

INTRODUCTION AND REVIEW OF LITERATURE

In recent years the awakening of interest in Early Childhood Care and Education (ECCE) has stemmed from a number of different reasons. Primarily, the concern has grown out of the belief that children's experiences in early years have a significant effect on later development including effects on subsequent school performance. Other factors that are responsible for this interest include; mother's employment which curtails child care, changes in child care patterns and a pressing need to increase primary school coverage. With improvement in child survival rates, the focus of attention now also encompasses care and education of the children. The results from researches on effects of ECCE have further led to increased emphasis and enormous expansion of early childhood programmes.

The renewed focus in these programmes has been on the care, education and development of the disadvantaged child, because a number of limitations are posed on children who belong to marginal populations or extreme poverty groups. These children are exposed to many adverse conditions, emanating from economic constraints, experiential limitations, lack of stimulation in their environment and inadequate educational facilities. Intervention is therefore an attempt to break the cycle of poverty by enhancing children's development at an early stage of their lives. It becomes necessary to intervene because there is an expectation that if the individual is left to the natural

course of events, the outcome is likely to be less than satisfactory (Horowitz & Paden, 1973).

The effort of intervention programmes therefore is to redirect the anticipated trajectory of development in order to alter the negative effects on social, cognitive and behavioral outcomes (Sigel, 1972; Sigel, 1990). This knowledge base if translated into workable programmatic operations can further help in building the theory and theory may change as needed to maintain the effectiveness of the programme (Sigel, 1990). Intervention programmes and their evaluations have been in operation for number of years but a major issue still concerns both the proponents and critics of early intervention programmes. The issue~~s~~ is : Does early intervention have an impact on children from the extreme poverty groups?

The present review therefore attempts to consider research related to influence of early intervention on children's subsequent development. The purpose is to document literature on the following major aspects :

- o Theoretical perspective underlying early intervention programmes.
- o Principal features of impact of early intervention studies conducted in developed countries.
- o Intervention programmes and their impact as reported from developing nations with specific reference to Integrated Child Development Services (ICDS) in India.
- o Issues involved in evaluating early intervention programmes.
- o Perspective of quality in early intervention programmes.

- o Role of home in influencing child's learning and development.
- o Factors within the school affecting child's learning.

Theoretical Perspective Underlying Early Intervention Programmes

Both in the developed and the developing countries, early intervention programmes have shared a common theoretical perspective as the basis for their planning and implementation. The social and cultural milieu poses many limitations on children from poverty groups, thereby hindering their development (UNESCO, 1983). Intervention programmes also referred to as environmental enrichment programmes are therefore designed with an aim to reduce the number of individuals who fail to acquire the necessary skills. It is believed that such programmes enrich the existing environment in specific areas of experience which affects individual's development (Horowitz & Paden, 1973).

Intervention theory, its practice as well as evaluation has been the concern of developmental psychologists and early childhood educators. The current view of effective developmental intervention has been a result of various theoretical assumptions. Reese and Overton (1980) present an indepth analysis of various models, methods and goals of intervention. Turner, Connell and Mathis (1980) mainly put forth two general models which justify a sound rationale for different views of intervention. These models, as has been explained by authors, are not discrete but represent end points on a set of dimensions that describe intervention strategies. The narrow end of these

dimensions defines the treatment model. Intervention programmes involving preschoolers have been developed using this model as the frame of reference. The broad end of these dimensions describes the service model. Large scale intervention programmes like Head Start and ICDS come under the purview of service model. These models have been responsible for gearing policy inputs towards developmental intervention.

Treatment as explained by Turner, Connell and Mathis (1980) involves intervention within an experimental or quasi-experimental design. The deficit and difference intervention models fall under the purview of treatment model. These models assume that individual either lacks something (deficit) or possesses something which is not maximally functional (difference). In either case, a series of events that are designed to change the individual in a specific way or for a specific purpose are suggested by those who propose treatment model.

In contrast, the service model is need based and the underlying theory behind this model is often implicit. It implies that intervention programmes should provide specific services in response to the identifiable needs of the individuals. Policy makers are becoming increasingly convinced with service model, as an effective strategy for early intervention programmes (Turner, Connell & Mathis, 1980).

As noted by these authors, a complex set of forces have produced changes in the nature of the programmes underlying these

intervention models. The direction of this change has been towards increasingly comprehensive programming that involves the child's total learning environment rather than the child in one particular setting. These changes have been mainly influenced by Bronfenbrenner's (1979) ecological perspective and Sameroff's (1975) transactional approach to the study of child's development.

Bronfenbrenner (1979) defines development as a lasting change in the way in which a person perceives and deals with the environment and therefore a need to study development within context. Bronfenbrenner (1986) also examines the influence of external environments on the functioning of children and families as a context of human development. His approach recognizes that children's learning and development is rooted not just in a single setting like home or school but is also influenced by interrelations between the settings. Further, he notes that development is affected by events occurring in settings in which the individual is not even present.

The role that children's environmental contexts play is also explicated by Sameroff's (1975) transactional model. The view point that is put forth emphasizes the fact that effects on learning are a result of complex interplay of variables in home and school. Moreover, children themselves play a role in maximizing or minimizing these effects through the images they project about themselves.

The underlying assumption behind the perspectives expounded by Bronfenbrenner (1979) and Sameroff (1975) recognize the multiplicity and complexity of children's learning environments. Therefore, in planning or evaluating intervention strategies, there is a need to account for various mediating processes that arise from these environmental contexts. This would help in planning programmes that focus on holistic development of children and broaden the dimensions of investigation.

Understanding of theoretical perspective behind early intervention programmes becomes important because theory and practice as observed by Reese and Overton (1980) are inseparable because they interact reciprocally, each generating and generated by the other. Theory guides intervention practice as well as its evaluation, and practice in turn clarifies and broadens the theoretical assumptions. Furthermore, generation of a sound psychosocial theory of intervention calls for the involvement of many disciplines; anthropology, sociology, education, developmental and social psychology. This is essential in order to tackle the manifold problems encountered in identifying the relevant social, economic, and psychological factors involved in early intervention (Sigel, 1990).

