6-10 years. The reason remains, as among all five-study states, proportion of female children (6-10 years) is the least to attain primary schools. For male children aged 6-10 years, the highest net enrollment ratio is found in case of Orissa and Uttar Pradesh, both as 85 per cent. But these two states differ in gender gap quite distinctly in case of net enrollment. While in case of Orissa, gender gap found is quite low of 4 percentage points, for UP it shows a wide value of 10 percentage points.

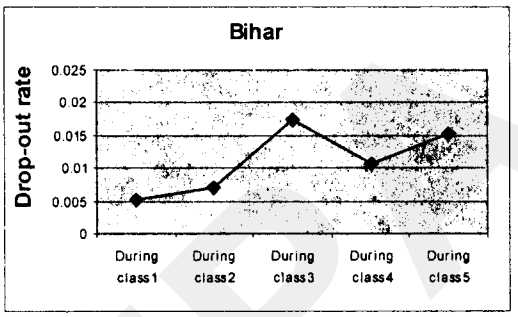
The recognition of female education as a social issue is very recent in India. The poor functioning of Indian schooling system is one reason for persistence of endemic female illiteracy. It is important to stress that the failure of Government primary schools is not gender neutral, especially in rural areas. A common response of parents to the poor functioning of a school is to send their sons to study in other villages. But the same response is far less common in the rural areas in case of girls because parents are often reluctant to allow their daughters to wander outside village (Dreze and Sen, 2003; Dreze, 2003). Even if the local schooling standard is good, school enrollment and attendance for girls are always lower than boys for low parental motivation. It is well established in literature that where gender relations are less patriarchal, the expansion of female literacy is comparatively rapid.

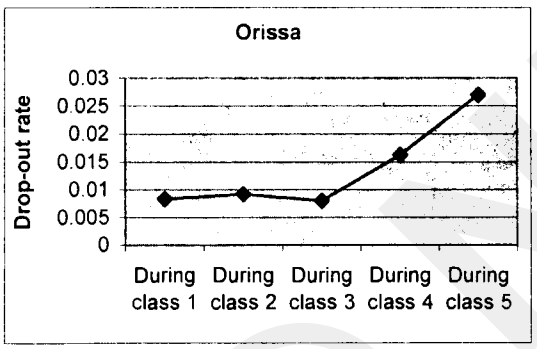
Drop-out Rates in Primary Grades Calculated for Less Developed States

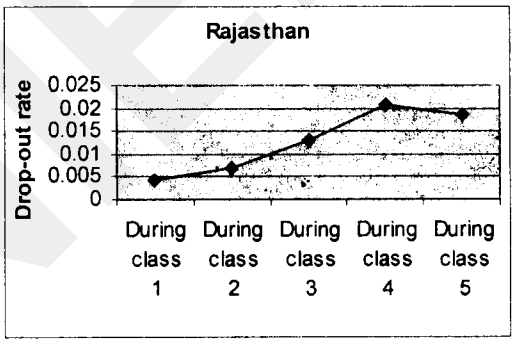
The chances of dropouts in primary education calculated across the five study states, are shown in Figure1. The states show quite different scenarios all together. The chances of drop out during grade one range from approximately 0.005 to 0.01 across all the states. The chances from grade one to grade two remain almost constant or increase slightly in case of Bihar, MP, Orissa and Rajasthan, but in UP, such a chance declines. During second grade to third grade, except Orissa where it actually declines, in the rest four states and at country level, drop-out chances increase universally, though in varying degrees.

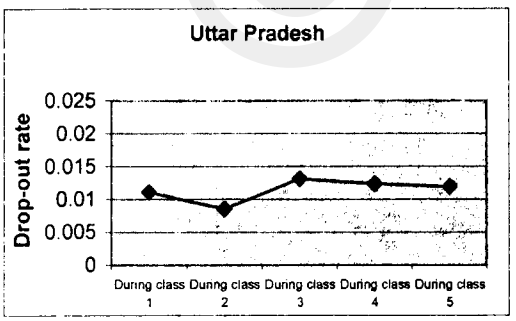
FIGURE 1
Chances of Dropping Out in Different Grades/ Classes Across the States

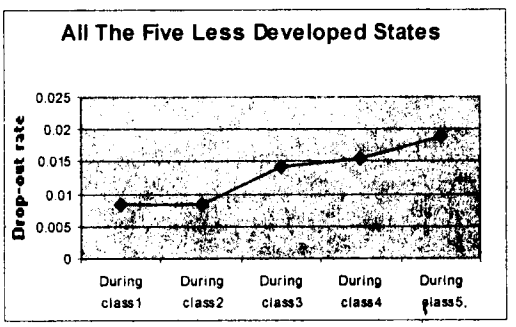












Only for Orissa and Rajasthan, chances during third to fourth grade incline sharply, in rest of the states it either declines (Bihar) or remains constant. Orissa continues to show a rising chance of drop-out even from fourth to fifth grade, together with Bihar, MP and all India, while such chances decline in case of Rajasthan and UP. It indicates that the problem of retention of children in primary grades is not similar in all five states. On an average, up to second year of primary education children do not drop out much, but the situation dramatically changes from second grade onwards. Orissa, where the primary education situation is found to be better otherwise, faces a sharp increase in drop out starting from grade three. In Bihar, chances of drop out reaches the peak in third grade. Apart from UP in other states and at country level, it seems that attention should be given to regulate drop out scenarios right from second grade, which poses a crucial turning point.

Determinants of School Attendance/ Non-Attendance in Rural Remote Areas

The focus here so far has been on the scenario of illiteracy, primary school attendance, gross and net enrollment ratios and drop-outs among the children of the five less developed states, in absolute terms and also in terms of gender differentials. However, it is essential to understand the reasons behind the situation, if it is to be improved. The focus further on is devoted to gauge the rationale behind poor performance of the five less developed states in primary school education. Table 5 categorises the reasons as mentioned by head of the household against those children who do not go to school. If we look at the reasons of not attending school or the reasons for drop-outs, both for male and female children, it is evident that "not interested" is mentioned by the highest proportion across all the states as the main reason. Overall, the order of subsequent reasons is, however, different for male and female children. While for boys, the next important reason of not attending school comes as "other" reasons, followed by education "costs too much" and engaged in "family business", not attendance for girls shows a different set of reasons. For girls, the second most vital reason is shown as " household work", followed by "other" reasons and also education "costs too much". While for boys only, 6 percent showed "household work" as the second largest reason, among girls, it had been mentioned by 16 percent.

Other reasons such as "school far away", " a transportation not available", "schooling for siblings", or "repeated failure" are found in very small proportion[3]. Looking at the reasons as states per se:

In Bihar, where overall school attendance is found quite low, the most important reason remains as, "not interested" (mentioned by 30 per cent), followed by "other"

[3] Surveying households to find out why students drop out, The NCAER (1989) study found that in all 15 states lack of finance was the most important reason, mentioned by more than 50percent of sampled households in 12 states. Financial security, as indicated by parent's landholding and occupation, affects both enrollment and dropout rates.

reasons (26 per cent) and education "costs too much" (19 per cent). Bihar contains the highest proportion of "other" reasons and education "costs too much" across all the five states.

In Rajasthan, where gender gap in school attendance is found as the highest, the main reason for non-attendance of school is again shown as "not interested" (39 per cent), followed by "house-hold work" (18 per cent) and "others" (11 per cent). However, the least percentage in this state, mentioned the reason that education "costs too much" (7 per cent), among all the five states.

Orissa, where overall primary school scenario has been found somewhat better among all the five, shows quite different phenomena. A whooping proportion mentioned the reason for not attending school again as, "not interested" (60 per cent), which is the highest across all the five states. The proportion is followed by the reason of "schooling not necessary" (13 per cent), while very few mentioned the common reasons like "costs too much" and no one mentioned "house-hold work".

TABLE 5
Reasons for not Going to School Among Drop-outs by States
Percentage Distribution

Reasons	Bihar	MP	Orissa	Raj	UP	Total		
						Boys	Girls	Total
School far away	3.9	1.8	2.1	3.6	1.8	0.7	3.7	2.4
Transport not available	0.0	2.3	4.2	1.8	0.0	0.7	0.9	0.8
Schooling not necessary	2.9	1.2	12.5	1.8	5.5	1.9	4.3	3.4
Household work	7.8	11.1	0.0	17.9	12.0	6.0	16.0	11.5
Family business	3.9	8.8	2.1	7.1	0.9	6.4	3.1	4.6
Outside work	1.0	0.0	0.0	0.0	0.9	1.1	0.0	0.5
Cost too much	19.4	12.3	8.3	7.1	14.7	13.5	14.2	13.7
No School Facility for Girls	2.9	1.8	0.0	3.6	0.0	0.0	2.2	1.2
Care of siblings	1.0	7.6	4.2	3.6	2.8	4.1	4.0	4.1
Not interested	30.1	38.6	60.4	32.1	42.9	46.4	34.8	40.0
Repeated failure	0.0	2.3	0.0	1.8	0.0	1.1	0.3	0.7
Got married	0.0	0.6	0.0	0.0	0.0	0.0	0.3	0.2
Others	26.2	11.7	6.3	10.7	17.9	16.9	14.8	15.7
Don't know	1.0	0.0	0.0	8.9	0.9	1.1	1.5	1.4
Total	100	100	100	100	100	100	100	100
Sample	*103*	*171*	*48*	*56*	*217*	*267*	*325*	*592*

Table 6
Determinants of School Attendance in Less Developed States (Rural)

Attributes	Exp (b)				
	Bihar	**MP**	**Orissa**	**Raj**	**UP**
Demographic					
Sex of HH head					
Male	.887	.875	1.220	.680	.787
Female#					
Age (c)	1.113**	1.152**	1.037	1.068*	1.138**
Sex of the children					
Male	2.135**	1.452**	1.480**	1.387**	2.270**
Female#					
Religion					
Hindu	.553*	.251**	.432	.828	.685
Muslim	.224**	.118**	.056**	.229**	.294*
Others#					
Caste					
SC	.392**	.516**	.499**	.676**	.710**
ST	.497**	.274**	.200**	.588**	.723
OBC	.589**	.692*	.613*	.729**	.830*
Others#					
Economic					
Type of house					
Pucca	1.661**	2.446**	.780	1.535**	1.810
Sami pucca	1.304**	1.584**	1.511**	1.401**	1.190*
Kuccha#					
Has electricity					
No	.617**	.915	.381**	.451**	.613**
Yes#					
SLI					
Low	.034**	.408**	.375	.222**	.192**
Medium	.136**	.611*	1.159	.355**	.358**
High#					
Village Development					
Primary education within					
Yes	.988	.928	1.502	1.107	1.411**
No#					

Distance from nearest town (Km)					
<6	1.094	1.271*	1.306	1.310*	1.442**
6-10	1.055	1.094	1.341	1.169	1.238*
11+#					
Distance to available transport services (km)					
0	1.282**	2.143**	1.097	1.000	1.084
1-5	.934	1.167	1.126	.900	1.414**
6+ #					
Constant	*3.334*	*2.282*	*4.891*	*2.666*	*2.621*
Sample	*5442*	*4176*	*2240*	*4335*	*5821*
R square	*.284*	*.151*	*.230*	*.250*	*.152*

Dependent variable 0 = not going to school, 1 = going to school # = reference category, (c) = continuous variable

** = significant at 1% level, * significant at 5% level.

One of the major aims of this paper is to find out the factors that determine school attendance of children. Table 6 predicts the attributes that enhance the chances of going to school at primary level in rural India where the dependent variable is coded as 0 if the child is not going to school (i.e. illiterate and drop-out) and 1, if the child is presently going to school.

Among the demographic variables, to a great extent, age and sex of the children, caste and religion are important predicts of primary school attendance. To elaborate, with increasing age, the chance of going to school remarkably goes up. The probability of school attendance for boys is significantly higher than girls with varying extent across states. For example, in UP, the chance for boys to attend school is 2.3 times higher than girls while in Bihar, it is 2.1 times more. The chance of going to school is about less among the ST, SC as well as OBC children of 6-10 years against the General caste with varying intensity across states. Interestingly, as a whole, in less developed states, children of Hindus (especially in Bihar and MP) and Muslims (in all states) displayed lesser probability of going to school compared to others. It could be possible that in the "others' category, Christians share the majority and the school attendance among Christian children is higher than the two above mentioned religious groups.

