Development is viewed as a never-ending, continual process that is shaped by the individual’s experiences in his or her environment. Developmental change may occur as a result of genetically-controlled processes known as maturation, or as a result of environmental factors and learning, but most commonly involves an interaction between the two (Brems, 1993).

There are several arenas of development, which includes motor (Cratty, 1986), language (Whitehurst, 1982), cognitive (Bjorklund, 1989; Piaget, 1967), moral (Kangan & Lamb, 1987), self (Stern, 1989), emotional (Lane & Schwartz, 1986), psychosocial (Erickson, 1950), and psychosexual development (Freud, 1952).

Development continues across the lifespan and is clearly impacted by a number of factors. Development is not only guided by physical factors, but also impacted by psychological, cultural, and external factors (Lerner, Skinner, & Sorrel, 1980). The overall development of the child can be assessed through the exploration of his or her psychological, biological, cultural, and outer physical determinants in terms of behavior, cognitions, emotions, language, activity level, types of activities, and needs (Brems, 1993).

1.1. Development of children during specified age of 8 – 12 years

Physical development (8-12 years) – It is a period of great agility and vitality. All physical activities are carried out with grace, economy and coordination. Games requiring exactness such as hopscotch, cankers, marbles, fine stones, jacks, complicated ball and skipping games, rollers-skating, and juggling are popular. There is a good deal of group wrestling and skirmishing during this period. Hiking, swimming, running, climbing hills are enjoyed by children of this age. General health is usually good. Appetite is sound and food is enjoyed. Energy tends to flag suddenly but short rest restores it easily.
Development of feeling (8-12 years) – Children during this period are emotionally independent of adults to great extent. There is a need for acceptance by peers during this age. They have deep satisfaction in intellectual pursuits. They derive joy and delight in physical powers and skills. Usually children during this period have good control of strong emotions except in mob situations. Anxiety is aroused by ineffectual adult management of environment.

Social Behavior (8-12 years) – During this period membership of group of own age seems to be now important. Mob violence may erupt if excited by irresponsible leaders. Team games, camping, collecting are popular games. Boys and girls mix fairly well except more masculine boys and more feminine girls who tend to make their own separate groups. Towards the end of this period sexes tend to separate. During this age, they can be seen as rebellion against authority shown by rejection of adults, tricking them, complaining, doing unpopular jobs, verbal battles but competent adults are however, respected. Towards the end of this period children are friendly, matter-of-fact and cooperative with adult.

Needs of Children (8-12 years) – During this period children have needs like: Opportunity to learn accurately about real world, rich academic environment; Books, music, creative materials; Reliable, confident adults and reasonable, consistent standard set are demanded; Independence and trust. Undemonstrative, steady affection at home; Matter-of-fact, straight forward information in reply to questions; Opportunities for games and physical activities; Constructive play like sewing, drawing, painting, clay modeling, singing collecting materials, construction with wood and tools; Games like basket ball, foot ball, and base ball; Amusements of late childhood include reading, comic books, movies, radio etc.
Some suggested play materials (8-12 years) - Equipment for collecting E.g. stamps, shells, match boxes, more advanced wood work equipment, conjuring sets, train sets, model sets, gyroscope, toy theatre, dramatic properties, draughts, cards, table games, chess, science equipments, sports equipments, book of all kinds, good painting, modeling and sculpting materials, tapes and records, musical instruments, electronic games, computers, role-playing games and equipments.

1.2. Importance of school for children

Children are considered to be the assets of our nation. Children are capable of enormous learning if given the opportunity. Schools are compulsory institutions that have significant and sustained contact (i.e. 15,000 hours over a child’s school career) with most children during their formative years of personality development (Rutter, Tizard, & Whitmore, 1970). The school environment is one of the primary contexts for the development of social relationships during childhood (Lyne & Brue, 1989). Schools have central position in many children’s lives and potentially in their development, especially when families are unable to assume a leading role. It is estimated that 50% of the children between 6-12 years regularly attend schools and this population is approximately 225 million. In India, education is particularly compromised for females, schedule caste and schedule tribe children, especially in rural areas (Kapur, 2007).

1.2.1. School, enrolment, teacher and scholastic problems related indicators in children (Kapur, 2007)

About 85 per cent of the total of 10,37,813 schools are government-run schools. 2,50,718 new schools have opened since 1994, with 84 per cent in the rural and 12 per cent in the urban areas. Around 4.37 per cent do not have school buildings. About 70 per cent of the rural and 74.30 per cent of the urban schools have pucca buildings.
94.73 per cent of the total of 1,07,842 single classroom schools are located in the rural areas. Schedule caste (SC) enrolment is 20.58 per cent and schedule tribe (ST) is 10.18 per cent. Of the total of 1,37,704 single teacher schools, 96.02 per cent are in the rural areas. Three lakh seventy-nine thousand ‘Para teachers’ were appointed in 2005 which is 9.09 per cent of the 4.17 million teachers. Ninety-two per cent of the ‘Para teachers’ are in the rural areas. The global monitoring report of the UNESCO (2007) indicts the teachers in India of absenteeism of 25–30 percent, which offsets the benefits of implementation on other indicators.

The Public Report on Basic Education in India (PROBE, 1999) and Pratichi (2002) at the State levels have gathered information on school participation, teacher availability and learning. Annual Status of Education Report (ASER, 2005) estimates that 1.4 crore children are out of school. The ASER report highlights the abysmally poor academic performance across the country. In terms of reading and mathematics when actually tested, of the 7–14 year old children, 5.35 per cent could not read at grade one level and 60 per cent could not read at grade two levels. The situation with respect to mathematics is equally poor.

From 1967 onwards, there have been 14 clinic-based studies, seven population surveys in rural areas and 10 surveys in urban areas. Unfortunately these are not comparable methodologically (Kapur, 1997). Several studies have highlighted the prevalence of scholastic difficulties as a major problem (Kapur, 2007).

**1.2.2. Status of disadvantaged, rural and tribal schools and education**

Survey studies on physical conditions, enrollment rate, crowding, drop out, facilities given, wastage rate, teacher’s level of training, attitude towards education, traditional teaching methods, etc about the rural and tribal schools were conducted by various
researchers. Some of the important facts that come to light about the rural and tribal areas are as follows:

The two studies conducted on ashram schools (Desai & Patel, 1981; Pratap, Raju & Rao, 1971) did not project a good profile of ashram schools. Pratap and Raju (1973) found the working and physical conditions of ashram schools unsatisfactory. Some of the teachers working in these schools did not stay there and visited schools occasionally.

Desai and Patel (1981) found that in most of the ashram schools the number of children enrolled was much higher than the prescribed number. In some cases the educational qualifications of teachers was class VII. In a study conducted by Sharma (1984) it was found that introduction of different incentives like free uniforms, textbooks and boarding and lodging facilities resulted in higher enrolment of SC and ST students including girls. This increase in case of SC and ST children ranged from 49.2 per cent to 92.7 per cent. In a Socio Economic Survey on SC/ST by Parvathamma (1984), it was seen that nearly one half of the sample was not aware of the Constitutional provisions meant for the development of the downtrodden. Study by Bhargava (1989) was carried out to conduct survey of educational facilities for weaker sections in Orissa and Maharashtra respectively. The study found that educational facilities for scheduled tribe habitations are poorer in comparison to other habitations in the district and the facilities of textbooks, free uniforms, stipends and midday meals were available to children coming from tribal communities.