Sylva (1990) while attempting to discern the role of psychological theories in guiding the design of future evaluations, mainly stresses on the work of Piaget, Dweck and Vygotsky. A conclusive analysis of their theoretical view points, as explained by Sylva (1990) reveals that early education

programmes, over and above other outcomes, should inculcate positive beliefs in children regarding their skills, encourage them to be learning oriented, help them acquire resources for dealing with stress of failure and an understanding that intelligence is not given but can be acquired through persistence. This should form the basis for planning as well as evaluating early education programmes.

In summary, the theoretical view points emphasize the need and importance of early intervention programmes for disadvantaged children. The focus of developmental psychologists has been on theory, practice as well as evaluation of early intervention. Various theoretical assumptions are expounded to explain an effective intervention. But basically treatment and service models provide a convincing argument in favour of intervention programmes. Both these models are reflected in the framework of ICDS programme, although service model assumes a greater explanatory power for a large scale programme like ICDS. Like other intervention programmes ICDS also bears the responsibility of minimizing the detrimental effects of disadvantaged environments. Hence, a need to plan, implement and evaluate the programme focusing on child within context, seems rather obvious.

The growing emphasis is on involvement of child's total learning environments and accounting for the various processes mediating from these environments. This would help to focus on child's overall development thereby widening the scope for assessment of outcome measures. If programmes are planned and

implemented against this theoretical backdrop then the question one is inclined to ask is : Do the programmes have a measurable impact on certain specific outcome measures in children ? The ensuing section focuses on the impact of early intervention firstly, with reference to developed countries and secondly, in the context of developing nations.

Principal Features of Impact of Early Intervention
Programmes as Reported from Developed Countries.

Numerous programmes have been implemented in U.S.A. for children from disadvantaged sections in the past three decades. These programmes have been assessed to determine both short and long term benefits for the participating children. The present review does not delve into the details of the various programmes and studies, but is delimited to mentioning the principal features of the studies. As is evident from the literature, the most frequently studied variables have been IQ, cognitive abilities and academic achievement, but since the focus of evaluations has been diverse the results reported have been quite varied.

Studies that used IQ as the major indicator for determining programme effectiveness either reported no gains or gains that diminished over a period of time. Another important admission was that those children who attended structured programmes showed the greatest improvement (Bissell, 1973). Researches also highlighted that programmes which were intense and emphasized on involvement of parents had more lasting effects (Horowitz & Paden, 1973).

Studies which aimed to explore the relative effectiveness of different models indicated positive effects for children in those programme models which focused on inculcating basic skills rather than broad academic goals. The results also suggested that there was no single approach which could be used in an identical manner across different settings (US Department of Health Education and Welfare, 1977).

A major early childhood intervention initiated in U.S.A. in 1965, which merits special mention was the Head Start Programme. The leit motif of this programme was that early education, parental involvement and provision of some basic services would enable disadvantaged children to function at par with their middle class counterparts. There have been numerous investigations and follow up evaluations to determine the influence of Head Start on children's performance and development. The results of early evaluation studies were encouraging as they demonstrated effectiveness of the programme on children's intellectual abilities mainly; I.Q. and later schooling. (Mann, Harrell & Hurt, 1977). Thus, highlighting the value of compensatory programme for disadvantaged children.

These promising lines of research however, became discouraging when researches demonstrated that immediate advantages to participant children gradually diminished over a period of time. Most important was the reporting of "wash out" effects (Westing House Corporation, 1969); due to which policy decisions were affected and funding for early education programmes was drastically reduced. Critics began to question the

justification for investment in early intervention programmes. Other researches also demonstrated that effects were lost within a year or two after programme termination (Bronfenbrenner, 1974; De Lacey & Nurcombe, 1977).

These findings necessitated long term follow up of children who had attended early education programmes. The ETS- Head Start Longitudinal Study (Shipman, 1971), which followed children's progress from age 3 1/2 through 3rd grade, found that children who experienced a mutual and collaborative family and school support system were more likely to demonstrate cognitive gains on tests. Furthermore, an extensive review which assembled numerous evaluations of Head Start Programme, indicated that children who participated in Head Start programmes showed improvements in performance on standardized intelligence tests, later reading achievement, social development and performed better than or equal to their peers when they began school. Majority of studies also reported improvement in parenting abilities and parent's satisfaction with the educational gains of their children (Mann, Harrell & Hurt, 1977).

In tracing the durability of effects of early intervention on children from poverty groups; optimistic assessments regarding long term benefits have been supported by Gray and Klaus (1970). Here the work of Consortium for Developmental Continuity remains unique as it was based on collaborative efforts wherein data from eleven research projects was put together (Lazar, Hubbell, Murray, Rosche & Royce, 1977). The attempt of combining

results of various researches, conducted across a long time span, using different methodologies does have certain inherent measurement problems which may question the conclusions drawn. Yet, some of the salient aspects of the findings in terms of their long term effects are tenable.

In the above mentioned study children who had attended early childhood programmes were followed when they were in the age range of 9-19 years. Results highlighted that programme children were less likely to be retained in grades or assigned to special education classes and showed gains in mathematics and reading tests. An added dimension to the findings was that programme children rated themselves better than the controls and gave achievement related reasons for being proud of themselves (Lazar, Hubbell, Murray, Rosche & Royce, 1977).

Of special significance have also been the findings from the Perry Preschool Project, which indicated better academic achievement of preschool children lasting till their eighth school year. Programme children were more likely to have opted for higher education and were employed. The strength of the study has been in finding the relationship between preschool participation and adult behaviours beyond school success (Clement, Schweinhart, Weikart, 1983). Information on effects of early childhood programme, especially on children's development, primary school progress and performance has also been provided through longitudinal evaluations of compensatory programmes for children from disadvantaged sections in United States, Australia and Europe (Myers, 1989). In short, well

planned early intervention programmes have been deemed essential for improved academic performance of children from poverty groups (Lee, Gunn & Schnur 1988; Zigler & Muenchow, 1984).