Coming to economic factors as a determinant of school attendance at primary level, standard of living is an important predictor, as being in the low or medium economic class enhances the risk of not attending school, except the state of Orissa where SLI does not portray any significance in this respect. Lack of electricity at household level also reduces the chance to go to school in Rajasthan, Bihar, Orissa and UP. Again, staying in Pucca or semi-pucca houses increases the chance of attending school in almost all the states.

Only in UP, at village level, the presence of primary school does increase the probability of school attendance. In rest of the states, this variable does not show any

importance. Nevertheless, distance from the nearest town plays a significant role in enhancing school attendance in MP, Rajasthan and UP i.e. with decreasing distance from nearest town, the chance of attending school goes up. For instance, in UP, compared to those villages where the distance from the nearest town is more than 11km, the chance of going to school for those children, who are staying closer to the town i.e., between 6-10km or less than 6 km, increases by 1.2 and 1.4 times respectively. Similarly, distance from the nearest transport facility is showing a positive relation in this regard. In Bihar, MP and UP, accessibility does improve school attendance significantly.

Table 7
Determinants of School Attendance in Less Developed States (urban)

Attributes	Exp (b)				
	Bihar	**MP**	**Orissa**	**Rajasthan**	**UP**
Demographic					
Sex of HH head					
Male	1.514	.931	.805	1.096	1.456
Female#					
Age (c)	1.179*	1.267**	1.049	1.096	1.197*
Sex of the children					
Male	1.824**	1.750**	1.440	1.844**	1.056
Female#					
Religion					
Hindu	1.876	.012	1.090	.583	5.630
Muslim	1.041	.010	.180	.222	2.548
Others#					
Caste					
SC	.570	.946	.494	.364**	.930
ST	----	.470	.224**	1.138	2.967
OBC	.729	1.412	1.185	2.405	1.063
Others#					
Place of stay					
City	1.045	.931	.417*	.498**	.891
Town #					

Economic					
Type of house					
Pucca	1.702	2.436*	1.604	.663	1.137
Sami-pucca	.698	2.496**	1.121	.486	1.101
Kuccha#					
Has electricity					
No	.832	.805	.244**	.425*	.431**
Yes#					
SLI					
Low	.116**	.021**	.060**	.073**	.023**
Medium	.283*	.061**	.201	.170**	.101**
High#					
Constant	*.786*	*5.940*	*3.595*	*2.732*	*1.286*
Sample	*595*	*1319*	*569*	*1214*	*1150*
R square	*.273*	*.253*	*.408*	*.292*	*.298*

Dependent variable 0=not going to school, 1= going to school #= reference category,
(c) = Continuous variable
In Bihar, the sample size of ST population is 5, hence excluded from the analysis **= Significant at 1% level, * significant at 5% level.

Coming to the determinants of school attendance in urban areas (Table 7) of the selected states, age and sex of the child play significant role, but not in all the states. School attendance increases with age in Bihar, MP and UP while proportion of boys attending school is remarkably more than girls in Bihar, MP and Rajasthan. Interestingly, unlike rural areas, here, religion does not play any significant role. ST population of Orissa and SC of Rajasthan has considerably less school attendance compared to the general caste. In Orissa and Rajasthan, staying in big cities reduces the chances of going to school compared to medium size towns. SLI plays a significant role in determining school attendance in all the states as with increasing SLI, the probability of attending school also goes up. Similarly, having electricity in the household increases the chance of school attendance in Orissa, Rajasthan and UP. Staying in pucca and semi-pucca houses also increases this chance in MP.

Summary and Conclusion

Before drawing conclusion, it is better is summarize the above findings in a nut shell:

1) Variation in primary school attendance is distinct across less developed states.

2) In Bihar, the proportion never attended primary school is the highest and consequently, the net enrolment ratio in primary grade is found also as the lowest. Bihar suffers also from the widest gender gap in net enrollment ratio.
3) Net enrollment increases steadily with standard of living and being a male child and staying in urban places, in all the states.
4) Gender differentials in primary school attendance are the highest in Rajasthan, followed by Bihar and UP. However, proportion of girls dropping out is comparatively higher in MP.

- The problem of drop-out is the highest in case of MP followed by Orissa, where percentage of 6-10 aged children ever attended school found to be the maximum, so just entering into primary education does not ensure the completion of its tenure, unless proper care is taken.
- In Rajasthan, the problem of primary education is more for girl children, both in case of never attended and attending primary schools. However, in this state, positive difference of net enrollment ratio in case of girl children indicates, probably male children over age 10 years are enrolled in primary grade more in proportion.
- Orissa shows not only a better enrollment scenario but also a narrow gender gap in drop-out. However, the only problem remains for the state is retention in primary school.

5) The chance of dropping out, as a whole, increases with class. In class 1, the chance of dropping out is highest in UP and MP. During class 3 and class 5,this probability increases sharply. The risk of dropping of students is the highest in MP and Bihar during 3rd standard. Interestingly, though in Orissa, during class 1 to 3 the risk is low, it steadily goes up in the next two classes.
6) Lack of interest in studies (especially in Bihar and among Boys), high cost, burden of household work (mainly for girls) are the major causes of drop-out.
7) Being a boy of higher age, non-SC/ST, non Hindu/Muslim (in rural areas) and of higher economic status significantly increases the chances of school attendance. As a whole, individual factors and SLI play more important role than availability of primary school in school attendance among 6-10 years age-group children.
    - In rural areas, among economic factors children belonging to low or medium SLI or from villages located distantly from towns or poor transport facilities declines the chance of attending school, significantly.
    - In urban areas, chances of attending school is found much higher in case of children belonging to high SLI, having electricity in household and staying in pucca houses.

Primary education is one of the cornerstones of development. As education is considered to be a booster agent for solving population problems, a catalyst for women empowerment and a powerful tool for channeling a host of other socio-economically

relevant issues in a positive direction, it is the prime aim of the governing bodies to provide basic education to the teeming millions. However, since independence, in spite of a series of government initiatives, still millions are lacking basic education. Situation in this respect has definitely improved over time with the development of primary schools and provision of incentives. But the condition of the backward states in India with respect to primary education is still a matter of concern not only because of the fact that they share major burden of child population in the country but also experience wide differentials in primary education by caste, gender, living standard and many other factors.

The crux of the matter is that poor economic condition along with general lack of interest among primary school goers are the two most significant dynamics affecting the drop-out or non-attendance. This apart, our study reveals the prominence of demographic factors in deciding the primary school attendance. It could be attributed to a possibility that although the basic minimum infrastructures which are there on paper are not meeting the minimum quality standard which can motivate a higher attendance in these primary institutions.

Considering the fact that in less developed states, the gender difference of school attendance with respect to girl child is very unfavourable, especially in Rajasthan and Bihar, compulsory vocational training along with education has to be included in the course curriculum. This training would augment future earning potential for these girls who will benefit from the dual utility of basic education along with an initiation into some basic vocational practices.

Considering the demographic variables determining the school attendance (which is directly or indirectly influenced by the whims and fancy of the household decision makers), we suggest a possible solution that can stimulate unconditional support from the household towards participation in primary education. A predetermined monthly ration system can be given to a household subject to the condition of attending minimum number of school hours by the first two children of that household.

In Bihar, we need to popularize the fundamental utility of education; otherwise children will be failing to attend the basic education. In Rajasthan, enhancing the power of women is the need of the hour to make them understand the need for girl's education. While, in Orissa and MP, the two better performing states, we have to somehow retain the children in school either by providing some lucrative elements like adding extra classes that they want, providing good quality mid-day meal, enhancing their interest in studying by providing dresses, books etc. From research point of view it is worth exploring to understand why certain groups of children loose interest in studying while others not, given the same circumstances. High cost of schooling cannot be a cause for non-attendance, though many children cite this reason, in spite of the fact that elementary education is free to all children. It is necessary to fathom the causes of non-attendance or dropping out in the context that whether it is the fault of the teaching system of our country or the very lack of motivation of the children or parents for not sending children

to schools or for poor infrastructure of the village however to fathom the depth of this enigma, we need to depend on the primary research.

In India, the gender gap is due to cultural and economic constrains and could be reduced through awareness campaigns, direct incentives, developing childcare centres, hiring more female teachers etc. As the caste gap is mainly because of poverty, welfare-based interventions targeting the children of the downtrodden may be more effectively directed to the poor.

References

Aggarwal D.D. (2002) *History and Development of Elementary Education in India* Volume-2 Sarup and Sons New Delhi 11002

Aggarwal D.D. (2002) *History and Development of Elementary Education in India* Volume-3 Sarup and Sons New Delhi 11002

Chugh Sunita (2004) *Why Children Drop Out? Case Study of a Metropolitan Slum* Book well New Delhi

Dreze Jean (2003) *Democracy and the Right to Food*-IIPS Newsletter Annual lecture Series-3, 2003, pp. 5-19

Dreze Jean and Sen A. 2003 Indian Economic Development and Social Opportunity, Oxford University Press, pp-114-116

Dreze Jean (2003) Democracy and the Right to Food- IIPS newsletter Annual Lecture Series-3. pp. 5-19

NCERT (1989) *Fifth All India Educational Survey: Selected Statistics.* New Delhi, National Council of Educational Research and Training.

Raza Moonis, Aijazuddin Ahamed, Sheel C. Nuna (1990*) School Education in India* National Institute of Education Planning and Administration New Delhi.

Thakur D.N. (1996) *Studies in Educational Development* Vol. 2 Deep and Deep Publication, New Delhi.

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BOOK REVIEWS

Ka Ho MOK (2003): ***Centralization and Decentralization: Educational Reforms and Changing Governance in Chinese Societies***. Comparative Education Research Centre, CERC Studies in Comparative Education. 13 Hong Kong, pp.xii+230, Price-Not mentioned.

The effect of globalization as a process of social change has been pervasive and affected the entire gamut of social system. The study of the pattern and direction of such changes has been a fascinating area of research among a host of social sciences. In this context, one can place the book under review as an attempt to understand and explain globalization and its effect on education as a sub-system of society at macro level. In fact, along with globalization, the world is also witnessing a current of democratization of societies and increasing role of civil social institutions in the governance of nation-states. The reactions to such powerful changes have myriad and multi-layered and have necessitated structural and functional changes in most countries. The book under review tries to explain the dimension of such changes in the educational administration in Chinese societies.

The book contains a number of interesting and illuminating articles on educational administration and governance of education system in mainland China, Shanghai, Hong Kong, Singapore, Macau, Taiwan etc. covering a large geographical space and socially similar but politico-economically different societies. It has been a sort of necessity to examine the effects of globalization, governance and public participation in Chinese societies before arriving at a conclusion. Far too long, this huge landscape and its equally huge population, their policies and perception have been locked to avert public gaze and it is high time that we learn their lessons and let them unlearn their inhibitions.

The discussion on globalization more often than not has veered around the notion of decentralization at least in its political manifestation. Economic globalization focuses on deregulation and dismantling of trade barriers as well as doing away with protectionism. Similar themes can be seen in the context of education where the state is gradually withdrawing itself from the welfare sector creating avenues for market to take over these responsibilities. The slow yet sure withdrawal of state from a variety of welfare activities not only implies the disinvestments of state in these sectors but also depicts the slackening of control of state in the 'state of affairs' of these in areas. In the backdrop of increasing market intervention and decreasing state control disinvestments and decentralization becomes synonymous. As state financing of these sectors continue to recede and emphasis is led on alternative finance institutions demand more autonomy and independence. However, the relationship that has emerged between the state and market is much more intricate and impervious than it seems at the outset. The critical dilemma before the state is to maintain its sovereignty and sanctity while ensuring good governance and that is impossible if it abdicates entirely of its social responsibilities. The

dynamics of this relationship has resulted in a dualism, which is captured in terms of 'centralization' and 'decentralization'. This dualism has an uncanny similarity with the trends of modernization where one can observe at one point of time 'modernization of tradition' as well as 'traditionalization of modernity'.