Masavi (1976) in his study found the wastage rate to be 65 per cent at the primary level, however, only 9.1 per cent of the total enrolled children of class I could complete class IV. The stagnation rate at class I was very high which came down considerably for classes II, III and IV. The overall wastage in ashram schools was
46.7 per cent. The main causes for wastage and stagnation were found to be socioeconomic conditions, ignorance among tribal parents, ill equipped teachers, teaching in alien languages, physical illness and inappropriate curricula. The study by Joshi (1980) besides other things, found that the majority of teachers did not have a specialized training for working in backward areas.

Study conducted by Biswal (1991) in Orissa found that as compared to boys, fewer girls in the area got enrolled in the schools. As far as quality of teachers working in these schools is concerned, most of the teachers were found to be non-tribal and less qualified. The study found that the dropout rate at the higher level is higher than that at the lower level. Srivastava (1981) in his study found that unproductive and traditional type of educational system for the tribal’s was the cause of indifferent attitude of tribal parents towards their children's education. Besides, lack of necessary facilities and equipments for teaching was the cause of lack of motivation for education among the tribals.

A study conducted by Ekka (1990) on development of tribal education in Orissa after independence showed that percentage of bigger habitations in the tribal inhabited areas is very negligible. This lead to conclusion that in any State with high tribal population, educational interventions should be planned at the level of various habitations big or small.

Addressing disadvantage and inclusion the World Development Report from the World Bank (2005) and Human Development Report from UNDP (2005) both highlight the inequities in opportunities that various groups face, and the setbacks these gaps can result in for children, adults and social and economic development. Educational attainment is one, if not the major, determinant of life chances and the opportunity to escape poverty.
McLoyd (1998) states that recent research consistently reports that persistent poverty has more detrimental effects on IQ, school achievement, and socio-emotional functioning than transitory poverty, with children experiencing both types of poverty generally doing less well than never-poor children. Less home-based cognitive stimulation partly account for diminished cognitive functioning in poor children. These factors, along with lower teacher expectancies and poorer academic-readiness skills, also appear to contribute to lower levels of school achievement among poor children. The link between socioeconomic disadvantage and children's socio-emotional functioning appearsto be mediated partly by harsh, inconsistent parenting and elevated exposure to acute and chronic stressors.

Large number of studies in the United States that have shown that socioeconomic disadvantage and other risk factors that are associated with poverty (e.g., lower parental education and high family stress) have a negative effect on cognitive development and academic achievement, smaller effects on behaviour and inconsistent effects on socio emotional outcomes (Duncan, Brooks-Gunn, & Klebanov, 1994). Living in extreme and persistent poverty has particularly negative effects (McLoyd, 1998).

According to Bringewatt and Gershoff (2010) the system for providing mental health services to children is fragmented and complex, and children and their families face multiple barriers to accessing care. They say that this is especially true for children in low-income families, who have the greatest rate of mental health disorders but have the highest underutilization of services.
1.3. Conceptual framework

Child-friendly methods of intervention for total development of children

Promotion of the child development in the contemporary context of developmental psychology emphasizes approaches which are creative, flexible and child-centered. The methods to promote the psychosocial development are child centered, and are to be based on principles validated in the current context of developmental psychology (Kapur, 2007)

- The child initiates the learning process.
- The child’s perception of the world is explored.
- The teacher is only a catalyst who provides time, space and appreciation.
- The material used is inexpensive and indigenously available.
- While holistic development in the domains of intelligence, language, emotional, social and moral realms are promoted - the natural outcome is the enhancement of attention, memory, intellectual function, creativity, language and mathematics skills.
- The activities have to be age or class appropriate, that is, developmentally appropriate, neither too easy nor too difficult.
- Gender sensitivity needs to be incorporated to compensate for inequality in child rearing practices in the Indian context.
- Ethnic sensitivity to the promotion of indigenous cultures needs to be incorporated.
- The shift of focus of teachers from teaching, for the convenience of the adults to that of interest to the children.
- Children can attain all the academic skills through art, craft, play, storytelling and so on. Conventional teaching contributes very little to the overall development of
the child, while play way and child friendly methods promote overall development.

So, if one needs to provide quality education, there should be shift of focus from teacher initiated instructional practices to improve academic skills to child initiated play way methods, to promote development across all domains.

1.3.1. The rationale for using Art and Craft work as intervention programme

There is an empirical literature in various areas of child psychology that supports the importance of Art and Craft in child development. Art like play is viewed as normal developmental activity among children. Art is more goal directed than play. Art has clear developmental purposes and is encouraged as an important activity for children (Brems, 1993). Art creates a completely new and creative process or product out of an old situation, thus ushering in mastery and resolution (Kramer, 1979). Art has been referred to as – The purposeful making of symbols (Kramer, 1979); the purposeful redirection of unacceptable impulses into acceptable behavior through sublimation (Rubin, 1984). Sometimes a child who is frustrated in school subjects such as reading, writing or arithmetic may turn to art for release from frustration, because in art there is no right or wrong answer.

Art can be used by the child symbolically to gratify wishes, control impulses, express affects and needs and recreate interpersonal processes and relationships without any fear of consequences or relations from environment (Rubin, 1987). Skill development needs are addressed through art by providing a medium for learning and practicing new skills, modeled by others or spontaneously through the child’s own desire to create. Such new skills can facilitate the development of new coping behaviors and problem solving strategies, further aiding the child in self-control and
meaningful self-expression (Brems, 1993). Getting satisfaction from one’s own art expression is a step toward a positive self concept (Lowenfeld & Brittain, 1987).

Art is a flexible, normal developmental medium that serve to help children meet the crucial developmental needs for self-exploration, structure and skill development as they have been outlined by developmental theorists (Kohut, 1984). Through art, cognitive growth can be stimulated without neglecting creative and affective growth. Art experiences can be so rewarding that they are sometimes considered play instead of learning, but beneath the obvious enjoyment are opportunities for becoming deeply absorbed in solving problems.

Brems (1993) has described the purpose and function of art in a child’s everyday life. Accordingly art acts as catharsis by allowing free expression of affects and needs, unlimited processing of past occurrences, expression and recreation of current events, expression and recreation of anticipated events and release and mastery of affects and conflicts. Art helps the child to grow by allowing for establishment of rapport, exploration of alternative problem solving, fostering of creative problem solving, fostering of creativity in approach and solution to problem situations, skill learning and talent development, increase self-esteem and self-confidence and increase goal directedness.

Drawing and painting are enjoyable activities for children. No motivation is necessary for young children; it seems to be a natural form of learning. Art can play a tremendous role in learning and may be more basic to the thinking processes that the more traditional school subjects. Every drawing, whether by a scribbling child or a high school student at the peak of learning efficiencies, demands a great deal of intellectual involvement. Drawing is the usual medium of art, but art experience can be healing in itself without talk, if need be, by fulfilling wishes vicariously,
ventilating feelings, reducing isolation, and providing opportunities to cope with problems and to adjust to disappointment (Lowenfeld & Brittain, 1987). In recent decades drawing has become a recognized modality in therapy with children (Malchiodi, 1990; 1997; 1998; 1999; Rubin, 1984) and has been used in the treatment of children who have been physically or sexually abused or exposed to domestic violence (Malchiodi, 1990; 1997; Riley & Malchiodi, 1994; Webb, 1991); have emotional disorders (Kramer, 1979); or have medical conditions (Malchiodi, 1999). According to Wolf (1975), art therapy can be used successfully with adolescents going through a period of tremendous mood swings and ambivalence.