Apart from long term benefits reported through the above mentioned studies, important insights are also provided through the description of early childhood services in 14 countries (Olmsted & Weikart, 1989). The countries which range from developed to developing included; Belgium, Germany, Finland, Hong-Kong, Hungary, Italy, Kenya, Nigeria, China, Phillippines, Portugal, Spain, Thailand and United States. Each nation's profile of child care and education is explicated in terms of its history, demography, child and family policies, current status and future issues. Useful policy implications have emerged from this cross national and national data. As discussed by authors, nations can compare the relative effectiveness of various national systems of care and education and ultimately use the information for planning preprimary programmes in their own countries.

Research findings and insights that have emerged from developed countries to an extent have relevance in the context of developing world. Primarily, early childhood programmes in the developed countries have stimulated the need to focus attention on children from poverty groups. Secondly, they have clearly pointed out the importance of investing in similar programmes so that they can become supportive in achieving long term developmental goals for children (IDRC/UNESCO/UNICEF, 1988).

Long term effects reported from U.S.A. have also given rise to the need to determine whether and under what conditions same results can be expected in the context of developing countries (Myers, 1989). This becomes necessary because the situation of disadvantaged children in developing countries is more adverse than in developed countries. Not only is the extent of poverty among the marginalized population more than the developed countries, even the population to be covered is vast, making it a difficult and an arduous task to implement intervention programmes purely based on studies from the developed world.

Intervention Programmes and their Impact as Reported from
Developing Nations

In the context of developing countries, the increasing emphasis on early childhood care and education programmes is clearly evident through the rapidly expanding programmes. A conscious effort is being made to reach poor children and their families. For instance, in India the Integrated Child Development Services (ICDS) has expanded at an unexpected pace, from 33 experimental projects covering 40,000 children in 1976 to 1300 projects covering 5 lakh young children in 1986. In Sri Lanka, all five year old children are being covered by decreasing the age of school entry to five years and converting the first year of the primary school to kindergarten. ECCE programmes in Thailand are able to serve 24% of preschool age children, while in Phillipines 19% of young children are covered through structured centre based programmes. The enormous

expansion of ECCE programmes is also observed in other countries like Brazil, Peru and Kenya (IDRC/UNESCO/UNICEF, 1988).

Countries like Argentina, Bolivia, Chile, Colombia, Morocco, and Malaysia have also emphasized the need and importance of early intervention. It is indicated that if intervention is intense and begun earlier, it has a positive effect on subsequent grade achievement, atleast until the third grade (Mckay & Mckay, 1983). Perhaps the most interesting finding is the one from Brazil which shows that even with one year of attendance at preschool children are apt to be more successful in school compared to children with no preschool experience (Carmen & Feijó, 1983). Although, results suggest that investment in early intervention is worthwhile, researchers have also cautioned against expecting a single year of preschool programme to result in educational miracles (Tizard, 1974; Woodhead, 1988).

However, it is now generally recognized that early intervention increases children's responsiveness to school. Studies carried out in Asia, Latin America and Middle East demonstrate the potential benefits of early intervention on children's enrollment, progress and performance in primary schools (Halpern & Myers, 1985; Halpern, 1986; Myers, 1989). Of importance has also been the Comprehensive Enrichment Preschool Programme initiated in deprived settings of Turkey. The superiority of this programme has been evident over the custodial day care provision. Evaluative findings have highlighted the success of the programme in terms of fostering children's cognitive and social development. Central to this programme has

been the mother training project which directly affected mother's abilities with positive changes in children's development (Kagitcibasi, Sunar & Bekman, 1988).

Evidence regarding preschool effectiveness is also reported from a four country study : Argentina, Bolivia, Colombia and Chile. In this study, attendance at preschool was found to have significant positive effects on the age of 1st grade enrollment, especially for low SES children and urban/rural populations in Argentina and Chile. However, negligible effects were found in Colombia and Bolivia. Similarly, significant positive effects were noted on school readiness in Argentina and Chile, but not in Colombia and Bolivia. Preschool attendance was found to have a facilitative influence on children's school promotion in Argentina and on reading-writing ability in Argentina as well as Bolivia (Flip, Donoso, Cardemil, Dieguez, Torres & Schiefelbein, 1983).

Impact of early intervention has not been limited to South American countries but is also reported in South-East Asian countries. Modest positive effects of preschool intervention on children's school performance have been observed from evaluations carried out in Haiti and Bangladesh (Halpern & Myers, 1985).

Preschool Education and Intervention Studies in the Indian Context : India a major South-Asian country has since early nineteenth century realized the significance of preschool years. As mentioned earlier, poverty and large population of children in the early years has made it mandatory for India to review its

policies for the young child. Therefore, the review examines the state of early education at the national level; firstly, with specific reference to significance of research related to early years and secondly views the historical development of preschool education movement in the country.

Findings from research related to preschool education have justified the investment in children's early years. The superiority of preschool children in language, intellectual development and readiness has been consistently reported by research studies (Muralidharan & Banerji, 1974 ; Muralidharan & Banerji , 1975). Preschool children have been found to perform significantly better than the unschooled ones on various measures of comprehension and intellectual ability (Mohanty & Mohanty, 1985). The experience increases children's retention power and also reduces stagnation in school (Dass & Garg, 1985).

Research reviewed shows that there has been considerable focus on language development. Performance of socially advantaged groups has been better than disadvantaged groups (Chakraborti & Kundu, 1986) ; with a positive correlation reported between SES and language development (Mohite, 1979) . Studies attempting to establish norms in this area have shown urban population to be ahead of their rural counterparts (Bevli, 1974).

Preschool experience has also been found to be instrumental in preparing children for school. Singh, Gopal and Murty (1978) found that attendance at preschool was associated with achievement in reading, writing and better school adjustment.

Research identifies the importance of compensatory intervention for the disadvantaged children. If disadvantaged children are trained on specific cognitive tasks, it considerably improves their performance on other related cognitive skills (Dash & Rath 1985). Moreover, improvement has been found to be proportional to the degree of disadvantage. Both school going (not disadvantaged) and non-school going (disadvantaged) children were found to show improvement in cognitive skills after the training but the improvement was greater for the non-schooled disadvantaged children (Dash & Rath, 1985).