The hypothesis of 'centralization and decentralization' as the context of education has been tested under the macro universe of Chinese societies and involves the study of two important sectors i.e. school and university education system. In a griping cognitive analysis of the phenomenon of centralization and decentralization in the context of school education in Hong Kong, Joan Leung takes a look at management reform in schools where he found that policy of school management reform is a manifestation of politics of state is essentially political in nature and in case of Hong Kong it has worried liberal and religious communities about the true intention of the government as well as threatened them with vices of centralization that they visualize in the structure of the proposed reform. However, there are inherent inconsistencies in the article regarding the notion of 'political' and its use in the context of school management. In fact, in an earlier study on the dimensions and dynamics of international schools in Hong Kong, Yako Yamato had found some conditions and contradictions of privatization and implications of new managerial techniques (Yamaoto: 2003). All reforms that require a restructuring of the system sans ideological undercurrents may not necessarily be a negative process if it intends to bring quality by co-opting rival groups in the process. Most of the articles in this section have discussed various facts of centralization and decentralization in micro structural settings arriving at almost similar conclusions that there is no watertight case either of centralization or decentralization rather despite variations in spatio-temporal frames tendencies of both forms of power distribution exists simultaneously rather than differently.

The question of educational governance in higher education has also been adequately dealt with in the educational ambience of Singapore where the authors have discussed the case of Singapore Management University. It has been found that despite the pronounced tilt towards self-financing of university education, the government continues to finance universities and the notion of autonomy is largely relative in character. The structure and dynamics of higher education in Singapore is essentially characterized by the traits of centralization and decentralization. There has been in a sense delegation of decision-making powers at some level, while in the name of accountability, Universities have been made answerable to the government. In fact, autonomy, accountability, academic freedom and ethos of liberalism has always been close to the ethics of higher education and will continue to be debated in different spheres of functioning. At the second level, one can find that the state as the distributor of public good ensures a fair distribution of resources while taking cognizance of regional and societal disparities which is yet to be seen in a market dominated managerial system. As a result of state sponsored distribution of goods and benefits not only marginal sections but also deprived regions used to have their share of benefits of development package. Kwong ruefully argues that this is not happening in current socio-political spectrum creating further fissures and layers of

stratification in an already unequal society. This understanding and expression of reality in mainland China has profound implication for Indian system and one cannot but be reminded of the unsavory episode concerning Indian Institute of Managements (IIMs). The ambit of the debate is much broader than the way it has been dealt with because Universities as institutions of civil society have a greater role to play in the nation-building and policy formulation rather than fighting for finances and autonomy with mediocre faculties and mindless mandarins siphoning of public money. They must learn their responsibilities and come out to the open to serve the society far away from the comforts of ivory towers. But in changing times, it would not be bad idea to put education in the market place as a commodity at least in some form to see how it adjusts itself in the advent of a neo-techno-economic reality.

In an interesting article on women education in China in the emerging economic regime Julia Kwong traces the contours of women's education in China. Defining current economic regime as socialist-market economy, which sounds paradoxical in the lexicon of political economy, she points out that liberalization of Chinese economy and its policy of 'reform and opening' has brought problems of women endangering their participation both in education and economics given the traditional outlook towards women in these patriarchal societies. Communist China had taken up the responsibility of uplifting the position women through education as an effort to create a classless society. As a result, under a centralized hegemonic polity social welfare measures were distributed equitably making more concessions for women considering their vulnerability. However, in the new economic era women continue to face discrimination and difficulties in two main spheres of development namely, education and employment. In the absence of educational opportunities and appropriate employment in labour market, the potentialities and participation of women in socio-political have nose-dived leading to 'feminization of poverty'. This has particular significance in the context of India where a similar economic regime is ushered with a similar social structure.

The book in also enriched by a powerful introduction to the concept and an equally interesting and thought-provoking concluding chapter by the editor where the concept of 'centralization' and 'decentralization' is thoroughly examined in the broader context of globalization and the reaction of nation-states. Education being the vehicle of modernization and educational sector being an important segment of civil society certainly provides a vantage point for discussion of this critical area and the editor has full advantage of the opportunity. The theoretical explanations are lucid, analytically and profoundly simple. It could have touched higher echelons of intellectual legitimacy and cognitive fulfilment with an international perspective and introduction of methodological debate which the editor has tried to bring in his introduction but has failed to provide it wings of further analysis. There are also a few but glaring inconsistencies in the arguments of some authors in their treatment of 'politics', policy and broad generalization. The role of civil social institutions have rarely been touched upon, though it is a very important sector in the any critical appraisal of 'globalization and its discontents' (Stiglitz: 2000). However, I strongly believe, this book will be an enormous

help to the students, teachers and researcher in the field of education and globalization, in general, and of educational administration in particular.

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Bird LINDSAY (2003) ***'Surviving School: Education for Refugee Children from Rwanda 1994-1996'*** UNESCO International Institute for Educational Planning (IIEP), Paris pp. 140

Education is a means for overall development of the human personality and in turn it is an instrument for the development of the society. Basic education is a necessity for all children and that is why the responsibility of imparting basic education to all children generally lies with the public authorities i.e. the government. However, in exceptionally difficult circumstances, like in case of natural calamities, emergencies and riots or any other form of disturbances, the education of the children is adversely affected. This is because under such circumstances, the priority is given for making provision of food, shelter and health related facilities on urgent basis and thus the provision for education becomes a low priority and is taken only after the above provisions are made.

One such condition is the conflict situation under which generally the education of the children suffers most. However it may be realized that education can play an important role in helping children to return towards normalcy. The book under review is a study that explores how education in situations of emergency can be established and maintained as a vital psychological support to the affected community, in general, and to their children, in particular. The study investigates how education for refugee children emerged and developed, after the genocide in the African country Rwanda, as a result of which hundreds of thousands people of this country flee to their neighboring countries. The focus of the study is on Tanzania and Democratic Republic of Congo (DRC) and the period of the investigation is 1994-1996, when a huge majority of the people returned to their home country.

The aim of this study is to document the emergence and development of education in the refugee context in Tanzania and Democratic Republic of Congo during the major period of Rwandan exodus, 1994-1996. Though the focus of the study is on this period but some references are also made for to subsequent developments in the education of refugees in the two countries.

The education of refugee children in Tanzania and Democratic Republic of Congo, according to author, cannot be fully understood without reference to the historical and political implications of the genocide in Rwanda that led to the refugee crisis in its neighboring countries. This is why, the study presents a summary of key events leading

to the genocide and some of the key factors contributing towards the crisis in this regard. The author presents the roots of the genocide, the role of the international community and the consequences of the genocide and its aftermath. It also presents about the humanitarian response to the refugee crisis.

Narrating the role of the international community, the author quotes that the moral authority of the international community was absent both before and during the genocide. Six months before the events, a key actor in the planning of the genocide informed the United Nations about the preparation being made, and this information was passed to U.N. Headquarters, warning of the potential violence and requesting assistance. However, the UN and the international community ignored the warnings. Even as the genocide unfolded, the US state department refused to publicly acknowledge what was taking place. According to the author, the past experience of US in Somalia where 18 of its soldiers were killed by one of the faction warlords, ensured that the US was reluctant to attempt any intervention in Africa unless its own population was under threat. As a result, without the US backing, no security force could be mobilized.

Base upon a few basic principles as agreed by specialists, the study highlights the importance of education to be imparted to the refugee children. However, the fact is that education is seldom given priority in the context of emergencies. Whatever provision for education is made in the emergency situations, is by nature, according to the author, ad-hoc and sometimes even chaotic. The study captures the determining factors that contribute to more effective implementation of education programmes in situations of emergency.

The success of the management of the education programmes for refugee children depends upon a number of key factors such as – availability of experienced education personnel both in refugee community and agencies; organizational strength and policies of the leading education agency; previous administrative structures of education in the country of origin and activity of the community.

As far as Tanzania is concerned the country had effectively no formal written policy established by the government to cater for a larger refugee influx which, according to the author, was a dangerous precedent when a security ministry, Ministry of Home Affairs, with no expertise in education in emergencies, became responsible for determining when and how education programmes should be established. However, fortunately for Rwandan programme, the MOU, that was signed between Ministry of Home Affairs and international agencies at the beginning of the Rwandan emergency, was crucial in ensuring that education could continue throughout the period, the Rwandan refugees were in exile in Tanzania.

Highlighting the problem of planning for the access and equity in education of the refugee camp children, the study clears that there were limited comprehensive data available that had real meaning. Statistics was rarely disaggregated or analyzed to try and determine where successes occurred and how these could be capitalized upon, or where poor schools needed assistance and could be boosted by neighbouring schools. This was where the focus on access, getting as many children into school as possible, had a

downside. It led to overcrowded classrooms, as NGOs had insufficient funds to increase the number of classrooms and teachers. Planning was not systematic enough at the early stage to predict the high demand for education in the lower grades, especially the number of both over-age and under-age children wanting to enroll in standard I.

The education was not established in Ngara camp of refugees in Tanzania immediately on arrival of refugees. According to the author, the July 1994 MOU signed between the Ministry of Home Affairs, UNESCO, UNICEF, United High Commissioner for Refugees (UNHCR) and Deutsche Gesselschaft fur Technische Zusammenarbeit (GTZ) outlined the guidelines for the establishment of education for refugees. It introduced a model that structured educational provision in three phases. This formed the basis of the 'Nagara Model' hailed as one of the better approaches for education in emergencies. These three phases discussed in the book in details are namely – recreational phase, Teacher Emergency Package (TEP) phase and formal curriculum phase.

With regard to thematic curricula for education of refugee children, an interesting observation made by the author is that the agencies are anxious to implement projects that reflect their own political and/or developmental agenda. In this way, environment education, peace education, HIV/AIDS education and many other 'thematic curricula' become addition to the already overloaded curriculum being taught. Each agency competes for space in the timetable to include their project. The author suggests that in order to avoid curriculum overload, it is necessary to co-ordinate the structuring of these different subjects so that the overlap can be avoided.

It has been found that the drop-out rate in the Rwandan refugee children, living in the camps, was quite high and one of the major reasons for this was the lack of clothing and uniforms. The importance of language is highlighted as another important cause for high drop-out rates. This was the major cause for drop-out of the Rwandan children, who were struggling not only with the difficulties of camp life, but also trying to study an unfamiliar curriculum in an unfamiliar language.

In July 1994, the Democratic Republic of Congo (DRC), at that time known as Zaire, hosted one of the greatest refugee influxes the world has seen since Second World War. Nearly one million Rwanda refugees crossed the border into the east of the country around Goma, Bukavu and Uvira, fleeing from fear of reprisals after the genocide. Describing the crisis, the author writes that it was in the environment of continual instability and heightened tension that education had to struggle for survival. In this environment, where the vast majority of children had little access to education, variations in the response to education for refugees and the delays in implementation were in part due to the factors like – concern by the Congolese government on establishment of schools in camps; the lack of co-ordination by UNHRC and significant financial constraints.

The Rwandan refugee crisis was seen as temporary by the DRC government and the other agencies, the DRC government did not consider any long-term implication of hosting Rwandan refugees. It was not considered an option for the majority of refugee

children, to integrate children in the DRC schools. This was because of the reasons like – the medium of instruction would be different; the refugee school population far exceeded that of local school population; the Congolese infrastructure was not sufficient to cope with the large numbers; and prima facie refugee status was not granted.

Provision of education for refugee children is generally perceived as the provision for primary schooling only and that is why many donors and agencies still do not see the need for provision of post-primary education for these children. However, the study reveals that it is clear from the experience in Tanzania and DRC that for the refugees the post-primary education is of the highest priority. The first buildings to be constructed by the refugees themselves were usually churches, followed by secondary schools. The arguments in favour of provision of post-primary education are strong, not only in terms of future economic and social development of the individuals concerned, but also for the country as a whole when the refugees participate in reconstruction after the crisis.