1.3.2. The rationale for using play as intervention programme

Play is universal phenomenon of childhood. Play includes games and any creative activities such as art, craft and language (Kapur, 2007). Play promotes motor, cognitive, language, emotional, social and moral development. For many educators, the value of play is beyond dispute but there are many teachers who believe that play serves very little purpose except to keep the children amused.

Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child (Office of the United Nations High Commissioner for Human Rights, 1989). Accordingly, children construct internal models of action through play. Play enables children to understand concepts such as time, class, space and quality. They observe relationships and understand cause and effect. They also learn to solve problems. Play allows them to express emotions and learn through imitation. Play is useful for learning to get along with others and for developing social skills such as sharing, taking turns, sympathy, leadership and even develop moral values. Also the motor skills develop through running, jumping, and so on while playing.
Brems (1993) has described the purpose and function of play in a child’s everyday life. Play helps children in self-development function which allows children to engage in self-expression, define the self, express and explore feeling, discover likes and dislikes, gain a sense of control, cope with difficult situations, express complexities beyond verbal capacity, meet the need to engaged in an activity and to feel stimulated. Play helps children in motivation function which allows children to explore the environment, to explore the relationship among objects, to gain a sense of mastery, to practice language skills, to practice motor skills, to practice cognitive skills, to learn moral judgment, to learn problem-solving skills, to organize experiences in meaningful ways. Also Play helps children in relationship functions which allows children to communicate with others, to learn about roles, to learn about environment, to learn social skills, to explore relationships among people, to work through conflict in relationships, to feel connected to others and to use others as models.

Play leads to maturation in a number of developmental arenas including language skills, motor skills, cognitive skills, problem-solving skills and moral judgment (Brems, 1993). Play is involved in the development of many cognitive, affective and personality process that are important for adaptive functioning (Russ, 1998). Play is important to healthy brain development (Shonkoff & Phillips, 2000; Frost, 1998; Tamis, Shannon, Cabrera, & Lamb, 2004).

Singer and Singer (1990) suggested areas of cognitive development through play. Play helps the child to (a) expand vocabulary and link objects with actions, (b) develop object constancy, (c) form event schemas and scripts, (d) learn strategies for problem solving, (e) develop divergent thinking ability, and (f) develop a flexibility in shifting between different types of thought (narrative and logical). Play has been
linked to the development of cognitive process important in logical problem solving and creative problem solving (Singer & Singer, 1990). Play has been related to and has facilitated insight ability (Vandenberg, 1990), and divergent thinking ability (Russ & Grossman-Meker, 1990). When play is allowed to be child driven, children practice decision-making skills, move at their own pace, discover their own areas of interest, and ultimately engage fully in the passions they wish to pursue (Hurwitz, 2002; Erickson, 1985; Pellegrini & Smith, 1998).

Play facilitates cognitive and emotional development (Singer & Singer, 1990; Russ, 1998). Play is a simple joy that is a cherished part of childhood. Children’s developmental trajectory is critically mediated by appropriate, affective relationships with loving and consistent caregivers as they relate to children through play (Shonkoff & Phillips, 2000). Play is natural medium for self-expression (Axlin, 1947), and an excellent means of communication among children, as well as between children and adult. Play and unscheduled time that allow for peer interactions are important components of social-emotional learning (Elias & Arnold, 2006; Zins, 2004).

Play is also thought to be related to general adjustment. Both cognitive and affective processes, important in adjustment, are developed in play (Russ, 1998). Undirected play allows children to learn how to work ingroups, to share, to negotiate, to resolve conflicts, and to learn self-advocacy skills (Hurwitz, 2002; Erickson, 1985; Pellegrini & Smith, 1998; McElwain & Volling, 2005). As they master their world, play helps children develop new competencies that lead to enhanced confidence and the resiliency they will need to face future challenges (Hurwitz, 2002; Erickson, 1985; Band & Weisz, 1998).

Play is the best mode for children to learn (Elkind, 1986; Izumi-Taylor, 2006; Morrison, 2009; Izumi, 2004). Through play children not only learn new skills but
also they are given the opportunity to practice skills in a meaningful and non-threatening manner. Play can serve as an arena to act out skills modeled after parents or friends, which gives an opportunity not only to gain a sense of mastery, but also enhance the child’s ability to problem solve in general, and to cope with new situations (Brems, 1993). Play is integral to the academic environment. It ensures that the school setting attends to the social and emotional development of children as well as their cognitive development. It has been shown to help children adjust to the school setting and even to enhance children’s learning readiness, learning behaviours, and problem solving skills. (Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Raver & Zigler, 1997; Wentzel, 1999; Fantuzzo & McWayne, 2002; Pellegrini & Boyd, 1993; McWayne, Fantuzzo, & McDermott, 2004; Fantuzzo, Bulotsky, McDermott, Mosca, & Lutz, 2003; Fantuzzo, Sekino & Cohen, 2007; Ladd, 1990; Fisher, 1992).


Despite the growing interest in play way and child centered approaches to teaching and learning in India, these approaches are still the exception rather than the norm (Prochner, 2002).
1.3.3. The rationale for using Games as intervention programme

Games are an important part of life. References to games are a common occurrence in the origin myths of various tribes (Culin, 1975). Games help to refine skills, build character, express oneself and to improve the performance. Games help to make friends and to have fun. Games are about teamwork, co-operation, managing a challenge, setting and achieving goals. Games are also about a healthy mind and a healthy body (Lankford & Neal, 1998). Through teaching, coaching and participating in games children can learn many lifestyle skills such as fair play, a positive attitude to life and living, teamwork, co-operation, healthy competition and respect for others. Games also promote active living, a healthy lifestyle and wellness.

Games are a fundamental part of human education (Ellis, 1973; Piaget, 1962). Representative games play an important role in the education of youth (Roberts, 1959). Games help man to cope with the stress of everyday life. The attributes of games can be psychosocial, sensory, communication, intellectual or biomechanical. With the dramatic increase in premature death due to lifestyle disease, in particular overweight and obesity, games and active living, can play a positive role in reducing premature deaths (Egan, 1997).

1.3.4. The rationale for using Word and vocabulary games as intervention programme

There is an empirical literature in various areas of child psychology that supports the importance of storytelling, imagination-dramatic play, and language games in child development.

Story telling has been an important means of making sense of the environment and of transmitting information, knowledge and wisdom from generation to generation among many ethical groups across the world (Brems, 1995). Fables,
myths, fairy tales and legends have been developed for the purpose of transmitting values and knowledge (Pellowski, 1977).

Story telling is seen to be a coping mechanism that aided people’s sense of control over their lives and environment. Traditional stories also served to reflect or illustrate typical situations a person in a given group might face, thus preparing her or him for its occurrence and for adjusting to and coping with it (Brems, 1993). Stories traditionally have provided recurring themes which reflect a people’s perception of their world, hopes, dreams, values, beliefs, customs, frustrations, humor, and problems as well as solving them (Greenbaum & Holmes, 1983). Children, use storytelling to reveal information about themselves to family members, friends, teachers and other significant individuals in their lives; to express affects and needs indirectly; and to engage in problem solving. Children tell stories to communicate with parents, friends and teachers, and to express meaningful material indirectly, and also when the direct approach appears too frightening or threatening (Brems, 1993).