Other investigations have shown that specific intervention can improve children's language and scholastic readiness (Basu, 1976; Pate, 1976). In addition, it has been established that training need not necessarily focus only on children but both children and teachers could be exposed to some form of readiness programme at the beginning of first grade. This strategy of action based research has been found helpful in minimizing the influence of disadvantage on children and preparing them for formal learning process (Asher, 1980 ; Barkataki, 1981; Guha, 1979; Gupta, 1980; Mistry, 1983; Shah, 1980).

While attempting to decipher essential features of studies conducted in the Indian context, it would be important to mention here the major early childhood care and education programme initiated in India i.e; Integrated Child Development Services. Before discussing the details of this programme and its impact which forms the focus of the present review, it would be

appropriate to briefly examine the various events and activities as discussed by Muralidharan (1980); which led to the initiation of ICDS programme in India.

Historically, if one attempts to trace the advent of preschool education in India, it dates back to early nineteenth century. European missionaries first introduced the concept of kindergarten education in India. In 1920, the work for child education was initiated through the establishment of Nutan Bal Shikshan Sangh in Maharashtra. Madame Montessori's visit to the country further gave impetus to preschool education as a number of montessori schools were started in Gujarat, Maharashtra and Madras. Gijubhai Badheka and Tarabhai Modak have been the pioneering forces responsible for stressing the need for preschool education in the country. Tarabai Modak's significant contribution has been the starting of preschool teacher training institute in Maharashtra and her outstanding work with tribal children in Kosbad, which still continues to focus on indigenous and relevant pre-school programmes as well as training programmes for grass root level personnel.

With the establishment of Central Social Welfare Board in 1950; sponsored programmes and grant-in-aid programmes for voluntary organizations gained emphasis. Following this, the Balsevika training programme to prepare personnel for working with children was started by Indian Council for Child Welfare. In 1963, a child study Unit was opened at the National Council of Educational Research and Training by Ministry of Education. The purpose of this unit was to conduct studies related to children

and delineate methods for childhood education. Further, in 1966, the Kothari Education Commission formulated recommendations which emphasized preschool services for all children and especially the aim was to reach disadvantaged children. The establishment of National Institute of Public Co-operation and Child Development (NIPCCD), gave further impetus to child centred programmes. Finally, in 1971, the Ministry of Education set up a study group to prepare a programme of action to focus on the development and education of the preschool child.

Thus, many individuals and organizations have been responsible for making a case for early childhood education. Important contributions to this area have also been made through the annual conferences of Indian Association for Preschool Education. On the basis of series of documents, papers and publications, several other individuals have reiterated the need, importance and significance of preschool education (Muralidharan, 1980; Prakasha, 1983; Swaminathan, 1972; Thakkar, 1984).

The historical background along with the results of intervention programmes from developed and developing countries set the stage for an intensive integrated programme for early years in India. Hence, in 1975, the introduction of ICDS has been a major step towards meeting the needs of disadvantaged children in the country.

Integrated Child Development Services (ICDS) : The need to foster integrated development of children from poorer section of the society, specifically gained support through the introduction

of ICDS programme in 1975 by the Ministry of Social Welfare. At present ICDS is the major ECCE programme in the country, covering one fourth of the total child population. The programme is functioning in urban, rural and tribal areas in all the states of the country. ICDS offers a package of services in the areas of health, nutrition and education to children in the age range of 0-6 years and their mothers. The centre where the beneficiaries receive various services is known as the "Anganwadi". Anganwadi which means a courtyard^{play centre} has been named so because when the programme was initiated, effort was to start an AW centre in all the communities with more than 1000 population using the space available in the community. This place could be a courtyard, a temple verandah or even some place under a big tree.

The Anganwadi (AW) is run by an Anganwadi worker (AWW) who is a grass root level worker preferably from the same community with a minimum required educational qualification of 7th-10th standard. She is assisted by a helper. These AWW's are selected on the basis of common criteria of education and experience level, which is laid down by the Central Government. The workers receive a three month pre-service training at an academic and non-governmental training institute. The workers are paid a small honorarium but are responsible for number of tasks. AWWs are monitored by the supervisor. The child development project officer, the lady health visitor, auxillary nurse midwives and a doctor from primary health centre form a team with the workers and supervisors to implement various aspects of the ICDS

programme. Ministry of Social Welfare at the National level coordinates the ICDS programme in all the states.

The prime effort of the programme has been to cover a vast population of children and their mothers. In meeting this objective, a number of practical constraints affect the quality of the programme. These include; budgetary limitations, inadequate infrastructure, low staff salaries, lack of trained personnel and ineffective coordination among various departments, training institutes and different levels of functionaries. Besides this, there are too many demands on the worker for meeting the requirements of various services provided under the scheme. This further affects the programme and its effective implementation.

Non-formal preschool education in ICDS Non-formal preschool education is one of the important services provided under ICDS; the other services being health, nutrition, health and nutrition education and community participation. Non-formal preschool education aims to fulfill the following specific objectives (NIPCCD, 1984) :

- i. To organize preschool activities in the Anganwadi for about 40 children in the age group 3-6 years, which should be largely centred around play and recreational activities to meet the developmental needs of children.
- ii. To inculcate among children habits of personal cleanliness within their homes and surroundings.

- iii. To develop in children desirable attitudes, values and behaviour patterns through environmental stimulation and to strive to satisfy the curiosity of the child and to channel it in a creative direction.
- iv To design, collect and improvise play equipments, toys, teaching aids etc. from locally available materials, to be used for preschool activities.
- v. To maintain link with primary school teacher for assistance in organizing preschool activities for children.

Apart from these specific objectives, non-formal preschool education has a major aim to fulfill namely; reducing the incidence of school drop outs by facilitating children's primary school progress. Although, there have been criticisms and weaknesses both with regard to organization and implementation of the non-formal preschool education, the immediate effects of exposure to this service have been found to be positive. The research evidence which indicates the impact of non-formal preschool education is presented year wise in a tabular format (refer Table 1); followed by the salient points which emerge from the researches.