The management of schools in DRC camps of refugees varied greatly. Some camps operated a system whereby NGOs with responsibility for camp management were also contracted to oversee education; while in Goma camp, for example, there might be up to seven different NGOs within one camp running different education programmes. Not all NGOs concerned with education programmes were supported by UNHRC, which made the co-ordination of activities difficult for UNHRC to manage.

The refugee problem has even created many hardships for the local Congolese people. In such appalling circumstances, Congolese parents continue to struggle to educate their children. The prospect of support to Rwandan refugees is a sensitive issue, as Rwandans are still perceived by many as an invading army. There is a reluctance to be seen supporting children of refugees who are suspected genocidaires when there is as great a need for support to children within the local population.

An important contribution of the study is the recommendations given by the author for provision and management of education to the children in emergencies. These recommendations are briefly as follows.

- Education in situations of emergency should be treated as first-line priority by all UN agencies and donors, alongside other life-supporting activities such as water, health, shelter and food.
- Ministries of education and home affairs, UN agencies and concerned donors should establish regional policies on education for refugees in regions of conflict.
- Access for all refugee children should be ensured, including the most vulnerable children such as unaccompanied minors, children with disabilities, street children and children with psycho-social problems.
- Refugee expertise and creativity should be captured at the outset of a programme, and should form the basis for all future educational programming.
- Donors and agencies should consider the refugee-affected areas where refugees have settled and provide adequate support and compensation to local population commensurate with the burden placed upon them by the refugees.

- Cross-border negotiations between the host and the home-country governments, as well as UN agencies concerned, should be initiated immediately to ensure firstly that the most appropriate curriculum is adopted.
- UN and concerned agencies should undertake a feasibility study to assess the potential of an 'Education Passport' for refugee children, which would guarantee the validation of their education in an emergency context.
- Peace education or peace-building activities should be introduced as quickly as possible into the education programme, but only as part of a well-constructed strategy to introduce the topic into the community in general, building on local mechanisms of conflict resolution.
- Additional research should be conducted to assess the full impact and value of emergency education for children when they have returned to their own school systems.

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M.A. ECKSTEIN, ***Combating Academic Fraud***, 2003, UNESCO, Paris, ISBN: 92-803-1241-3, paperback, pages 101, price not given

As the title suggests, the book deals with academic frauds. Presented in five chapters, the study is all about an age-old problem and suggests ways of controlling it. We are all familiar with the tricks of the trade adopted by various individuals and even scholars. For instance, the academics are caught sending their own papers to various journals after changing the titles. I recall a few decades back, couple of Oxford dons were caught adopting this means to improve their curriculum vitae. This after all might not appear to be a serious crime. But there are incidents that clearly fall in the realm of punishable offence. For instance, in India, once a report prepared by a team of British experts for Nigeria was attempted to be passed off as a native effort. Beyond some adverse publicity in the national dailies and a small debate in Parliament, nothing more happened. After all, the culprits were fairly senior bureaucrats and academics. A well-known name in the field of philosophy was made to defend himself in a Calcutta court in the 1920s against a complaint by a Ph.D. scholar. The allegation was that the examiner had published a research report in the form of a book after rejecting the same as not being worthy of a doctorate degree. It is generally rumoured that the case was settled out of court for one lac rupees. The son of this philosopher has tried to find an explanation for the misdeed of his great father in a book published by the government of India. To be able to stop all this would never be easy. Laws do not make societies saintly. Still, ways have to be devised to curb this malaise. It is universally acknowledged that modern means of communication have come as a great boon to the plagiarist. It is becoming increasingly difficult to locate the original source and penalize the culprit. Universally, the laws have been found

malleable. They are, therefore, not very difficult to circumvent. In the past few years, numerous pseudo-scholars in India have started resorting to this technique for earning their Ph.D. degrees. In fact, I myself came across an individual who has opened a consultancy service in this area. For a modest sum he helps the candidate submit a dissertation, which s/he has not written, instead it is a photocopy of some ICSSR library material. I have recorded this fact in my book titled '**A critique of Indian education'** published two years back. Since then even more shocking facts have come to my knowledge. But then these facts are becoming common knowledge. Somehow, it has been extremely difficult to deal with these matters legally. The present publication is both timely and helpful. For this, UNESCO deserves heartfelt gratitude of many across the academic world.

The chapter scheme of the book under review is self-explanatory. Chapter 1 deals with the importance and extent of academic fraud under such sub-titles like the ubiquity of fraud, examinations and credentials, technology etc. Chapter 2 recounts the varieties of academic fraud attempted during the course of examinations besides plagiarism, fraud in research, diploma mills (like the one in Bihar's MBBS examination scandals) and false credentials, reform policies and academic fraud and international and global dimensions of academic fraud. Chapter 3 deals with the causes and consequences of these academic frauds. Besides causes and rationale for the frauds, this chapter also deals with its consequences and costs. One major consequence is that it seriously damages the credibility of the system. In India a number of universities, both in and outside Bihar have lost their academic credibility because of their involvement in these types of frauds.

Chapter 4 discusses problems and issues in controlling fraud. Since high-tech methods have come to be adopted in the perpetration of frauds (such as the use of Internet, mobiles, and similar other devices), defenses too have to employ high–tech defenses against them. The motto 'to catch a thief, set a thief' seems to be getting operationalized. Several agencies are currently involved in developing software to detect plagiarism, monitoring devices to prevent other types of frauds, particularly related to examination and others of the identical nature. A number of official agencies in the USA and the UK have come forward to combating academic fraud.

Chapter 5 gives the summary and conclusions of the study. In the summary, a list of reasons is given that have forced people to indulge in this kind of behaviour. A few of these reasons are: 1) competitive pressures are a significant cause of academic fraud; 2) lack of systematic control; 3) ambiguities in defining the nature of misconduct; 4) the presence of electronic means of communication; 5) individual ambitions to excel others; and 6) erosion of professional ethics. The book also carries a very useful list of references, besides two very meaningful appendices for future guidance and application. The first appendix deals with management of examinations—(participants, security and vulnerability at key stages) and the second offers a proposal for information and communication that centres on academic fraud. The suggestion for setting up an international agency is surely very welcome. Towards that end, a model for an international watchdog agency is also proposed.

Each chapter is so meaningful that it deserves to be read with good deal of attention. The government agencies should arm themselves with necessary legislation and put in place a mechanism to prevent its perpetuation.

I wish NIEPA to come forward and organize a program on the theme. I am sure the model that will work in India will be welcomed and adopted the world over.

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A. CAWTHERA, ***Computers in Secondary Schools in Developing Countries: Costs and Other Issues***. Seven Oaks: DFID Education Publications, 2001, 50 pp.

With the advent of personal computers, schools started using information technology (IT) as a subject and also as a tool to teach other subjects. While developed countries have invested heavily in procuring hardware, software and training teachers, many schools in developing countries are yet to explore the benefits of IT. While cost of hardware and software remains the major constraint, there are also other issues that need to be addressed for effective implementation of IT in schools. For example, proper training of teachers is a requirement that should be given priority. Maintenance cost over a period of time can be as high as the initial cost of the computers. Schools also need to find creative ways to make maximum use of acquired hardware, thereby reducing the cost per student. Based on data from several schools in Zimbabwe and South Africa, Cawthera provides various categorizations of provisions (A provision refers to kind of hardware, software, other equipments and supports. For example, a basic provision refers to used or refurbished computers while a deluxe provision includes purchase of new computers), develops some useful financial ratios to measure effective usage of provisions and raises issues of processes of allocation of provisions and training of teachers in the use of IT.

This DFID Research Paper has 8 chapters, with the last chapter summarizing recommendations for the benefit of policy makers and planners.

Chapter 1 sets the argument and method used for the study. For developing countries cost aspects in deployment of computers in schools need to be studied. The study covers many schools, telecentres and training providers in Zimbabwe and South Africa.

Chapter 2 while illustrating rapid developments in the field of IT also highlights the digital divide that is prevalent in the world today. It is shown that a small part of the mankind with access to IT has become richer and more powerful.

In Chapter 3, the author argues that though raising quality, increasing access to education and importance of IT in today's context may be some basic reasons for using computers in school education; the research still does not support the first two arguments. However, there is no doubt that introduction of computer in schools brings in certain excitement and benefits to schools. Computer literacy at the school level is also required

as all jobs in the market require this skill. At a higher level, schools can use information and communication technology (ICT) to facilitate collaborative learning.

In Chapter 4, the author describes two studies in developing countries to assess cost involved in providing computers in school. The first study by Osin in Israel and the second study by Bakia in Barbados, Turkey, Chile and Egypt considered cost involved in procuring hardware, software, furnishing of computer room, and providing manpower, training and maintenance. The cost per hour and cost per student etc. have been worked out. The author suggests that these costs can be reduced by buying not so latest computers, and increasing usage per computer.

Chapter V describes key elements of the author's study to find costs of computer provision in schools. Secondary schools in Zimbabwe in South Africa were considered for the study. Five categories of cost, namely housing cost, equipment costs, initial training of teachers, running cost and external support cost were examined. Teacher cost was not included, though it could make a difference in many schools. The schools studied had computers ranging from old computers donated by NGOs or other donors to brand new ones purchased by the school or given by service providers. Depending on kind and number of computers, schools were divided into five categories. Case studies of 3 schools under "basic provision" category showed that most schools had to work hard to organize resources required to keep the computer program running. It also revealed that by enhancing usage, the unit cost could be reduced. Schools studied under "basic plus provision" were telecentres supported by World Links (an initiative of World Bank). It showed the users were ready to pay for the facilities. Schools under the category "deluxe provision" showed that there was a digital divide between private schools and government schools. Also, private schools made better use of their resources. Rural areas, where grid electricity and land phone lines were not available, posed different challenges. Schools had to install solar equipments in order to have power for running their computers. They also adopted the concept of shared computer. The last category is "community-based telecentre provision" where a telecentre was shared by community members.

In Chapter 6 author discusses the factors that can make a difference in effective usage of computers in schools. These factors are: (1) processes of provisions, (2) training of teachers, and (3) models of provisions (telecentres or school-based labs). If computers are provided to schools as part of school's own initiative, its adoption will be better. Appropriate training of teachers at the right time can be very crucial. School-based telecentre seems to bring out better usage of computers.

Chapter 7 focuses on the conclusions that can be drawn from the study. It is argued that better usage of computers can be achieved by allowing the community to use the facility. Normally, the cost of hardware and software is expected to be a major factor in adoption and use of IT in schools. But the study showed that if a time period of 5 years is taken, the cost of hardware and software becomes a small percent of the total cost. Rural provision needs not be very expensive. School computer lab can be used to generate some income by providing services to the local community and recover a part of the

running cost. But schools need some hand holding for this activity. Apart from buying new computers, schools can look for old computers or refurbished computers to meet their requirements. Finding out different ratios like "the annual cost per regular student user", and "the cost of a computer to the total cost of effective provision over a five year period" etc. can help to decide what kind of computers to procure and from where and how to enhance their usage. A telecentre model makes better usage of resources.

Finally, in Chapter 8 the author makes several recommendations like: (1) opt for appropriate computers not just latest, (2) ensure high level of usage of computers, (3) follow processes that enhance higher usage, (4) provide adequate training to teachers, (5) develop low cost training packages, (6) look into actual computer usage, (7) develop appropriate benchmarks and ratio, and (8) enhance school-community relationship.

Though most of the cost data provided in the book may not be directly relevant in the Indian context, most of the recommendations, however, are appropriate for Indian schools. In India, most of the private schools meet their financial requirements through extra fee from students, but these schools can look into cost aspect and reduce the fee burden on students by using computers after school hours for some training programs for outsiders. They can enhance the quality of teaching by extending better training to their teachers. School centered telecentre models can be tried out in rural schools to extend computer learning facilities to village kids. Kiosks floated by n-Logue and Tarahaat etc. are looking at computer literacy in villages. For them, the ratios and benchmarks described in the paper can be useful. The example of mobile computer lab of IT2Kids is also worth trying in rural areas.