Stories allow the free expression of feeling, needs, problems, conflicts and belief, and through this self-disclosure provide opportunities for mastery and maturation. Through their stories children can symbolically confront problems, test various solutions and arrive at acceptable alternatives. Stories help children confront challenges more openly and confidently, facilitate competent problem solving and therefore result in enhanced self-esteem (Smith, 1989). Personal storytelling is also a powerful aid to the socialization process of children (Robert & Barford, 1979).

Brem (1993) has described the cultural and personal purpose of storytelling. In cultural setting (myths, legends, fairy tales, fables etc) story telling serves the purpose of understanding of the environment, control over the environment, coping with the environment, expression and transmission of spiritual and religious beliefs,
transmission of moral values to guide actions, self expression to facilitate identification, cultural identification and belongingness, preparation for problem situations, preparation for and facilitating of coping, representation of the psychological and emotional atmosphere of the group and as entertainment. Story telling (fantasy stories, make believe stories etc) at the child centered personal level serves the purpose of communication, expression of feeling, needs, conflicts; mastery of feelings, needs, conflicts; alternative problem solving, meaningful, anxiety-free, self-disclosure; symbolic working through of conflicts, symbolic confrontation of challenges, enhancement of self-esteem, and enhancement of socialization process.

According to Brem (1993) imagination and dramatic play is considered as fun. It gives children opportunities to practice skills they will use as they grow up. In imaginations and dramatic play, ‘Being’ other person gives children the opportunity to feel like them feeling what it is like to be a mother or a doctor or a policeman leads to some understanding of adult roles and the responsibilities and relationships of people to each other. Also ‘Being’ other people help children to sort out reality from fantasy. At the same time it helps them to understand purpose and the passing of time, to look to the future and to remember the past. Imaginative plays let each child bring out into the open many anxieties and worries and handle them. In their make-believe play children can be angry and violent to their imaginary characters without doing any harm. Growling and screaming can all be part of the game and so long as no real person is hurt and no harm is done.

Bolton (1985) points out that while much school learning is an accruing of facts, drama can help students reframe their knowledge into new perspectives. Dramatic activity is a way of exploring subject matter and its relationships to self and
society, a way of making personal meaning and sense of universal, abstract, social, moral, and ethical concepts through the concrete experience of the drama.

In dramatics and the teaching of literature, Hoetker (1969) contends that drama increases creativity, originality, sensitivity, fluency, flexibility, emotional stability, cooperation, and examination of moral attitudes, while developing communication skills and appreciation of literature. Most of the research on drama in the classroom has been done at the primary level, where drama has been found to improve reading comprehension, persuasive writing, self concepts, and attitudes toward others (Pellegrini & Galda, 1982; Gourgey, 1984; Wagner, 1987).

In her research with high school students, Clift (1983) found that students using dramatic enactment performed as well as students in traditional lecture, discussion, or seatwork modes. Moreover, they experienced more instances of higher order thinking, more topic-specific emotions, decreased apprehension, and less topic-irrelevant thought than students in the non-dramatic mode.

Research suggests that engaging in dramatic play can have beneficial effects on children’s cognitive development, learning, peer relationships, and emotional well-being (Ellis, 1973; Fisher, 1992; Landreth, 1991; Piaget, 1962; Stambak & Sinclair, 1993; Smilansky, 1968). Researchers have commented that children who actively participate in dramatic play during preschool and early elementary years are advanced in intellectual development, score higher on tests of imagination and creativity, and have an enhanced ability to think inventively (Freyberg, 1973; Pepler & Ross, 1981).

Dramatic play can also be viewed from a “preparation for life” perspective. Jones and Reynolds (1992) explain that pretending allows children to represent real-life problems and practice solving them. They are able to question things and to learn about the world in ways that make sense to them. By participating in dramatic play,
Jones and Reynolds (1992) argued that children are developing learning and problem-solving strategies, as well as utilizing their knowledge and skills.

Snyman and de Kock (1991) describe how role playing promotes creative work and coping skills. According to their study role playing creates opportunities for more creative thinking and encourages students to express their feelings freely and without bias. Smilansky (1968), on the other hand, investigated how dramatic play helps children develop socially. Smilansky (1968) found that by engaging in socio-dramatic play (dramatic play that involves more than one player), their social skills were enhanced. Participation in socio-dramatic play requires a high level of social ability, including cooperation, negotiation, sharing, problem-solving, self-regulation, and appreciation of another’s play efforts.

Through participation in socio-dramatic play, children develop skills necessary to regulate their own actions in order to keep the play going, to control themselves and their emotions, to be flexible in their responses to other players, and to transition from being an egocentric being to a social being. As children engage in dramatic play scenarios, they act out relationships and experience putting themselves in another person’s shoes, which leads to increased, more sophisticated understandings of others and themselves. Dramatic play contributes to children’s emotional development by helping them reach places of increased happiness, more positive self-concepts, and greater feelings of power (Frost, Wortham, & Reifel, 2001).

According to Pecaski and Deanna (2008) socio-drama encourages each participant to develop self-confidence and self-expression through risk-taking and exploration in activities that explore real life personal feelings and situations.
Smilansky (1968) says socio-dramatic play activates resources that stimulate emotional, social, and intellectual growth in the child, which in turn affects the child’s success in school. According to Smilansky’s gains in cognitive-creative activities include better verbalization, richer vocabulary, higher language comprehension, higher language level, better problem-solving strategies, more curiosity, better ability to take on the perspective of another, higher intellectual competence, better peer cooperation, reduced aggression, and more group activity. Gains in socio-emotional activities include more playing with peers, better ability to take on the perspective of others, more empathy, better control of impulsive actions, better prediction of other’s preferences and desires, better emotional and social adjustment, more innovation, more imaginativeness, longer attention span, greater attention ability, and performance of more conservation tasks.

1.3.5. The rationale for using Number games as intervention programme

Guberman and Saxe (2000) examined emergent divisions of labour in children’s collective mathematical problem solving during educational game playing. The results showed that individual goal-directed activities both sustained and were constitutive of the collective play; collective efforts to accomplish emergent problems valued in play had implications for individual goals. The study by Ke and Grabowski (2007) investigated the effects of game-playing on fifth-grader’s attitude towards maths. 125 fifth graders were recruited and assigned to a cooperative Teams-Games-Tournament (TGT), interpersonal competitive or no game-playing condition. Multivariate analysis of covariance (MANCOVA) indicated that game-playing was more effective than drills in promoting maths performance, and cooperative game-playing was most effective for promoting positive maths attitudes regardless of student’s individual differences.
1.3.6. **The rationale for using Cultural activities with music as intervention programme**

According to educational researchers, there is substantial evidence that children acquire vocabulary incidentally by reading and listening to oral stories (Krashen, 1989). Many educational researchers promote music as a way to enhance vocabulary acquisition and comprehension, and emphasize music’s ability to engage children in instruction (Fountas & Pinnell, 1999; Miller & Coen, 1994; Page, 1995; Smith, 2000; Wiggins, 2007).