TABLE 1

Impact and Evaluation Studies Related to Non-formal Preschool Education of ICDS

Name of the Researcher/Year	Place of study	Sample studied	Major Findings/Observations
Muxlidharan and Kaur (1983)	Bastar Tribal ICDS Project in Madhya Pradesh	144 tribal children of ICDS block	<ul style="list-style-type: none"> o The AWW's if given an intensive and adequate training are capable of influencing language and cognitive skills of children who are at extreme disadvantage. These changes were noticeable within a short time span of 7-11 weeks.
Khosla & Kataria (1986)	Urban, rural and tribal ICDS projects from Delhi, Karnataka, U.P., Assam, Manipur and Rajasthan	25 randomly selected AW centres from rural, urban and tribal projects in the states of Karnataka, U.P., Assam, Manipur, Rajasthan and Delhi.	<ul style="list-style-type: none"> o Children attending AW scored higher in all tests consistently than the non-attenders, although the difference was significant only in listening comprehension, sequential thinking and time perception. Males were found to score higher in cognitive tests while females performed better in language tasks.
Anand Lakshmy and Sharma (1986)	ICDS urban project in old Delhi	64 children in the age range 4-6 years from the AWWs assessed as high and low were selected. 16 children were included in the non-ICDS sample. The mothers of these children were also included in the study. 40 children who had been to AWWs and were enrolled in I and II grades of Municipal schools were also selected for the study.	<ul style="list-style-type: none"> o Children who had attended highest rated AW had highest scores on all developmental tasks (motor, language conceptual and personal social). The performance of non-ICDS children was low. Awareness and involvement of mothers from highest rated AW was higher compared to mothers from lowest rated AW. o There was no noticeable difference in the school performance, as rated by the class teachers, between the children who had come from AW and those who had not.

Table 1 Contd....

Name of the Researcher/ Year	Place of study	Sample studied	Major Findings/Observations
Mistry, Kaul & Dhar (1986)	Baroda urban ICDS project	60 ICDS children and 20 non-ICDS children in the age range of 3 1/2 to 5 1/2 years were selected from the highest and lowest rated AW. A total of 191 children which included ICDS and non-ICDS children were drawn from first three grades of local primary school.	<ul style="list-style-type: none"> o Both the ICDS group from the two AWS scored highest in the area of conceptual and readiness skills. There was a significant difference among the ICDS and non-ICDS children in their developmental skills which was in favour of ICDS children. o ICDS children from highest ranking AW performed better than their non-ICDS counterparts on academic performance and school adjustment in first two grades but in third grade non-ICDS children were performing better. o Children from lowest ranking AW adjusted better in the school but the picture in academic performance was not very clear.
Tarapore Deshpande & Pendse (1986)	Junnar Tribal ICDS project in Pune District	64 children from ICDS preschool were compared with 16 non-ICDS preschool age children. 40 ICDS and 20 non-ICDS children were selected from I and II grades of primary school.	<ul style="list-style-type: none"> o Children from highest ranking AW performed better than the children from lowest rated AW and the non-ICDS on developmental tasks. o In the older group more children from highest rating AW than lowest ranking AW and non-ICDS could perform complex developmental tasks. o Results on teachers rating scale showed that majority of children from all three groups were at average level of performance. In standard II the mean scores declined in all skills for children from lowest ranking AW and non-ICDS showed improvement.

Table 1 Contd...

Name of the Researcher/ Year	Place of study	Sample studied	Major Findings/Observations
Sood (1987)	Mangolpuri Urban ICDS Block in New Delhi	The ICDS sample included 64 preschool children from highest and lowest rated AW their mothers and 40 children studying in grades I and II in the primary school. The non-ICDS sample included 16 preschool age children, their mothers and 40 children studying in class I and II of primary school.	<ul style="list-style-type: none"> o The ICDS group performed better than the non-ICDS group on all aspects of development. The directionality of better performing Anganwadi within ICDS group could not be established. o Almost two thirds of ICDS mothers gave socialization as one of the reasons for considering it essential to send their children to Anganwadi. They also felt that attendance at AW was essential to prepare the child for school. o The school performance of children who had graduated from AWs as compared with those who had not was better in class I and II. Although mean performance of children from grade II was lower than that of grade I children.
Chaturvedi, Srivasstava, Prasad, Singh Nirupam (1987)	Rural ICDS Blocks in Rai Bareilly	214 children aged 6-8 years from three randomly selected villages of ICDS block and 205 children of same age from three randomly selected villages of non-ICDS block	<ul style="list-style-type: none"> o A significantly higher percentage of children (89.2%) in the ICDS group were going to school compared to (78.0%) in the non-ICDS group. o In the ICDS group (80.8%) children went to school at the age of 6 years compared to only (66.8%) in the non-ICDS group. o ICDS children were better in regularity, academic performance and their general behaviour in school, compared to non-ICDS children.

Table 1 Contd...

Name of the Researcher/ Year	Place of study	Sample studied	Major Findings/Observations
Lal & Wati (1989)	Kathura Rural ICDS Project	1707 primary school children who had atten- ded AWWs from 1977 to 1981	<ul style="list-style-type: none"> Nearly 70% of the children were enrolled in elementary schools. Cumulative drop out in four years period was 40% the drop out being maximum in first and second year of schooling. Male children's enrollment was found to be much higher than that of female children. Children who had exposure to preschool education of ICDS were adjusted better and their rate of learning during the first two years of schooling was faster.
Sahni & Aggarwal (1989)	Hissar Rural ICDS Project	10 AWW's who were given inter- vention training and 100 children drawn from five villages of ICDS block	<ul style="list-style-type: none"> There was a significant difference between pre and post intervention in the knowledge and skills of AWWs. Children were also found to have gained significantly in their cognitive abilities after the intervention.
Gupta & Rahgir (1984)	Fatehpur Sikri ICDS Project in Agra	Ten AWW's (145 children as experimental group) and five AWW's (125 children as control group). Children were in the age range of 2.6-4.6 years	<ul style="list-style-type: none"> There was no significant improvement in the progress of the children from the control group, who experienced a routine preschool education programme. But children from the experimental group who had undergone the modified preschool education programme indicated significant progress and improvement.