The paper has several box items which contain interesting information on topics like tele-collaborative learning, new deal software, InfoSat, and future computer technology etc. It also emphasizes the point that while preparing the IT plan, school management should not overlook maintenance and other running costs.

In summary, in India where there is very little research on various aspect of IT in schools, this paper is a useful resource for school planners and policy makers. The paper reads well and uses simple language to convey some very useful ideas.

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W.O. LEE, DAVID and L. GROSSMAN, ***Citizenship Education in Asia and the Pacific: Concepts and Issues***, Kerry J. Kennedy, Gregory P. Fairbrother, Kluwer Academic Publishers, 2004, pp. xi+316, price not stated

There is a feeling that the "Local values have often had to take second place to the values highlighted by European Enlightenment. This has been particularly so in colonial

societies that were left a legacy of Western values and institutions, even where rich traditions of philosophy, thought and ideas were deeply embedded" (p.12). The editors of the present volume have tried to indicate an alternative set of values from the Asian examples, which they think can be the basis of citizenship education in the context of globalization, on the one side, and rising fundamentalism, on the other (p.1).

The processes of globalization have brought to the fore certain contentious issues like civic education in a national context. The post-modern theorists have emphasized the local as the context to be privileged in contrast to the global and, therefore, negated the idea of the nation as a valid context for variety of reasons. The editors felt that the post-modernist valorization of the local at the expense of the universal values has coincided with the rise of fundamentalism in large parts of the world, which too attacks universal values as something European (pp.11-13). This has been taking place in a world which is rapidly globalizing, and so, even while the universal set of values is under attack, the world is desperately in need of universal values given the globalization context. What should be the loci of the citizenship education in the context of the twin processes outlined above?

The title of the first paper 'Searching for Citizenship Values in an Uncertain Global Environment' by Kerry J. Kennedy (pp.9-24) evocatively spells out the theme of the book. The author emphasizes that at the time of all these discussions, 'citizenship education is the province of nation states and not some supra national authority' (p.18). The national context emerges as the most vital context in which the project of citizenship education is set. Many critiques, primarily by the post-modernists or even those who set their eyes on cosmopolitan education like Nussbaum, (Cultivating Humanity: A Classical Defence of Reform in Liberal education, Harvard University Press, Cam., 1997) would, however, see the context of education changing from the nation to either the global or sometimes to the local. The post-modernists would argue that the insistence on 'nation' or on the 'individual', with modern education privileges, denudes education of its local or community context and, hence, of its deeper and more valuable essences. Some of the arguments in favour of Asian values are projected from this criticism of modern education. The present book, however, bases itself on a defence of modernity and its defence of a universal horizon. Therefore, it perceives the Asian values debate too from the perspective not of privileging the local, but of culling from the local some universal essences.

The recent defenders, like Nussbaum, of cosmopolitan perspectives on education, see that the nation state's role in setting the curriculum is increasingly restricted. They appear to take the old Aristotelian plea of making citizenship in a universal plane, where defense and cultivation of virtues require the individual to relate to the democratic world directly. In their modern sensitivity, it is the global world of citizenship that provides a defense against authoritarianism and narcissism, and hence, education needs to be located on this cosmopolitan axis. The arguments located in the present volume, though agreeing in principle that a cosmopolitan education is what sustains democracy, unconsciously

follow a time-tested strategy of Immanual Kant where the individual is allowed to be universal by the virtue of sharing a rational and moral universe.

The recent discussion about state and civil society also has impressed upon many the need to steer education away from the hands of the state. There are many who have argued that it is the civic culture, the domain of civil society, which should be incorporated into education. Quite often, the discussion has taken an anti-state turn in recent studies, particularly after the rapid neo-liberal global institutions have cast their shadows over some of the old institutions, of which the state itself is one. In such a situation, the search for civil society has also intensified. The studies in the book, however, eschew engaging with the new institutional onslaught and their impact on education as a soundboard for reforming the curricula.

However, as recent discussions and tussles over curriculum in the Indian context show, notwithstanding claims to the contrary, curriculum cannot be separated from the political/ economic contests that are being waged in the society. Quite often, what we consider as citizenship values emerge out of these struggles. Concern for ecology and the environment, issues of civil and human rights, and consciousness of patriarchy and gender are precisely such values. Rights, which took years to emerge, find place in the curriculum, once they emerge in the social consciousness victoriously after these battles. In most of the studies in the present work, the curriculum and education content are shown to have been changed not merely to effect a societal change, but also because political changes had necessitated certain rearrangements. For example, in Indonesia the ascending power of the Islamist groups saw the old equilibrium established by the nationalist leaders in 1945, of creating a Panchsheel state, being compromised (pp.42-48). One may have to read this text in the light of the strong financial attack by the United State on the Indonesian economy that brought it to a ruinous state, the gradual geopolitical aggression of Australia and United State in the area resulting in the loss of the island East Timor, and finally, the tragic absence of secular opposition in the country that has resulted in the civic opposition being expressed by religious groups. All these must have influenced the curriculum of the Indonesian pupils, some of whom are interviewed in the case study (pp.37-57). It would be simplistic to merely view the process of Islamisation, as the paper suggests, in isolation from all these other processes outlined above.

It is here that one looks at two very significant facets of the relationship between education and society in analysing curriculums where state plays a role in citizenship education. First, it is accepted that sustenance of civil society and widening of the political and civic spaces requires citizenship values. The second and related issue is whether the states are ready to provide the spaces where these values could be taught and transmitted.

In the Asian context, the countries have vastly different trajectories of political, economic and cultural development. Japan, which evolved from its isolation into a self-reliant country, soon became an aggressively imperialist country by the 1930s. Its curriculum and education system was democratized and secularized by the American

occupation army after 1945. The Chinese had undergone a communist revolution and, therefore, the education and curriculum not only struggled with the non-communist world but also with its own non-communist past. Countries like Indonesia, Malaysia and Singapore gradually relapsed into one party rule and consequently the curricula and education have undergone corresponding changes. Only in countries like South Korea and Taiwan, there are widespread reforms towards democracy and larger popular space. Therefore, these countries have a different experience in curriculum and the forces behind curriculum development. The premise that the state models education according to its own demands and colour is historically given in most cases. If it is so, then the space that these states allow for the civic virtues and rights to come to their fruition must also be conditioned by their own demands and colour. The social context of education greatly implicates states.

One of the fundamental characters of civic values has been that they are not merely handed down but also contested. In the contest, their substance too quite often undergoes transformation. Citizenship values in countries studied, i.e. Indonesia, Malaysia or China (India also makes an excellent case but is not part of this study), must have undergone changes over the last century, and, therefore, the historical and political contexts can retrieve not only these contexts but also the values.

The nation in Indonesia was shaped out of the struggle against the Dutch colonial rule. The anti-colonial struggle was premised, as it was in the Indian struggle for Independence, on a common political and economic vision, and there was an effort to create a unity among the people of islands which comprised Muslims and Hindus, and later the Christians, too. Nationalism in Indonesia attempted to create a united front. The ideology of Panchsheel was its answer towards this unity. It proclaimed (i) Belief in one and only one God, (ii) A just and civilized humanity, (iii) The unity of Indonesia, (iv) Democracy led by the wisdom of deliberations among Representatives and (v) Social justice for the whole people of Indonesia. (p.42). The fact that an ideology like Panchsheel, which argued for an overall secular state and not an *Islamic* one, became the force behind the anti-colonial struggle is not taken into account by the present study.

Bereft of that context, such discussion can become one more of those written under the real or perceived threat of Islam and the Islamic fundamentalist movements. In fact, the gradual movement and orientation of the state towards the communal Islamic ideals has weakened the earlier consensus over which the nation emerged in the 1940s. Thus, contrary to the argument presented in the chapter, the character of the state changed not because of the changes in the way Muslims perceived the state but because of the overall changes brought to bear on the state itself, (pp. 37-58). This must have strong bearings on the way education is perceived and curriculum designed.

China presents another example where history and politics combined to set a curriculum designed to promote patriotism. (*Patriotic Education in a Chinese Middle School*, pp.157-173.) From presenting images in the first stage and concepts in the later, the Chinese curriculum, as was seen in the Jingling middle school, indicates something which is of significance. Here patriotism is linked to a set of old historical contexts. At

the same time, it is given a broad social contour by linking it up with the Marxian ideals. In this, Confucianism, which was attacked in different stages of intellectual and political movements in 20th century China because it was perceived as legitimizing a hierarchical and stratified world view, has been replaced with a largely egalitarian social philosophy, Marxism.

There is, however, an interesting twist in the history as a careful analysis will bring out. Admixture of patriotism and communism provides the patriotic education with a very limited vision. Whatever the Marxist theoreticians say, the evidence from the study of Fairbrother shows that patriotic education, while it directs the students to think about the society, circumscribes vision within the Chinese society. The universal values, including that of communism, are not present anywhere. Thus, communism appears as a Chinese nationalist artifact. The promise of global and universal citizenship remains a chimera. The critics of communism take this situation to their advantage and invoke the humanist Confucianism of the Harvard scholar Tu wei Ming as the alternative. Fairbrother finds in this model a powerful alternative to the Eurocentric universal values, informing the citizenship educational needs of children.

Not only that, the curriculum and policy of education are informed of their historical context, but as the author of "The Making of a good citizen in Malaysia: Does history Education Play a Role?" (pp. 195-214)" argues that the presence of history in the curriculum itself facilitates citizenship and democratic education. It is in this context that the study of the Malaysian case seems very educative. In their 1996 national curriculum, history was abolished for the early years of schooling (pp. 199-200), but was later reintegrated when it was found that the civics education, which had replaced history in steering citizenship education, was neither being taught in the way it was conceived, nor was it capable enough to interest the students in learning citizenship values. (It would be quite interesting to see why the curriculum devised in India in 2000 tried to replace history with civics whereas other places were doing things the other way round.)

History, the author believes, is the most potent tool in citizenship education. 'In the process of learning history', he believes, 'historical concepts and historical facts will give opportunity to pupils to develop their citizenship characteristics' (p.195). Significantly enough, this is crucial for the overall theoretical argument of the editors who have tried to present a critique of post-modernism. Since post-modernism is founded on a critique and invalidation of history, placing history at the centre of value education is, in a way, a vindication of the editors' modernist position.

However, history itself is not the final arbiter. How it is written and the curriculum is drawn too are very crucial. History, as one can argue, points to the struggle in the society over values which shape and reshape society and, in turn, the state. The current state of values, which the state wants to propagate in its acts of legitimization, quite often colours the curriculum. In the Malaysian case, while history is restored in the curriculum for more effective citizenship education, the content of some of the core indicators in the curriculum shows how it tries to legitimize the monarchical values and a respect for tradition. For example, in the chapter on 'Pride in being a Malaysian', the points required

to be stressed are: dignity, loyalty towards the king and the country, respect for country's emblem, upholding national pride, valuing and practising Malaysian traditions and culture, loyalty towards the country, fostering unity, discipline, and productivity (pp.199-200).

Historical knowledge becomes important in this context not only to make one feel dignified about being Malaysian but also to know the source of such dignity. History also provides the core principles around which citizenship is defined. In the case of, for example, the monarchical system, one may look for the struggles for democratization against it, and history would record these struggles. And these struggles would in turn provide values, which may be in opposition to the monarchical values. Thus, the struggles as well as the historical record of those struggles are both providers of value. In such a situation, a historian will additionally enquire, which the scholars here could not, as to what kind of history, that is, a history, which suppresses or one that liberates, should be included in the curriculum.

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Johnston, CHRISTINE A. (1998). ***Let Me Learn***, Thousand Oaks, CA, Corwin Press Inc, A Sage Publication, ISBN-O-8039-6765-9, pages XVII + 221, price U.S.$. 24-95 (Paperback)

Let Me Learn is about listening to the learner. The sole purpose is to help educators create a learning environment in which they can hear the voice of the learner, understand the learner and facilitate the learner's success. The author's earlier books are "Empowering the Organization through Professional Talk (1994)", and "Unlocking Will to Learn (1996)." The book introduces an instrument – Learning Combination Inventory (LCI) based upon the concept of brain science and multiple intelligence. It reproduces the voice of the learners, teachers, parents, staff developers and educational administrators.