Musical activities are cited by researchers as effective experiences for building listening skills in the classroom (Hirt-Mannheimer, 1995; Wolf, 1992), for both mainstream classrooms and classrooms with children who have disabilities (Humpal & Wolf, 2003). A meta-analysis of 25 correlational studies, some involving sample sizes of over 5,00,000 students, found a “strong and reliable association” between music instruction and scores on tests of reading comprehension (Butzlaff, 2000).

A study of 4,739 elementary and middle school students in four regions of the United States revealed a strong relationship between elementary (third- or fourth-grade) student’s academic achievement as measured by test scores and their participation in high-quality music programs (Johnson & Memmott, 2006). Adults with music training in their childhood demonstrated better verbal memory, according to a study by Chan, Ho, and Cheung (1998). A study of involving boys aged between 6 and 15 year found that those with music training had significantly better verbal learning and retention abilities. The longer the duration of the music training, the better was the verbal memory (Ho, Cheung, & Chan, 2003). The authors suggest that the cause of the increase in verbal memory was neuroanatomical changes in the brains of children who were playing music.
The link between music ability and learning is supported by brain research in both adults and children. Brain research (Flohr, 1996) shows that music training changes and improves brain functioning related to listening. A study by Stanford researchers (Gaab et al., 2005) found that musical training improves brain processing the spoken word. Researchers stated that this finding may have important implications for improving reading skills for young children. Researchers suggest that music training will lead to improved non musical skills, especially for children struggling with language-learning impairments (LLI). Another study by Musacchia, Sams, Skoe and Kraus (1997) demonstrated that playing musical instruments triggers changes in the brain stem as well as in the brain cortex. The finding meant that music training may enhance reading and speech functions because the brain stem is a pathway for both music and language. The longer a person had been playing an instrument, the sharper was the responses.

Researchers (Magne, Schon, & Besson, 2006) conducted a study regarding the impact of musical training on eight year old children. The results of the EEG studies on brain functioning showed that musician children outperformed non-musician children on both music and language tasks. Researchers concluded that there are positive effects of music lessons for linguistic abilities in children.

Overy (2003) conducted an initial study confirming that children with dyslexia have difficulty with rhythmic skills (but not pitch). A follow-up experimental study set out to determine the impact of music lessons for dyslexic children. The study found that classroom music lessons had a positive effect on both phonological and spelling skills in addition to musical abilities.

Walker and Boyce-Tillman (2002) report the potential benefits of music lessons (above the acquisition of musical skills) as including increased sense of self-
efficacy, self-confidence and self-esteem, increased ease and confidence in new social environments, increased independence, improved social relationships in the home and outside, self-expression through creativity, emotional release and expression of emotions and control over unpleasant feelings, thoughts and emotions.

To conclude with Gardner’s model, In Gardner’s multiple intelligence models there is eight different types of intelligence (Gardner, 1983). Emphasis on today’s early school learning is mostly on cognitive learning (reading, writing, and mathematics). However, it is known that a great deal of an individual’s learning takes place prior to going to school. Many of the child’s language skills, gross and fine motor skills, music and rhythm skills, coordination, dexterity and communication skills are well developed during the first five or six years of life. In Gardner’s linguistic intelligence - games, play and storytelling were the tools used to teach the children, words, names, ideas and communication skills. The logical concepts of patterns, relationships, strategies etc. could be learned from every day experiences of hunting, fishing, building shelter and playing games. Body-kinetics intelligence would be developed by activities as wrestling, string games, tarp crawling, spear throwing, high kicks, juggling etc. In all these activities, manipulation and sensation played an important role. Visual Spatial Intelligence would be developed by participating in games and activities such as quiet games, pretend games, bag of bones game, tarp crawling, checkers, bow and arrows and ice fishing. Music intelligence would be developed by exploring the drum, dance, throat singing, violin, and rhythmic games. Much of their interpersonal intelligence would be developed using storytelling, laughing contests, chanting games, throat singing, dance, music and their traditional games. Intrapersonal intelligence has to do with getting to know oneself. Success in work and play helps to build a positive self-image which in turn gives the individual a
realistic self-worth. Finally, naturalist intelligence has to do with the ability to recognize and to survive in one’s own environment.

So, play is the most popular tool which enables a child to achieve overall normal development without the domineering pressure of adults. The fact that even a young child can create and learn from his or her environment through play has strong support from the current research in developmental psychology.

Hence, in the present study an integrated combination of intervention programme is being used. The package consists of a combination of art and craft work; games and play; word and vocabulary games; number games and cultural activities. The programme consisted of a package of activities, which adopted a child-to-child approach. This intervention programme aimed at development of the individual in terms of cognitive aspects like attention, memory and intellectual functioning; and psychosocial aspects like self concept, adjustment, and social problem solving ability.

1.4. Some of the concepts considered for the present study are described in detail

1.4.1. Attention as a cognitive aspect

Attention is the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things. Attention has also been referred to as the allocation of processing resources (Anderson, 2004). Attention may be differentiated according to its status as "overt" versus "covert". Overt attention is the act of directing sense organs towards a stimulus source. Covert attention is the act of mentally focusing on one of several possible sensory stimuli. Covert attention is thought to be a neural process that enhances the signal from a particular part of the sensory panorama (Wright & Ward, 2008)
Hierarchic model gives description of different types of attention as given below; The ability to respond discretely to specific visual, auditory or tactile stimuli can be called as focused attention; The ability to maintain a consistent behavioral response during continuous and repetitive activity is sustained attention (vigilance); The ability to maintain a behavioral or cognitive set in the face of distracting or competing stimuli is selective attention (Therefore it incorporates the notion of ‘freedom from distractibility’); The ability of mental flexibility that allows individuals to shift their focus of attention and move between tasks having different cognitive requirements is alternating attention. Divided attention is the highest level of attention and it refers to the ability to respond simultaneously to multiple tasks or multiple task demands.

The objective of the study conducted by Helen Baker, Jena, Syed, and Sally (2009) was to determine whether undernourished children aged 6–12 years had different temperament traits than better-nourished children. The results showed that the undernourished children were less sociable, less attentive, more fearful, and had more negative emotionality. Saiz and Roman (1998) studied the effect of a cognitive training program on the problem-solving abilities of socially disadvantaged children. Experimental and control subjects were tested before, immediately after, and two months after the program to assess their levels of attention and comprehension and their information processing, reasoning style, problem-solving methods, and response elaboration. There was a significant difference on all the measures. These couple of studies do indicate that there is an impact of poverty and disadvantage on attention, but can also be enhanced through some methods.
1.4.2. Memory as a cognitive aspect

The important aspect which is part of cognitive development is memory. Memory is the means by which one can retain and draw on the past experiences to use that information in the present (Tulving, 2000; Tulving & Craik, 2000). In terms of process, memory refers to the dynamic mechanisms associated with storing, retaining, and retrieving information about past experience (Crowder, 1976). Cognitive psychologists have identified three common operations of memory: encoding, storage, and retrieval (Baddeley, 2002; Brown & Craik, 2000). The general process of memory has been outlined by several researchers (Broadbent, 1958; Kesner, 1973; Miller, 1956) as passing through various stages of sensory, short-term (often called working), and long-term memory. The sensory memory retains an exact copy of what is seen or heard (visual and auditory). It only lasts for a few seconds; while some theorize it last only 300 milliseconds. It has unlimited capacity. Selective attention determines what information moves from sensory memory to short-term memory. STM is most often stored as sounds, especially in recalling words, but may be stored as images. It works basically the same as a computer's RAM (Random Access Memory) in that it provides a working space for short computations and then transfers it to other parts of the memory system or discards it. It is thought to be about seven bits in length, that is, we normally remember seven items. STM is vulnerable to interruption or interference. Long-Term Memory is relatively permanent storage. Information is stored on the basis of meaning and importance.