Table 1 Contd...

Name of the Researcher/Year	Place of study	Sample studied	Major Findings/Observations
Adhish, Zaheer, Sinha & Siddiqui (1989)	Aligarh ICDS Rural Project	Two villages from each ICDS and non-ICDS block. 114 children from ICDS area and 108 from non-ICDS area comprised the sample	<ul style="list-style-type: none"> o In the ICDS villages 70.1% of children were average or above average in their intellectual abilities compared to only 56.6% in the non-ICDS villages.
Paranjpe & Paranjpe (1989)	Urban, rural and tribal ICDS blocks in Maharashtra	Urban ICDS block of Bombay, rural ICDS block of Chiplun and tribal ICDS block in Dharni were selected for the study. The control group included adjacent non-ICDS areas. A total of 1,485 ICDS and 1,322 non-ICDS children in the age range of 6-16 years were selected for the study.	<ul style="list-style-type: none"> o 90% children from all three blocks of ICDS area were admitted in schools. 50% children from three projects of ICDS area were still studying in I and II grades whereas nearly 60% from non-ICDS area had passed II grade and were studying in III or IVth grades. o Enrollment rate was high with drop out rate being low for ICDS children compared to non-ICDS children.
Shrivastava & Shrivastava (1989)	Urban ICDS and non-ICDS blocks in Madras city	11 urban ICDS blocks and 5 non-ICDS blocks were selected for the study. Sample comprised of 60 children from ICDS blocks and 60 children from non-ICDS blocks.	<ul style="list-style-type: none"> o Impact of ICDS on problem solving ability in children was evident. The average time taken for successful completion of task by ICDS children was lesser compared to non-ICDS children.
Saraswati (1989)	Urban and rural ICDS blocks in Karnataka State	115 children from AWS of both urban and rural areas, in the age range of 3-6 years.	<ul style="list-style-type: none"> o Findings revealed that urban children were superior in both cognitive and social development compared to rural children. There was also a positive association between cognitive and social development of children.

Salient features that emerge from the research related to non-formal preschool education of ICDS

- o Children attending Anganwadis have been found to score higher on developmental tests consistently than the non-attenders. Impact of Anganwadi is also evident on primary school enrollment, progress and school performance.
- o Influence of ICDS has also been noted on children's cognitive abilities like general intelligence and problem solving abilities.
- o Children from urban population have been found to be superior in cognitive and social development, in one particular study.
- o Few studies demonstrate that benefits to participant children decline in primary school by the end of II or III grade.
- o The work in the area has been mostly limited to assessing the impact on direct school related measures. Investigations have not dealt with measuring the impact of ICDS on more crucial indicators like psycho-social development. Clearly such assessments would require more robust measures capable of discerning the important features of programme content and its relation to children's development.
- o Interventions that have aimed at improving the skills of the workers have also proved successful and have directly affected children's cognitive and language abilities.

- o Children with no preschool experience have been compared with ICDS children in most of the researches. Other preschool programmes could be considered for comparison which would help in ascertaining the kind of preschool programmes which are more effective.
- o Studies have also failed to examine long term benefits (if any) on the children who have attended preschool programme of ICDS.
- o Research under this domain should also assist in gaining insights on methodological issues so that some of the difficulties encountered in measurement (especially field level experimental research) could be minimized and the results would be more convincing.

Early education programmes have been evaluated to determine their effectiveness. But programme evaluation, or in other words, evaluation research is beset with many unresolved issues. These issues surface more when research is aiming to evaluate national level large scale intervention programmes.

Issues Involved in Evaluation of Early Intervention Programmes

There are some inherent measurement problems in evaluation research. One of the main reasons for lack of clarity and consistency in the information generated through different evaluations have been the complex problems of measurement confronting the individual. Clarke and Fein (1983) suggest

that when researchers move from laboratory to field, they must give up elegance for the sake of relevance, thereby forfeiting a large degree of rigorous controls used in the laboratory settings. But consequently when this is done, the validity of the information gathered becomes questionable.

In the field, evaluation is further confronted with issues related to randomization, attrition and generalizability. When the focus of research is on evaluating already existing programmes rather than assessing the effects of experimental treatment, assigning children randomly to groups ceases to be a feasible strategy. Another problem centres around simply locating the subjects in the field. A large degree of control is lost by the sheer non-availability of the control group. A related problem that concerns researchers is that of attrition. The problem of attrition becomes more profound when evaluation is carried over a period of time. Problems of randomization and attrition in turn give rise to the issue of generalizability. The question that arises is; to what extent can the findings be generalized when the research procedures are constrained by actual realities of the field ?

In addition, assessment of impact of the educational programmes calls for greater sensitivity in measurement compared to measuring the impact of health and nutrition programmes. Zimiles (1982) points out that as long as programme impact is made the focus of educational evaluations, assessment is bound to be based on what can be measured rather than what should be measured. The author, therefore, suggests that a more definitive

assessment would be to examine actual educational conditions experienced by children and then delineate their potential impact.

Great deal of criticism is levied against the existing modes of evaluation because they are unable to achieve desired level of validity in the information collected. However, criticism should be used in strengthening the means of evaluation rather than eliminating efforts to evaluate (Zimiles, 1982). The author further suggests that attempts should be made to upgrade the quality of evaluation by searching for valid modes of assessment of crucial child variables and the evaluation design should be such that there is more scope for precise control of extraneous variables.

Hence, research in the area of early childhood education apart from reporting on programme impact should shed light on issues related to methodology. Perhaps, in order to design studies with fewer methodological artifacts the plea for longitudinal designs appears to be a necessity. Some of the unresolved issues could be approached by using longitudinal designs. Only evaluations over a period of time would help in achieving a balance between relevance and elegance and in relating children's actual experiences to the derived outcomes. The information thus gained would serve an important guide in this arena of research and also aid in devising programmes that focus on quality.