The author points out that much of the talk of let me learn within the child gets lost in the talk of management, controlled communication and unanswered call for help. Normally, teachers are to do the talking and teaching, and children are to do the listening and learning. The voice of the learner becomes muted amid teacher direction, limited time and limited contact with others. Thus, there is no time to clarify, probe or communicate where the breakdown in understanding is occurring. It is emphasized that learning is an interactive and interactive experience. Not only does the learner interact with those around him or her as the learning occurs but the learner also interacts within himself or herself. Learning begins at conception and patterns of learning processes have begun to form long before formal school begins. The challenge for the teacher is to hear

the learner's call for help within any given classroom context. Again the voice of the learner is the best source we have for giving effective teaching and successful learning. The author writes that grades K-2: provide an accepting environment, grades 3-5: provide a nurturing environment in which the learner's patterned learning processes are developed; grades 6-8 provide a supportive environment in which learner begins to develop strategies to use the learning process the learner would naturally avoid; grades 9-12: provide a challenging environment in which the learner exerts independence and resource-fullness in negotiating learning experiences (Table 1.2, p. 13).

Misidentification can frustrate the learner. Our greatest challenge as teachers is to acquaint ourselves with the mind of the learner. He/she has to know what is going on in learner's mind when learning is occurring. Thinking, processing, communicating, firing neurons, releasing chemicals, associating, sorting and sensing are all things that are going on in the learner's mind when learning is occurring. These activities are part of the cognitive process that is thinking and knowing. Simultaneous to thinking, the brain is also preparing to act. It determines the initial response to the learning assignment, the rate at which we pursue the task. The brain also employs its affective emotiveness to learning process. The teacher has to respect the feelings of the learner and to respect the learner's need for space to work through the feelings the child is experiencing. The convergence of the three brain activities (cognition, conation and affection) from four stable patterns of learning – sequential, precise, technical and confluent, taken together, they compose the learner's combination of learning voices. Each pattern exists is all of us to some degree and contributes to our unique combination.

Let us examine the four patterns in turn. The sequential pattern seeks to follow step-by-step directions and plan work carefully, and complete the assignment from beginning to end free from interruptions. The sequential pattern is the "making connections" part of our learning. The precise pattern enables to seek and process detailed information carefully and accurately. It is the "discovery pattern". It wants to know things with certainty. The technical pattern is the practical, relevance seeking part of our learning. Through this, we see the mechanics of operation. This pattern uses written information on as needed basis. It emphasizes on physical representation of technical process. The confluent pattern envisions beyond what is evident and carries the learner to the edge of his/her experience and beyond. This part of the learning pattern is the most celebratory, unfettered and unbounded. It is most operative when we are young children and least operative after only three years in a formal schooling. The existence of the interactive pattern within the learner requires each to start at a point that is "graspable": Each using the voice of the dominating learning pattern(s) is the place to launch the learning task. When learners understand these patterns about themselves, they talk about what is going on inside them when confronted with different learning situations. The learners can identify what is preventing progress and why they are going off track.

A partnership develops, bringing the teacher and learner to a new understanding of learning. We need to listen to sorting (sequential communication), shifting (precise communication), solving (technical action) and soaring (confluent communication)

messages. Learning is a process. It takes time and opportunity for the learner to absorb, respond to, mull over, and consider what is being asked him or her.

The learning combination inventory (LCI) has been developed during 6 years of pilot studies with the U.S. and international students. Its strength lies in its ability to identify, accurately and consistently, an individual's hard-wired learning patterns. To understand, the reader needs to experience the LCI. There is a Professional Form of LCI developed for use with adults. The results of the LCI are first reported in a sequence of scores labeled sequence, precision, technical and confluence. The degree of variation among the stores, the placement of the scores within a given range, and the combination of scores all provide insight into the "volume" of the voice of each learning pattern (the LCI Inventory and the Scoring Sheet appears on pp 42 to 45). It has been found that the learning combination in adult learning pattern are not different from school age learners. There is no single profile that predicts success. However, the patterns of the professional closely match the demands of their professional vocations.

The challenge for each reader lies in making the connection between what a learning combination is and what its meaning brings to the classroom. It is noted that the latest educational research supports the partnership concept. When students work with adults who continue to view themselves as learners, students are more likely to demonstrate successful learning behaviours. In the cooperative type of learning, where students are clubbed in groups, the purpose is to ensure that each learner has a meaningful experience that matches his/her learning combination. The learner shares his/her learning with the group members and is able to contribute to the good of the group. They will gain confidence in wheat they are learning and doing. They will also be prepared when called upon later to perform the task, as an empowered independent learner. Our learning patterns are a sign of our true potential. As such they should be recognized and valued.

Linda, an elementary school teacher found that children see learning as going far beyond the school site, the classroom or their desk. They learn by going to museum, from reading, from their mom etc. By administering LCI to the students, it was found that these children have a much better understanding of themselves and others. They are much more understanding of those who need more directions or those who ask questions all day long. The let me learn process has really helped the children see that they could be different than I am (teacher) and it would be O-Kay. It is maintained that besides providing students with insights into their learning processes, Let Me Learn has helped students more effectively. By working in a group, each person in the group possessed a unique talent or strength that they could utilize to complete the required task. The learning combination actually enhances the curriculum.

The idea of the teacher recognizing and understanding how a student learns, the student's realization of he or she is a learner, and the two of them being able to communicate is the foundation of building a real partnership. The cooperative effort resulted in a greater understanding and built a more supportive relationship between teacher and student. One issue that the teachers struggled was assessment of student learning outcome. It was found that our learning process is the guiding factor for

establishing how to assess learning. The result of encouraging parent involvement and sharing information with them resulted that the parents want to help the child with his/her home work and be an active part of his/her education, but it has always been a major conflict. As a result there has been a dramatic change in attitude towards learning and a rekindling of learning enthusiasm.

The job of the administrator is to create a shared learning and working environment where every one works together as educational partners. When the teacher understands the Let Me Learn process, she can group children and talk to them about cooperative learning and how they can function in a group. It is emphasized that our ultimate responsibility is to the learner; classification of the students as learning disabled can and should be a last resort. The concept of "Let Me Learn" has raised my level of understanding and has opened up insights into my relationships with them.

The real measure of our understanding learning will be seen in what we choose to do. Will we continue to devote 12 years to reshaping our students 'learning mechanisms into school learning, or will we accept and appreciate each learner's way of learning and devote time to developing the learners potential? To discover the essence of the learner is to assume responsibility for encouraging, engaging and empowering the learner. Let Me Learn process infuses the curriculum learning process by empowering the students and teachers alike to teach and learn more effectively. The best means of understanding what the student knows is through assessment such as portfolios. Students can apply this knowledge to any testing situation. Learners will be better able to read and comprehend what is being asked of them on these tests. The author concludes that the future of all learners depends on your willingness to listen with your heart, your mind and your very soul to the message that each learner's voice conveys: "Let Me Learn".

In sum, the book is about learning among school children. It emphasizes on students interactive learning patterns. The book includes the learning combination inventory, which helps to assess, understand and work with student's different learning patterns. The book has implications for curriculum formulation, teaching and learning and assessment. The book will be useful to teachers, staff developers, and educational administrators who want to raise the level of learning in their schools.

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REVELO R J and HERNANDEZ A C (2003) ***The National Accreditation System in Columbia: Experiences from the National Council of Accreditation*** (CNA), Pages: 132

ADRIANO A ARCELO (2003) ***In Pursuit of Continuing Quality in Higher Education Through Accreditation: The Philippine Experience***, Pages: 134

TAMAS KOZMA (2003) ***Accreditation in the Higher Education System in Hungary: A Case Study for International Comparison***, 165

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The explicit focus on quality assurance in higher education through an external mechanism is relatively new, the world over. In the changing context marked by expansion, resource crunch, new providers of higher education and globalisation of economic activities, higher education has become a national concern with an international dimension. To cope with this changing situation, countries have been pressurised to ensure and assure quality of higher education at a nationally comparable and internationally acceptable standard. Consequently, many countries initiated national quality assurance mechanisms and many more are in the process of evolving a suitable strategy. In some countries major transformation in the system of higher education has been an added pressure to initiate quality assurance strategies. Most of the quality assurance bodies were established in the nineties. The books under review present the experiences of Columbia, Philippines and Hungary in quality assuring their higher education systems through external mechanisms.

Under the series, 'New Trends in Higher Education', the International Institute for Educational Planning (IIEP), an autonomous body of UNESCO, published a number of books on the quality assurance experiences of many countries. The books under review published under that series are case studies of the country experiences. The experienced quality assurance experts of these systems who have shaped the quality assurance practices of their countries have presented the country experiences with essential appendices.

Columbia

The Columbian experience presented in seven chapters makes an interesting reading. Chapter 1 explains how the National Council of Accreditation (CNA) was established as a part of reform of higher education system in Columbia. Although the law was enacted in 1992, CNA became fully functional in 1995 and the accreditation experience of CNA seems to be just eight years old. But the variations, one could observe in its model and the consequent outcomes it highlights, make this publication a very useful document. The term accreditation is used to denote different things in different countries. In some countries, it is the equivalent of ministerial recognition of institutions belonging to the national system. In such cases, accreditation is mandatory and it might ensure only the

minimum levels of quality. But in some other national systems, accreditation stands for excellence and under such circumstances it might be a voluntary process. CNA presents a dynamic model of quality assurance where both these levels are taken care of by the same agency with different processes in place.

CNA performs two main functions in the area of quality assurance. Firstly, it does quality assurance of a compulsory nature through a mechanism called "previous accreditation" wherein minimum standards in chosen study areas of particular social relevance are verified. Secondly, a voluntary accreditation process of both undergraduate programmes and higher education institutions called "Accreditation of Excellence", which acknowledges high levels of quality through a standard-based approach, is also implemented by CNA. This case study is an analysis of the conceptual framework and the methodology used for the "Accreditation of Excellence". Chapters 2 and 3 provide essential information about this voluntary process in a lucid manner. The factors measured for excellence and the characteristics applied are given in detail.

The case study presented in chapter 4 brings out the institutional experience when an institution undergoes the CNA process. Interestingly, the authors raise the question "What follows self-evaluation and accreditation?" More information to answer this question and some more information about the campus reaction to the accreditation outcome and how CNA responded to it would have added more value to this chapter.

Chapter 5 on conceptual and methodological analysis as an outcome of the model implementation is very brief, but with relevant information for an emerging quality assurance system. For an eight-year old agency, the developmental path it has taken - continuous fine-tuning without major hiccups - seems to be similar to that of many other successful quality assurance agencies. It justifies the authors' statement that CNA is a success story.

Chapters 6 and 7 would be very relevant to any quality assurance agency interested in learning from the lessons of others. Although the book has mentioned about two different processes and limited the discussions to the voluntary processes – Accreditation of Excellence – one cannot resist asking the question about differential impact. Obviously, the different processes are expected to achieve different objectives and the first part of the book presents this in an interesting way. But the differential impact that these processes have actually made on the institutions of higher education and their programmes is not very clear. On reading about the impact, the voluntary process has made on the institutions, one could raise the question: "Are these outcomes unique to the voluntary process or could they be achieved by the mandatory process for minimum standards also?" Had the authors brought out this comparison, it would have made a very interesting analysis to the readers. However, this is only a minor point for value addition and the significant inputs given by the authors, in terms of specific lessons learned are commendable.

The book highlights how Columbia has managed to establish a multi-functional system of quality assurance for a diverse higher education. While it is essential that all institutions and programmes adhere to minimum standards, it is also important to

acknowledge more advanced levels of quality. As the authors have noted, "This creates acknowledged role models and incentives for other institutions to strive for higher levels of quality". Obviously, as the case study establishes, CNA has been successful in implementing this model in a complex and heterogeneous system of higher education.

Philippines

This book traces the history of the accreditation system in the Philippines, relating it to the expansion of higher education in the country. Over recent years, higher education has expanded enormously in the Philippines and accreditation has been strengthened as a response to the quality related problems of expansion. While relating accreditation to the development of higher education, a short analysis of the history of both private and state higher education has been presented well to provide background information.