Several models of memory have also been put forward to explain this process. Guilford’s structure of intellect model says that memory is one of the five operations of the individual’s intellectual abilities and different types of memory can be included in different factors. At least 18 to 24 such factors can be identified. The multi-store
model of Atkinson and Shiffrin (1968) has proposed a three part model of memory involving a sensory register that decays rapidly; a short-term store with limited capacity which can be enhanced by rehearsals; and a long term store with unlimited capacity. According to this model, memory depends on the efficiencies of strategies used for transferring memory from STM to LTM (encoding) and for retrieving it from the LTM. Piaget’s (1971) constructive model of memory says that, in accordance with pre-existing knowledge, the individual assimilates new information into existing knowledge constructing the meaning of what is to be stored and reconstructing what needs to be recalled. The levels-of-processing framework (Craik & Lockhart, 1972) distinguishes in memory ability based on the degree to which items are elaborated during encoding. This model modifies the multi-store model and says that memory depends on the level of processing; the deeper the processing, the more durable and deeper is the memory.

In the Developmental Model, Brown (1975) proposed three developmental dichotomies to understand the development of memory namely, strategy versus no strategy; mediation versus production deficiency, and episodic memory versus semantic memory. An alternative model uses the concept of working memory (Baddeley, 1992) usually defined as being part of long-term memory and also comprising short-term memory. According to this model, working memory holds only the most recently activated portion of long-term memory. It moves these activated elements into and out of short-term memory (Dosher, 2003). The multiple memory systems model differentiates between procedural-declarative (semantic) memory and between semantic-episodic memories. Another models proposed regarding the structure of memory is parallel distributed processing (connectionist) model (Rumelhart, Hinton, & McClelland, 1986). The parallel distributed processing model
incorporates the notions of working memory, semantic memory networks, spreading activation, priming, and parallel processing of information. Thus there are many models put across by many cognitive psychologists to understand the process of memory.

Regarding the development of memory system during childhood it is seen that memory develops as children grow older, i.e. they remember more effectively with their growing age. As indicated by Imhoff and Baker-Ward (2002) some simple recall is present in the second half of the first year. By about nine months of age, babies can imitate an action after a twenty-four-hour delay. Recall continues to develop over the second year of life, corresponding to the development of the prefrontal cortex and other brain structures associated with explicit memory. Between age two and two and a half, toddlers can be expected to remember their first, repeat parts of nursery rhymes, and possess simple event schemas (also called scripts) for everyday events. By age two and a half, children describe specific past experiences such as a trip to an amusement park. Memory span increases from about two items at age two to five items at age seven to seven items in adulthood. By age seven, most children spontaneously use rehearsal to enhance short-term memory performance. Retrieval strategies begin to be spontaneously used around third grade. During middle childhood short term memory capacity improves significantly. For instance children are able to hear a string of digits and then repeat the string in reverse order (Feldman, 1998). Children’s self-directed use of organization, the ability to impose a semantic structure on the to-be-remembered items to guide memory performance, emerges later in the elementary school years. Elaboration, a highly effective strategy that involves actively creating representation integrating new information with existing information, may not be used spontaneously by children until early adolescence.
Most individuals do not acquire optimally effective study skills, which can be considered forms of memory strategies, until adolescence. Memory develops largely through social interaction. There are number of other different factors that contribute to produce these developmental changes in memory. Development of cognitive abilities, use of different mnemonic strategies, social maturity etc, are some of those factors which contribute to the development of memory. In the course of development cognitive changes are seen in children, they become more abstract and conceptual, which often results in memory development. They use their growing knowledge to establish, elaborate meaningful relations in the information to be remembered and, as a consequence, remember more accurately. Developmental changes are also seen in the use of mnemonic strategies by children. In the older children thus, the memory is better (Uma, Oommen & Kapur, 2002). Age related changes in the use of mnemonic strategies like rehearsals, outlining, grouping etc; have been reported by various researchers (Flavell, 1970).

Memory has the infinite ability to store information about events and experiences that occur constantly (Pinel & Edwards, 2008). Experiences shape the way in which memories are formed, therefore, major stressors on socioeconomic status can impact memory development. It has been demonstrated that better environmental conditions are associated with better performance in neuropsychological tasks (Evans & Fuller-Rowell, 2013; Noble & Farah, 2013). In terms of influence on development of memory dynamic model of multiple components through the socio-cultural theory (Nelson & Fivush, 2004) explains that memory development occurs through social interaction and cognitive development over the year, thus emphasising the value of socio economic interaction and conditions.
Research has indicated that childhood social economic status affects some neurocognitive systems more than others. Studies that assessed multiple neurocognitive systems found that the largest effects of social economic status are on language processing, with more moderate effects on executive function—particularly on working memory and cognitive control (Noble, McCandliss, & Farah, 2007b; Farah et al., 2006; Noble, Norman & Farah, 2005; Kishiyama, Boyce, Jimenez, Perry, & Knight, 2009). Some other studies have also found that there is moderate effect of socioeconomic status on declarative memory and spatial cognition (Noble et al., 2007; Farah et al., 2006; Levine, Vasilyeva, Lourenco, Newcombe, & Huttenlocher, 2005; Herrmann & Guadagno, 1997). Family social economic status seems to also affect performance in episodic, working and semantic memory (Hackman, Farah, & Meaney, 2010; Piccolo, Sbicigo, Grassi-Oliveira, & Salles, 2014). Over all such studies indicate that children from lower social economic status are at risk for deficits in memory processing (Siegler, Eisenberg, DeLoache, Saffran, & Graham, 2014).

Most studies examining social economic status associations with cognitive development have focused on explicit memory tests and found that children from lower social economic status backgrounds perform worse on measures of working and declarative memory than their higher social economic status peers (Herrmann & Guadagno, 1997; Farah et al., 2006; Noble et al., 2007b; Evans & Schamberg, 2009; Sarsour, et al., 2011; Hackman, Gallop, Evans, & Farah, 2015). In a study by Farah et al., (2006) pronounced differences were found among many aspects in memory systems, along with significant differences in working memory where in higher socio economic status children had better working memory. Deficits were noted in both verbal and visuospatial working memory as part of working memory profiles among children living in rural poverty (Michele Tine, 2014). On different aspects of memory
(episodic, semantic and working) children from socioeconomically disadvantaged households had poorer performance than those with high socio economic status especially until nine years old, and on executive functions (inhibitory components and cognitive flexibility) from 6 to 12 years old (Piccolo, Arteche, Fonseca, Grassi-Oliveira, & Fumagalli, 2016). A study by Das and Padhee (1993) reported that the performance of the Brahmin caste was better than that of the Harijan children on the Digit-Span, and the Figure Copying Test. These evidences further emphasis the need to specifically use intervention and preventive strategies at all levels for development and improvement of memory of children from tribal background. In a study by Flores-Mendoza and do Nascimento (2007) the comparison between the rural and the urban children, showed 16.18 points of intellectual quotient difference on one of the two subtests of subtests Digit Span.