The Perspective of Quality of Early
Intervention Programmes

The emerging perspective along with impact of early intervention has been the programme quality and its effects on children. Before emphasizing on the importance of quality perspective in early intervention, as Bruner (1980) stresses, there is a need to find out whether quality in education matters more or less in the early years? After raising points both in favour and against the issue, the author concludes that there are certain early attitudes and skills upon which later ones are built. Exemplars are provided in support of the view point by the author. For instance, the author states that it could be possible that a fear of failure, developed early, may inhibit the confident use of mind later or if resistance is built to adults early, it can not be easily shed. In a nutshell, the author argues that although human childhood is marked by plasticity, yet acquisition of early skills affects the mastery of later skills and thereby underlines the significance of quality early childhood programmes for young children.

There has been considerable discussion on influence and importance of quality programmes for young children, but surprisingly the research evidence that would illuminate this perspective has been limited. This has been in view of the fact that the quality perspective suffers from imprecise definition. This point is highlighted by Fuller (1986) while referring to school quality. The author points out that often school quality

is inferred from the achievement level of students, failing to account for the influence of contextual factors. Similarly when reference is made to quality preschool programmes, very little research has been conducted to find out which specific aspects of programme quality are directly related to children's better performance. This becomes essential in order to delineate the crucial indicators of programme quality that need close monitoring.

The implicit assumption being that improving programme quality would help in sustaining the impact of early intervention. Few researchers while comparing programmes that vary in quality suggest that social development per se is improved through high quality programmes, with the caregiver child verbal interaction having a direct bearing on child's development (Jones, 1972; Phillips, McCartney & Scarr, 1987). Investigation conducted in United States highlights that early education programmes of high quality can result in significant long term impact on children from poverty groups. Perhaps the impact may have effect on children's entire lives (Clement, Schweinhart & Weikart, 1983).

Programme quality gains greater importance when a reference is made to a national level programme like ICDS, since substantial capital and human resources are being invested in this scheme. Assessing its impact as well as monitoring its functioning becomes crucial in terms of meeting the laid down objectives and enhancing its quality.

The project on "Monitoring and Evaluation of Social Components of ICDS", by NIPCCD, New Delhi, has been a preliminary step in this direction. The project provided useful information regarding the processes involved in the implementation of the ICDS package. The findings also helped in identification of some crucial and relevant indicators to be included in the monitoring system of social components of ICDS (Sharma, 1987). For instance, in the area of preschool education the indicators that have been delineated for monitoring include; frequency of conducting preschool activities, variety in programme planning, availability and utilisation of teaching aids/play materials and Anganwadi Worker's skills in planning and conducting preschool activities. These indicators thus serve a two fold function. One, they become important guidelines for monitoring, and secondly, they yield information which helps in gearing the inputs in a meaningful direction, so as to judge and improve quality of the programme. Apart from focusing on quality programme, the influence of home needs to be taken into account, since home is an important determinant and a fundamental learning environment for the child.

Role of Home in Influencing Child's Learning and Development

Parents can play a crucial role in reducing the effects of deprivation in their young children. Parent's perception of early intellectual ability in their children leads to earlier and greater enrollment (Irwin, Engle, Yarbrough, Klein & Townsend, 1978). Furthermore, the quality of children's home stimulation

during the early years is strongly associated with their performance. Muralidharan and Banerji (1970) report that regular attendance in nursery school made a significant difference in the intellectual development of children from high stimulation homes. Other researchers document that children's academic achievement is related to the support children receive from parents at home (Singh, 1983). Thus, knowledge regarding nature and content of child's learning environment at home becomes very essential. Tizard (1974) emphasizes that expansion of early schooling would be meaningful only if the learning environments of children at home are also taken into account.

In the context of home, parental indifference has been identified as an important factor hindering progress of learning and education especially amongst girls (Grover, 1987). Other factors found to affect child's repertoire of learning are emotional responsiveness, learning opportunities and disciplinary practices (IDRC/UNICEF/UNESCO, 1988).

Realizing the importance of home and in particular the role of mother in affecting child's development, a number of intervention programmes have focused on educating the mothers so that they in turn can influence child's learning. Various mother education programmes have been developed and implemented to mothers from lower socio-economic strata by the Department of Human Development and Family Studies (HDFS), M.S. University, Baroda.

The findings from these action oriented research programmes have highlighted the importance of involving mothers in child's learning and development, thereby indicating a strong influence on children's learning (Bhola , 1978 ; Boman-Patel, 1983; Desai, 1985; Iyer, 1981; Pradhan, 1976). While reference is made to mother education programme and their importance it would be appropriate to mention here the Home Instructional Programme for Preschool Youngsters (HIPPY) developed in Israel. Lombard (1982) discusses the details of the programme. HIPPY is a home based enrichment programme for disadvantaged children in which a mother works with her young child from the time he is 4 to 6 year old, on a particular set of educational activities. The effects of HIPPY on children have been systematically assessed and replication studies have confirmed that HIPPY improves disadvantaged children's school performance. A considerable impact has also been observed on the participating mothers in terms of changes in their behaviour and attitudes towards children.

Thus, the fact that mother has the greatest influence in home and more specifically on children's learning has been reiterated by researchers (Jones, 1972; Tarrran & Ron, 1980). A strong association has also been established between the educational background of parents and achievements of their children. The encouragement that children receive from their parents is always related positively with children's achievement (Prakasha, 1983 ; Singh, 1983). Hence, efforts to sustain the impact of early intervention should not overlook the role of home

in affecting child's development. This would also contribute to an understanding of complex relationship between child's different learning environments. This leads to examination of factors in the school as they too serve to facilitate or impede child's learning.

Factors within the School Affecting Child's Learning

There is evidence to indicate that long term continuity in children's school performance stems from children's early social environment, especially the school and home (Entwistle & Hayduk, 1988). The authors elucidate that parental expectations and feedback from teachers are important determinants of children's early school performance. But the curriculum in primary school fails to cater to child's natural inclination for learning (Kumar, 1988).