While external quality assurance evolved in most countries during nineties, it has a relatively long history in the Philippines. The accreditation movement in the Philippines began in 1951 and that makes this book very useful to analyze critical issues of the accreditation system that emerge over a period of time.

Contrary to the other two books reviewed here, where most responsibilities of external quality assurance lie with a single national agency, this book presents the scenario of multiple accrediting agencies. From the 1950s to 70s, three accrediting bodies were formed in the Philippines: the Philippines Accrediting Association of Schools, Colleges and Universities (PAASCU); the Philippines Association of Colleges and Universities – Commission on Accreditation (PACU-COA); and the Association of Christian Schools, Colleges and Universities – Accrediting Agency (ACSCU-AA). With the formation of the accrediting agency for state colleges and universities, a fourth accrediting body was formed in 1989 – the Accrediting Association of Chartered Colleges and Universities of the Philippines (AACCUP). Each of the associations has its own accrediting instruments and standards. In striving towards common standards and instruments, the Federation of Accrediting Agencies in the Philippines (FAAP) – an umbrella organization of accrediting agencies established in 1976 - serves as the coordinating body. Against this scenario, the problems of multiple accrediting agencies have been brought out well by the author. It is interesting to note that AACCUP has resigned from the membership of FAAP. The Commission of Higher Education Development (CHED), a national buffer in charge of higher education and the Professional Regulation Commission (PRC) that regulates entry qualifications for professional areas of studies add to this diverse scenario. In consequence, this book presents clearly how accreditation is only one of the mechanisms for quality assurance in Philippines higher education.

Due to the features mentioned above, for many areas of contention such as single Vs multiple accreditation agencies, accreditation outcome (two-point scale or multi-point scale), unit of assessment (institution or programme) and linking outcome with funding and incentives, the Philippine experience has valid lessons to emulate. All Philippines accreditation agencies have opted to focus on programme accreditation, for which they

have developed a considerable number of specific instruments. Considering the variations in quality among the higher education institutions, these bodies offer accreditation at four different levels, each level entailing specific benefits both in terms of administrative autonomy and access to incentive funds. The higher the level of accreditation, the more the autonomy granted to the institution.

The author establishes the success of accreditation through its impact on the quality of higher education. Chapter 5 on management and support structure of accreditation system provides valuable information for emerging quality assurance systems. Chapter 7 on problems and solutions and chapter 8 on lessons learned have been drafted well, raising many critical issues about shaping the accreditation system. In all, this book has a wealth of information on many critical areas of external quality assurance. The author needs to be commended for the interesting presentation.

Hungary

Contradictory to the Philippines experience, which has a history of five decades, the Hungarian experience presents a system that is still evolving amidst major political transformations. As a system, it notably acts as a buffer between government and the higher education institutions, replacing direct state intervention and control over higher education institutions, providing increased autonomy to higher education institutions.

The major external developments that contributed to the establishment and consolidation of accreditation have been presented well in the book. One was the change in political system in 1989/90, which unsettled the former state administration of higher education. Another was the reform in higher education policy prompted by the intervention of World Bank, to incorporate the accreditation mechanism. The book presents interesting data on these developments that took place during the nineties. Especially the data on the system of higher education, although seems to be lengthy in some places, makes an interesting reading and it gives an appropriate background to understand the way the accreditation system evolved in Hungary.

While the other two books present a case study, its absence in the Hungarian presentation is a noticeable gap. However, chapters 4 and 5 that discuss the problems, solutions and the impact of accreditation, as well as the lessons learnt in the process have been drafted well and make up for the absence of the case study.

The Hungarian experience, as presented in this report, also sheds light on a number of other aspects of developing the accreditation procedure and the inherent tensions in the objective of external quality assurance. Initially geared towards assuring minimum quality standards, the various responsibilities under its purview are amazing. Apparently, the single system is expected to serve both accountability and improvement purposes at different levels. The consequent tension in the system and the need to move from the compulsory accountability oriented accreditation procedure towards the improvement oriented quality assurance procedure have been brought out clearly. The way the institutional accreditation is based on both programme accreditation and the minimal

number of programmes that have been accredited with the "exception" or "strong" grade is another interesting feature to be noted.

The Hungarian experience presents many valid lessons of experience for the emerging quality assurance systems, especially if the system of higher education itself is undergoing transformations. It might also serve to reflect on how much of quality assurance and how much of quality control can be expected of the same system.

In sum, all the three books deserve a commendation. Although external quality assurance is of recent origin, after a few years of practical experience, many quality assurance agencies are rethinking on many issues of quality assurance. At this juncture where countries look for experiences and practices elsewhere, the experiences from Columbia, Hungary and the Philippines would help in sharpening the understanding about quality assurance. They may not offer a perfect solution to the problems of another country, since any strategy has to necessarily take cognizance of the conditions in that country. But while evaluating the outcomes and rethinking the strategies, the experiences of other countries are always useful. Viewed with this understanding, the three case studies, each case study set in the unique context of that country, are certainly worth considering. While both Columbia and Hungary present the experiences of systems that are still evolving, the Hungarian context of major political transition makes it unique. Again, the Philippines highlights the lessons of a matured system of accreditation and it also presents the issues that emerge over a period of time and the problems of having multiple accrediting bodies. Overall, this is an excellent series of publication to be read by anyone who is interested in the quality assurance developments in general, and anyone active in quality assurance in particular.

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Maheswari, KANDASAMY and Blaton, LIA (2004) ***School Principals: Core Actors in Educational Improvement: An Analysis of Seven Asian Countries***, Paris: IIEP, UNESCO; pp. 149, (Paperback)

The book is an outcome of research studies centered around extensive profiles of head teachers in seven countries of Asian region: Bangladesh, Malaysia, Nepal, Pakistan, the Philippines, the Republic of Korea, and Sri Lanka. These studies, discussed at length in an International seminar on *Better School Management: the role of the head teacher* at Shanghai in 2000, provide sufficient reflection to understand the policies and strategies adopted in these countries that help in improving the quality of schools through effective leadership skills and capacities of head teachers. The book also touches most of the critical issues that have a major role to play in the entire endeavour for school

improvement. These include recruitment, training, financial conditions, posting and transfer practices, career development, innovative practices initiated and major problems encountered in school and its management.

The volume is divided into four major chapters. While presenting a comparative picture in basic data and information on profiles of seven countries, the first chapter also confirms that the countries are moving towards decentralization but with centralization of main decision related to policy definition curriculum issues and financing. Although visible similarities in the general structure of the school system are observed, (one year of primary school education, six years of elementary education, four to seven years of secondary education and two to five years of higher education), but country-specific distinctions between 'private' and 'public' education have also been drawn. Similar is the case with public education expenditure to percentage of total government expenditure where variations have been shown to be quite significant with the difference being more striking at secondary education level in terms of literacy rates, GER and NER, provision of primary government and private schools, teacher-pupil ratios being average but variations existing between schools and variations in the number of elementary qualified teachers is also noticeable.

Chapter two gives an overall picture of the functioning of management structures and roles played by out school but active actors primarily the community representatives like School Management Committees, Pupil Teacher Associations, Pupils and Alumni Associations. It has been mentioned categorically that the internal management of schools in all countries depend on the size of schools, different personnel involved and committees created but with a common thread of willingness to make decision-making participatory with spirited community involvement. This seems to be a recent phenomenon and a process in course largely depending on leadership style, characteristics and recruitment criteria of an effective leader. Until there is an urge to involve community in decisions concerning schools, this kind of involvement is not possible as these tasks do not appear in official job charts or manuals on defined roles provided by the Directorates of Education.

Chapter III presents impressive details on comparative analysis of six domains of management by head teachers, that may be cited as recruitment, financial conditions, posting and transfer practices, career development, training and support. The information on official rules, regulations and procedures followed in recruitment, and selection criteria in elementary and secondary schools etc. reveal that in spite of all procedural formalities, seniority and qualifications have always been dominant. The financial conditions reflect on disparities between private and public schools, salaries of head teachers with other officials etc. and a mention has also been made on special allowance in terms of incentives/benefits including intrinsic rewards where special positions are created to ensure promotion and continuity in leadership positions of head teachers. With mixed experience on transfer and postings, Nepal being an exception, where no clear written criteria has been spelt out, the countries like the Republic of Korea, the Philippines, Bangladesh (primary schools) follow decentralized approach while Malaysia

and Bangladesh (secondary schools) show trends towards centralized decision on transfers/posting practices. The issues on career prospects highlights that head teachers in the selected countries have limited promotional avenues except for two-three countries where they find places for themselves in the system at the Ministry or Education office, which is a horizontal move rather than promotional positions. Philippines gives unique impression where Master Teachers Scheme gives the opportunity to occupy either head teachers position or opt for administrative designation based on their inclination. The explorations on evaluation shows that it is carried out in two instances, either on performance of individual head teachers or school functioning. While annual confidential reports are main instruments used in Bangladesh and Pakistan, a standard evaluation tool is a major instrument used for evaluation in Malaysia. But it is also a fact that such evaluations, however, have so far had very little impact on the career. The training part examined have shown that in majority of countries, very few specific induction training either pre or post induction for a head teacher has been imparted. Some countries that have adopted innovative practices are Nepal, Bangladesh and Pakistan. The case of the Republic of Korea has been a peculiar one as it calls for license before any training package is transacted. The three stage specific training course chalked out as a collaborative exercise under teacher training instruction of the Ministry of Education by Korea Teachers' University and Seoul National University is a well-practised example. The in-service training effort diagnosed for head teachers highlights that Bangladesh, Nepal, Pakistan and the Philippines have been showing initiatives at different levels whereas in the Republic of Korea, Malaysia and Sri Lanka, one institute is responsible for the training programmes. The quality of training provided has posed another dilemma except for Nepal where Whole School Approach (WSA) is being seriously followed. At the same time, it is being felt that support material need to be generated specifically on efficiency, discipline rules and code of conduct to be issued from time to time, charters to be prepared to guide both the head teachers and their clients.

The final chapter mainly gives a diagnostic view of major problems encountered and innovations introduced in seven countries. The problems listed are similar in all, for example, shortage of classrooms, over-crowded classes, non-availability of audio-visual aids or shortage of laboratory equipments. As regards autonomy and support, one of the first complaints by head teachers concerns their lack of involvement and autonomy in the decision making process. Concerning specific management issues, it was felt that selection to head teachers' position should be extended further from qualification and experience to a wider range of selection criteria. This should also be supplemented by well designed pre-induction and in-service training programmes focused more on their specific needs. The section on innovations from the countries has been examined from four perspectives: Structure, Personnel Management, Training and Finances. Except for Bangladesh, all the other six countries are showing progressive picture in the introduction of innovative approaches. Some of the significant innovations introduced in the countries concerning structure are Community Participation, Establishment of SMCs and SMTs, Co-operative and Participatory Planning Processes at the Central, District and

Community levels, School Autonomy, Institutionalization of In-service Training and Evaluation. The Republic of Korea introduced two interesting practices: 'inviting principals' with the cooperation of SMCs and performance-based screening for promotion. Sri Lanka has also introduced island-wide performance appraisal scheme to transform school functioning. Similarly, recruitment procedures are revised in the Philippines and Sri Lanka. Innovative practices also relate to pre and in-service training for head teachers in some of the countries. Malaysia has taken measure to ensure thorough training before the placement of educational managers and head teachers. The Whole School Approach in Nepal implemented in two phases has been instrumental in improving school climate. The refresher course on education management at least once in every five years in Sri Lanka has been found to be much relevant to educational managers as it is to teachers. Innovations in finances have been the weakest link in the innovative practices and, therefore, the general impression is that poor financing of education system is the main instrument for creating problems.

The salient conclusions drawn at the end highlight several primary issues, the striking one being that a wide discrepancy exists between the present profile of the head teacher and the ideal profile of an innovative pedagogical leader. Therefore, it is being increasingly realized that the head teachers' conditions be improved first, that can always emanate from making basic changes in the way the system has been functioning and the most practical approach would be to restructure policy for greater school autonomy.