Tiwari (1986) tested the hypothesis that children with different backgrounds display different levels of control process performance, using boys and girls from grades 3–5 in inferior or superior rural or urban Indian schools. Subjects were tested on recall of groups of Hindi words. Overall results showed that subjects demonstrated greater free recall than serial recall. Urban girls scored higher on serial recall than rural girls; subjects from superior schools demonstrated greater serial recall. Studies like this shows that children with different backgrounds display different levels of control process performance hence emphasizing need for intervention to enhance memory and its related aspects.

1.4.3. Intelligence as a cognitive aspect

Intelligence has been defined by many individuals in different ways as follows: Intelligence is goal-directed adaptive behaviour (Sternberg & Salter, 1982). Intelligence is judgment, otherwise called "good sense," "practical sense,"
"initiative," the faculty of adapting one's self to circumstances, auto-critique (Binet, 1916). Intelligence is the ability to deal with cognitive complexity (Gottfredson, 1987). Intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings (Gardner, 1983). Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment (Wechsler, 1944). As a working definition one can adopt the wording offered by a distinguished panel of experts (Neisser et al., 1996): the term intelligence refers to individual’s ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by careful thought.

The theory of Structural Cognitive Modifiability describes intelligence as "the unique propensity of human beings to change or modify the structure of their cognitive functioning to adapt to the changing demands of a life situation. Spearman (1927) believed that performance on any cognitive task depended on a primary general factor and one or more specific factors relating to particular task. Turnstone (1938) suggested that intelligence is composed of seven distinct primary mental abilities. Included in the list were visual or special ability, perceptual ability, numerical ability, verbal relation ability, word fluency, memory, inductive thinking, deductive ability, and problem solving ability. Gardner’s (1983) theory of multiple intelligence proposes that there are several important types of intelligence like linguistics, logical-mathematical, spatial, musical, body-kinaesthetic, intra personal and interpersonal. According to Sternberg’s Triarchic Theory of intelligence (1985), there are actually three basic types of intelligence. The first, called componential or analytical intelligence, involves the ability to think critically and analytically. The second type of intelligence, experiential or creative intelligence, emphasises insight
and the ability to formulate new ideas. The third type of intelligence contextual or practical intelligence, and in some ways, it is the most interesting of all. Persons high on this dimension are intelligent in a practical, adaptive sense—they have what many would term street smart and are adept at solving the problems of everyday life. Cattell (1963) concluded that two major clusters of mental abilities exists; fluid intelligence and crystalline intelligence. Fluid intelligence refers to the largely inherited abilities to think and reason – in a sense, the hardware of the brains that determines the limits of our information processing capabilities. Crystalline intelligence refers to accumulated knowledge-information over a lifetime experience, plus the application of skills and knowledge to solving specific problems.

Intellectually, middle school childhood is a time of substantial growth. According to Piaget, children entering the concrete operational period become capable for the first time of applying logical thought process to concrete problems. Other cognitive advances that emerge in concrete operational stage are the ability to ‘decenter’ (to take multiple aspects of a situation into account), to grasp the notion of reversibility, and to understand concepts as relationship between speed and time (Feldman, 1998). According to information processing approaches, intellectual development in middle childhood is more quantitative than qualitative. The rapid cognitive development of the period is attributed to substantial increase in memory capacity and in the sophistication of the ‘programs’ children can handle (Kuhn, Gracia-Mila, Zohara, & Andersen, 1995).

Cognitive development during adolescence is rapid and substantial, with notable gains in the ability to think abstractly, to reason accurately, and to view possibilities in relative rather than absolute terms. Adolescence coincides with Piaget’s formal operational stage development, the stage at which people begin to
engage in abstract thought and experiential reasoning (Feldman, 1998). According to information processing approaches, cognitive growth during adolescence is gradual and quantitative, involving improvements in mental organization and strategies; memory capacity; perceptual ability; verbal, mathematical, and spatial abilities; attention; problem solving; and knowledge. Another major area of cognitive development, according to the information processing view, is the growth of metacognition, which permits adolescence to monitor their thought processes and accurately access their cognitive capacities (Burbules & Linn, 1988; Gagne, 1985; Keating & Clark, 1980; Wellman & Gelman, 1992).

In a study Gaur and Sen (1989) compared the intellectual level of non-scheduled castes, scheduled castes, mentally retarded children (aged 11–14 years). Results indicate that the non-scheduled caste subject’s were comparatively more intellectual, less deprived than the other subject’s. The study by Flores-Mendoza and do Nascimento (2007) had objective of raising information about rural children's cognition aged 6 to 11 years old. The comparison between the rural and the urban children, showed 30 points of intellectual quotient difference on Ravens Progressive Matrices, and 16.18 points of intellectual quotient difference on two verbal subtests (Arithmetic and Digit Span). The effect of socio-cultural deprivation on the cognitive and non-cognitive abilities of tribal adolescent students was studied in Bihar by Balkrishna, (1986). It was found that Christian tribal students possessed more intelligence, better reasoning ability and higher achievement motivation than non-Christian tribal students.

In a study by Dwivedi and Dubey (1989) rural children were administered verbal and performance IQ tests once a year from age 7 to 11 years. Analyses revealed that performance IQ was higher than verbal IQ at each age level. A
corresponding increase existed in performance and verbal IQ with increasing age, suggesting that the influence of cultural deprivation in rural children is lessened with increased exposure to education in schools. The impact of parental education status on the intelligence of children from economically disadvantaged families was examined by Sidhu, Malhi, and Jerath (2010) on school going children aged 4 to 8 years from low income families. Children with high parental education had significantly higher IQs as compared to children with moderate and low parental education level. Analysis revealed that 33.7% of the variance in the IQ of the child was explained by the education of the mother and income of the household.

All the above mentioned factors do point out that disadvantaged groups are indeed lagging behind in their cognitive ability specifically intellectually, mainly due to environmental conditions, and hence calls for programmes to cut down these effects, which can be dealt by some intervention methods at tertiary levels and preventive measures at primary levels.

1.4.4. Adjustment as a psychosocial aspect

Adjustment is defined as the subjective experiences that is associated with and results from attempts at adaptation, and that also motivate further adaptation. Adjustment, therefore, essentially refers to the general concept of well-being, which is an affective evaluation of one’s life situation. In line with this definition, previous researchers have incorporated a wide range of outcome measures of adjustment, including self-awareness and self-esteem (Kamal & Maruyama, 1990), mood states (Stone Feinstein & Ward, 1990), and health status (Babiker, Cox, & Miller, 1980). Other typical measures of adjustment involve other subjective experiential constructs that refer to well-being, such as anxiety, mood, depression, subjective well-being, satisfaction, and happiness.
Brislin (1981) has identified three factors of adjustment, including having successful relationships with people from other cultures; feeling that interactions are warm, cordial, respectful, and cooperative; and accomplishing tasks in an effective and efficient manner. Hammer, Gudykunst, and Wiseman (1978) focused on these factors, and also included the ability to manage psychological stress effectively. Black and Stephens (1989) identified general adjustment involving daily activities, interaction adjustment involving interpersonal relations, and work adjustment related to work and tasks.