The reason being that a number of unfavourable conditions are prevalent in primary schools which cater to children from disadvantaged sections, especially in developing nations. These include; inappropriate teaching styles, pressures forced by large classes, examination systems, irregularity, and emphasis on formal reading and writing (Grover, 1987; King, 1983; Kumar, 1988; Myers, 1989). These have been the main factors responsible for repetition in grades and school drop-outs.

School quality has been found to make a substantial difference in student's achievement after accounting for the effects of child's preschool and socio-economic background

(Fuller, 1986). In particular, textbooks, writing materials and teacher quality have been found to exert a considerable influence (Fuller, 1986). The author stresses the need for directing future research in finding out the role of teaching practices and classroom organization in affecting student's achievement.

This is because the most important factor tied up with school quality has been the teacher. A teacher who is responsible and able to take advantage of the existing situation thereby sustaining enthusiasm and hope, in unfavourable conditions can create a high quality learning environment (Myers, 1989). Thus, quality of the educational system depends on the quality of the teachers. Teacher effectiveness could be considered a sole important factor responsible for pupil's learning outcomes.

Avalos and Haddad (1981) while synthesizing the research on teacher effectiveness in third world countries shed light on the fact that bulk of the research concentrates on the background variables of the teacher and its relation to teaching situation. Research has dealt in a limited way into some of the insightful issues like interaction style between student and teacher characteristics and its effect on student's achievement and attitudes. Reviewers also point out that one can not expect a unidirectional and linear relationship among factors in the school and their effect on student's learning.

There is a need to examine the influence of various factors within the context of home and school in totality. As Bronfenbrenner (1986) urges; researchers should examine how experiences in the school in turn affect the behaviour of children and parents at home. Focus should be on the associated processes taking place within family and classroom and their joint effects on children's learning and development. Such investigations would help in understanding and tapping the total educative environment of the young child. It would also enable to ferret out the mediating processes which in reality operate together.

Rationale of the Study

The heightened awareness regarding the importance of early intervention for the children belonging to disadvantaged sections of the society is clear from the literature. ICDS at present is a major national level early childhood intervention programme for the disadvantaged population. Therefore, it becomes essential to assess its impact and find out what promise it holds in affecting children's learning and development. Evaluation is necessary both for taking stock of existing functioning and improving the programme's efficacy. However, after almost one and a half decade of the programme's operation, the emphasis is not so much on justifying its existence but on improving its efficacy.

The focus of present research is on assessment of the impact of non-formal preschool education of ICDS. The assessment of this component in terms of its direct impact on broad academic

goals is difficult to measure because it does not aim at inculcating formal educational skills in children. But specific outcome measures can be devised in relation to the objectives of the programme. Thus, the present study specifically aimed at looking into the benefits of non-formal preschool education on children's developmental skills. This would help in delineating specific developmental areas on which ICDS has a definite impact and also shed light as to which particular areas need more emphasis in programme implementation. Thus, highlighting the crucial indicators that need close monitoring in order to strengthen the component of preschool education in ICDS. AS the same sample is being studied from the age of 3 1/2 years upto first grade of primary school, it would also aid in determining the rate as well as the extent of impact on children's development.

The present study is also taking into account the difference in preschool programmes by drawing samples from the highest and lowest ranking AW's. This would provide insight into whether difference in implementation of the non-formal preschool component has a differential influence on children's abilities. This would lead to highlighting the important features of a better functioning preschool programme. The constituents of a better programme would therefore become a frame of reference against which programmes need to be implemented and evaluated. Thus, within the given constraints of ICDS preschool programme, inputs could be expended in the right direction so as to achieve maximum benefits necessary for improving the quality of ICDS preschool programme.

It is assumed that the potential of non-formal preschool education of ICDS lies in preparing children for school by enhancing their school readiness. This would help children avail the educational opportunities provided at school since these children are likely to adapt to formal learning with greater ease compared to children who have had no experience. Thus, leading to their sustenance in the school system. Hence, a need was felt to determine whether ICDS preschool experience made a difference in children's attainment of readiness skills. Another important enquiry was to find out if ICDS preschool experience affected children's specific classroom related behaviours. The purpose was to rate behaviours like 'ability to concentrate', 'ability to follow instructions', 'degree of interest and alertness in classroom activities' and so on ; as these behaviours could be considered pre-requisites for children's success at any organized learning task. Therefore, if preschool experience helps in acquisition of school relevant behaviours, it would assumingly facilitate children's learning ability in the formal setting of primary school.

Furthermore, the review of literature has been convincing in endorsing the interpretation that factors within the school and home environment are influential in shaping child's learning and development. In fact, the factors interact with the effects of early intervention , thereby minimizing or maximizing the benefits accrued by children. Therefore, the study also examined the extent to which children's performance could be attributed to differences in their home environments. The focus was on finding

out whether variation in children's home environment could explain children's performance on the measure of reading readiness. In addition, factors within the school were studied mainly to explore what happens in primary schools in which children from lower socio-economic group enroll. The effort was not to relate the school factors directly to children's performance but to document the emerging school processes likely to affect children's learning. Accounting for these two major contextual factors alongwith assessment of impact of preschool experience, has been a step ahead of earlier evaluative studies that have dealt with preschool component of ICDS. The aim was to provide a context in which impact of ICDS preschool experience could be explicated.

In view of the above rationale, the study aimed to persue following specific objectives.

Specific Objectives

1. To assess children with preschool experience and those with no preschool experience on the following developmental skills :
 - o Gross motor skills
 - o Conceptual and readiness skills
 - o Language skills
 - o Personal social skills
 - o Finer motor skills

2. To find out whether children from two different Anganwadis (one rated as high and other rated as low) differ on the above mentioned developmental skills.
3. To compare ICDS children and children with no preschool experience in the beginning of first grade, on the dimension of reading readiness.
4. To determine whether ICDS children and children with no preschool experience differ on specific classroom related behaviours as indicated by teacher's assessment.
5. To document the school processes likely to affect children's learning.
6. To ascertain the extent to which differences in children's performance could be attributed to differences in their home environments.