Precisely, the volume offers a platform wherefrom the entire process of transformation of educational improvement effort can take place, also drawing attention to the meaningful intervention of core actors, that is, the School Principals – the forgotten prized human resources – who play the most vital role in setting the tone for school-based improvement. Taken together, the book is undoubtedly an invaluable resource for all educational personnel at the systemic and institutional levels expected to facilitate appropriate decision making in order to bring changes in the way schools have been functioning for decades.

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Education For Rural Development – Towards New Policy Responses, A Joint Study by FAO and UNESCO, co-coordinated and edited by – David ATCHOARENA of UNESCO and Lavinia GASPERINI of FAO - 406 pages; and

Education for Rural People Aid Agencies Workshop, Rome, Italy, 12th And 13th December 2002 organized by FAO Extension, Education and Communication Service-114 pages
Book by UNESCO Publishing IIEP, Paris

The two books – a joint effort of UNESCO and FAO is one of the first few activities of EFA flagship initiatives which focuses on the flagship on Education For Rural People (ERP) launched by the Director Generals of FAO and UNESCO in September 2002. The introductory note explains the word 'flagship of EFA.' A very appropriate name given to the programs that lead a number of agencies in the war against the constraints that bars more than a billion human beings from taking up their rights to adequate education. Presently, nine specialized flagships have been launched, each dealing with a separate area of human concern. The books describe the reasons, leadership and scope of the last and most recent flagship – 'Education For Rural People'.

The first book is the compendium of the reports of the joint study conducted by FAO and UNESCO on the same theme, which was followed by a workshop held at Rome, Italy on the theme "Education For Rural People" in December 2002; the second book is a report of the said workshop.

As the two books are complimentary to each other and as the report of the workshop is a presentation of the results of the study carried on the theme of the workshop and for the same purpose it has been felt appropriate to review them in the same order in which the two were prepared.

Education for Rural Development consists of six chapters, which are based on the five studies carried out by number authors including the editors.

As the initiative of the ERP Flagship, the book is an excellent addition to the literature available on the subject and will be an eye-opener for the policy makers of the various countries. The box items in the various chapters are 'an idea bank' for a serious implementer in any country. Although situations may vary in the countries but adaptable solutions are available in the book. They are very interesting and they have made the book very absorbing for the reader. But, we are not aware whether the team visited the areas for an on-the-spot evaluation or the information is based on the reports of the sponsoring Government or non-Governmental agencies. In such cases, there is a possibility of biased reporting for selfish motives. The flow charts, maps and the tables are self-explanatory and are used in an ideal manner.

The reports have covered a vast gamut of countries and most of the affected areas of the world. There is no doubt that this is a very serious attempt by the IIEP in achieving the global goals of EFA. The 'lessons learnt' from the programs of the various Governments are very interesting and offer very useful reading. The book aims at drawing operational lessons to guide countries in the reform of their education, training

and rural development policies. It also reviews the status of rural education from the standpoint of public policies and their conceptual framework.

The studies will act as points of reference in finding ways of developing education in rural areas and contributing more effectively to rural development. The five studies, that have been carried out very systematically and reported in a lucid style, will definitely help consultations with the countries at the national and international levels so that the needs of the rural people from education are truly taken care of. The studies as a prelude to the workshop at Rome are well placed and make a well-meaning effort. The initiative aims at achieving education for the rural people, by the rural people and of the rural people, so that the efforts of the international and national initiatives are a success. It is a very exhaustive book and hence it will definitely act as a tool to support the strategies on Education For All. There are very useful references in the book in every chapter, which provide exposure to the literature available and authors on the subject in various countries. This will enable comparative studies by interested authors.

The book – Education For Rural People – is a follow up of the Seminar organized for ERP and hence is a brief of the other book. It consists, apart from executive summary, introductory notes, list of participants, preliminary programme and announcements on the launch of the new flagship, of seven chapters:

The various chapters are a report of the proceedings of the sessions of the workshop, which were based on the studies organized on the subject. The last chapter gives a list of the 'show and tell presentations made in the various sessions along with the name of the presenter.

The two agencies the FAO and the UNESCO are leading all the initiatives in this direction of achievement of ERP which is no doubt has to be achieved for the final goal of EFA. The executive summary gives the purposes of the flagship, (ERP) and that of the aid agencies workshop and gives a short account of the contents of the various sessions. Interesting part of the book is the points discussed by the panel that participated in the session, based on the studies made on the topic.

The book is a gist of the previous book and is an abstract of the presentations made at the Seminar at Rome. The UNESCO-FAO combine has identified nine specialized flagships for EFA and the ERP is the last and the most recent of them. There is a call to the participating nations of the EFA initiative on four priorities as emphasized by the Director-General for the new flagship. They are:

- Nations should have rural education as the core, promoting and supporting initiatives that will expand rural people's access to education and improve the relevance of educational programme to rural interests and livelihoods.
- Increasing attendance and completion rates at schools need to be promoted and supported by enhanced quality and ranges of measures suitable to countries.
- There is a need to improve relevance of educational programs to rural interests and livelihoods.

- There is also a priority for the international aid agencies to work together and forge closer and more effective partnerships with nations and other bodies. Hence, the flagships need to work at national and international levels, both by providing technical support in ascertaining the needs of the people and also draw up plans and sub-plans to achieve EFA.

The appendices in the book include a list of participating countries and agencies with the contact names, addresses, both postal as well as electronic, the programme of the workshop and 'The Announcement on the Launch of the New Flagship'. The flagship objectives given in the book are a true reminder of the situation obtaining in various countries on the quality and access to basic education and the need to foster the national capacity to devise and implement basic education plans and address to the needs of rural people. The activities suggested in the appendix after the seminar and the meetings planned out are a proof to the continuing efforts of the UNESCO-FAO combine.

The books are very useful reading for academicians, research scholars and policy makers of the Government, and the Ministry of Human Resource Development of all the countries. The second book, as a concise form of the first one, can be read first and areas of importance can be identified if the reader is interested in selective reading and is running short of time. The cover page of the books is attractive and the paper used is of very good quality. Electronic addresses are available for downloading a number of speeches made at the workshop. This will help interested users of the studies to a great extent.

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Eric A. HANUSHEK (ed.): ***The Economics of Schooling and School Quality***: *Volume I: Labour Markets, Distribution and Growth,* pp. 436 plus indexes; *Volume II: Efficiency, Competition and Policy*, pp.522 + indexes; The International Library of Critical Writings in Economics No. 159. An Elgar Reference Collection, Cheltenham, UK: Edward Elgar, 2003, (hard bound), Price: £225.00 (2-volume set) ISBN: 1-84064 828 7

The two-set volume under review is the 159th in the International Library of Critical Writings in economics series of thematically organised compilations of Edward Elgar, a series edited by Mark Blaug. The two volumes together contain 33 excellent defining contributions in the field authored by about 45 leading authorities in the area of economics of education. The contributors include some of the pioneers in Economics of Education, and other famous experts such as Jacob Mincer, Milton Friedman, Finis Welch, George Psacharopoulos, Sherwin Rosen, Robert Barro, Edmund Phelps, Alan Kruger, Edward Lazear, etc., in addition to Eric Hanushek, the editor himself. The papers are reprinted here from top class journals such as *Economic Journal, Journal of*

Economic Literature, Journal of Political Economy, World Development, American Economic Review, Review of Economics and Statistics, Quarterly Journal of Economics, Journal of Human Resources, and *Journal of Labour Economics*. The set covers a period spanning over four decades, starting from Milton Friedman's 1962 article on the 'Role of Government in Education' to Edward Lazear's 'Educational Production' published in 2001.

Economics of Education has a close interface with four other areas of economics, viz., theory of firm, labour economics, economic growth and distribution, and public economics and finance. While the stupendous growth in research in Economics of Education cannot be adequately packed in about a thousand pages, the editor has done a commendable job of selecting some of the best available research on these core aspects of Economics of Education – labour markets, distribution of wages, economic growth, school efficiency, finance and policy and competition between government and the markets. The two volumes are rich in content, and hence, should be warmly welcomed. The set provides a good mix of theoretical, methodological and empirical aspects and policy issues. Not only students and researchers in Economics of Education, but also those interested in economics of growth, wages, labour markets etc., will also benefit from the collection.

A few striking features of the selection are worth noting: the two-volume set does not attempt at providing a comprehensive view of economics of schooling; the issues chosen are highly selective. While the first, of the two, covers a more familiar ground, focusing on human capital, wages, labour markets, distribution of wages, and economic growth, the second volume concentrates on education production function, quality, efficiency, educational achievement, financing issues, etc. Particularly educational production has not attracted the attention of many researchers. In this sense, the second volume on 'Efficiency, Competition and Policy' and particularly the articles in part I that focus on production and efficiency in public schools, education production functions, class size and scholastic achievement, and part II dealing with competition among public schools, Catholic schools, parental choices etc., can be of particular interest, though the first volume also has some articles of current policy and intellectual interest. Financing mechanisms of schools, including specifically school vouchers constitute yet another set of important issues that is reemerging and quite a few contributions (e.g., by Thomas Nechyba, Dennis Epple, Richard Romano, and Cecilia Rouse) discuss various dimensions related to vouchers and various alternative methods of school finances (e.g., by Sheila Murray, William Evans and Robert Schwab and Caroline Hoxby). In both the volumes, there is some special emphasis on quality of schooling, including cognitive and labour market skills. Further, the question on whether education causes growth, which has re-emerged again, also receives serious attention in the books under review.

In all, this set of volumes can be considered as complementing a few other publications brought out in the same series, such as No.17: *The Economic Value of Education* (ed: Mark Blaug) [see the review in this *Journal*, April 1992], No.40: *Recent Developments in Economics of Education* (eds: Elchanan Cohn and Geraint Johnes)

[reviewed in this *Journal*, October 1994] and No.165: *Economics of Higher Education* (eds: Clive R. Belfield and Henry M Levin) [reviewed in this *Journal* October 2004]. Taken together, the four cover a wide spectrum of issues in Economics of Education, though one might find a little bit overlapping, in fact, duplication of a few articles. They seem to have been planned almost independently of each other. But that's not an important weakness. There is no reference in the present set of volumes to the other three volumes or to other major compendiums on Economics of Education (e.g., George Psacharopoulos: *Economics of Education: Research and Studies,* or Martin Carnoy: *International Encyclopedia of Economics of Education,* both by Pergamon). The five and a half page introduction by the editor gives a succinct summary of the various papers included in the volume, but does not place this volume in the broad context of voluminous research compendiums and anthologies produced in the area.

The second important striking feature of the set is: a vast majority of the papers included in the volumes are those that were published during the 1990s and later. Only two papers of the 1960s and four of the 1970s, a period during which there had been a virtual explosion of research in economics of education are included here. So, in a sense, these two volumes are much more contemporary in their nature and coverage.

Third, such compilations would be of particular interest and of significant use if they contain rare and otherwise hard to access articles. But not only the articles included in this set are relatively recent, having 27 out of 33 articles been published in the 1980s and later but are also those that have appeared in standard popular journals in Economics, that an average student in Economics can easily access in many developing countries like India, not to speak of the students in the West.

Fourthly, not only all the journals and books, from which the several articles were reprinted, are those published in the west, but also all the contributors belong to the developed world. Even the geographical area of their research is the first world, except in case of studies that involved cross-nation analyses, like Robert Barro's 'Economic Growth in a Cross Section of Countries,' Psacharopoulos' global update of 'Returns to Investment in Education,' Mark Bils and Peter Klenow's 'Does Schooling Cause Growth?' and Hanushek and Dennis Kimko's 'Schooling, Labor-Force Quality, and the Growth of Nations.' What is surprising is the non-recognition of research conducted outside the first world by researchers in developing countries or by researchers on the developing countries.

While these aspects do not diminish the importance and value of the set, which does serve beyond doubt a valuable reference volume, it can certainly be said that the value of these volumes would have been considerably enhanced, had their scope been expanded beyond the western hemisphere, and if some old and rare articles were also considered.

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