For the purpose of the study ‘Adjustment’ is defined as the individual’s orientation towards his parents, peers, school and himself, in terms of the satisfaction he derives from his interactional relationship with these significant others, and himself (Pareek, Rao, Ramalingaswamy & Sharma, 1975).

Nomani (1965) conducted a study on adjustment of the adivasi students. The major conclusion was that, social adjustment in general was not satisfactory for adivasi students. Ushasreem (1987) tested socially disadvantaged and non-disadvantaged pupils regarding curricular adjustment, and other. Non-disadvantaged subjects were better adjusted and higher achieving, but no significant differences in patterns of academic adjustment were obtained between disadvantaged and non-disadvantaged. The study by Goyal and Chopra (1989) among scheduled castes/scheduled tribes student-teachers found that Non-scheduled castes/scheduled tribes student-teachers exhibited higher self-concept had better social adjustment and higher achievement than their scheduled castes/ scheduled tribes counterparts.

A study to measure certain psychological traits of tribal and non-tribal students studying in secondary and higher secondary schools school children was
planned by Kumar (1989). Findings indicated that non-tribal’s showed a more favorable attitude towards school than the tribal’s.

Study by Esposito (1999) where the families participating in the study were low-income, minority, and living in chronically poor urban neighbourhoods indicated that overall school climate and the teacher–student relationship significantly predicted school adjustment. The study by Raju and Rahamtulla (2007) showed that adjustment of school children is primarily dependent on the school variables like the class in which they are studying, the medium of instruction present in the school, and the type of management of the school. Parental education and occupation of the school children also significantly influenced adjustment. The study conducted by Sujatha and Yeshodhar (1986) on SC/ST and non-SC/ST high school students indicated that SC/ST students were low in their academic achievement and achievement motivation. They had relatively poor school adjustment compared to non-SC/ST students.

The study by Sujatha and Yeshodhar (1986) recommended that there is a great need to provide for a specially designed compensatory programme to enrich SC/ST student’s cognitive faculty and achievement, to overcome their specific learning problems/difficulties; compensatory language programmes to bridge the gap between home language and school language, which goes a long way in facilitating better achievement among SC/ST children. Steps should also be taken to provide a stimulating school environment which encourages SC/ST children to develop aspirations and to achieve better.

1.4.5. Self-Concept as a psychosocial aspect

Researchers in personality and social psychology have long been interested in the role of self-related perceptions. Children with different self-beliefs demonstrate different levels of cognitive, social, and emotional engagement in school. Because school-
related experience makes up a major portion of children’s lives and shapes the early paths to important life outcomes, educational researchers try to grasp the meaning of self in student’s minds (Mimi & Einar, 2003).

Self-concept is colloquially defined as a composite view of oneself. Self-concept has been defined as: "ones self-identity, a schema, consisting of an organized collection of beliefs and feelings about oneself" (Baron & Byrne, 1997); as "one’s sense of ‘me’ identity, (Myers, 1993) as "I" (Bernstein, Alison, Roy, Srull, & Wickens, 1994); and as "a cognitive appraisal of our physical, social, and academic competence" (Eggen & Kauchak, 1999).

Rosenberg (1979) defined self-concept as “the totality of the individual’s thoughts and feelings having reference to himself as an object”. Shavelson, Hubner and Stanton (1976) provided a similar definition of self-concept that formed the theoretical foundation of contemporary self-concept research: In very broad terms, self-concept is a person’s perception of himself. One’s perceptions of himself are thought to influence the ways in which he acts, and his acts in turn influence the ways in which he perceives himself. Self-concept is formed through experiences with the environment and is influenced especially by environmental reinforcements and significant others (Shavelson et al., 1976). Franken (1994) suggests that self-concept is related to self-esteem in that "people who have good self-esteem have a clearly differentiated self-concept. When people know themselves they can maximize outcomes because they know what they can and cannot do”.

Self-concept is a multi-dimensional construct that refers to an individual's perception of "self" in relation to any number of characteristics, such as academics (and non-academic), (Bong & Clark, 1999; Byrne & Worth Gavin, 1996; Shavelson & Bolus, 1982; Shavelson et al., 1976; Hoffman, Rose, John, & DiAnne, 2005), gender
roles and sexuality (Wade, 1998; Hoffman & Rose, 2004; Aries, 1998) racial identity (Ayduk, Anett, & Anna, 2009) and many others.

Skaalvik (1997) identified some key antecedents to self-concept in review, which include frames of reference, causal attributions, reflected appraisals from significant others, mastery experiences and psychological centrality. Self-concept is heavily influenced by frames of reference or standards against which to judge one’s own traits and accomplishments. Frames of reference play a particularly important role in the development of academic self-concept (Marsh, 1986, 1987). The factors to which people attribute their successes and failures are hypothesized to influence descriptive and affective aspects of their self-concept. Self-concept and attributions are related in a reciprocal manner such that the types of causal attributions made for previous successes and failures influence subsequent self-concept and the self-concept thus formed affects later attributions (Skaalvik, 1997; Stipek, 1993; Tennen & Herzberger, 1987). Several self-concept researchers suggested that people come to view themselves as they believe how others view them. Rosenberg (1979) claimed that “there is probably no more critical and significant source of information about ourselves than other people’s views of us. Self-schemas are created from individuals past experiences in a particular domain. Relevant information and experiences are subsequently processed by these self-schemas (Markus & Nurius, 1986). Although self-concept researchers do not explicitly emphasize the role of mastery experiences in self-concept formation, Skaalvik (1997) suggested that prior mastery experiences might be of comparable importance to the formation of self-concept as they are to the formation of self-efficacy (Bandura, 1986). Rosenberg (1979) in his analysis of self esteem, claimed that self-esteem is based on self-assessments of qualities that are perceived as important or psychologically central by individuals.
In a study by Magano (2007) which focused mainly on the self-concepts of adolescents from disadvantaged environments indicated that there is a significant relationship between environment and the self-concept. A comparative study of personality patterns of scheduled caste and high caste students were conducted by Pal (1984). Specific findings of the study indicated that scheduled caste students possessed poor social self-concept whereas high caste students in comparison to their scheduled caste counterparts possessed better social self-concept. Study conducted by Jin–dao (2003) to understand the characteristics of self-concept among the primary and secondary students in the rural area for students aged from 10 to 17 years old showed that the urban students had significantly higher self concept level than the rural students. The study by Goyal and Chopra (1989) compared the self-concept among scheduled castes/scheduled tribes student-teachers, which indicated that Non-scheduled castes/scheduled tribes student-teachers exhibited higher self-concept than their scheduled castes/ scheduled tribe’s counterparts.

In a study by Freda and Albertazzi (2001) on disadvantaged it was ascertained that students affected by poor scholastic performance and negative self-esteem have a high risk of depression. Woodward and Frank (1988) investigated the extent of loneliness of rural adolescents in relation to aspects of their self-esteem, from rural Nebraska. Results showed that subjects had extremely high loneliness scores.

All these aspects indicate the influence and impact of poverty and disadvantage on development of self-concept and its correlated aspects which has to be tackled at the earliest through a comprehensive intervention programme.

1.4.6. Social problem solving as a psychosocial aspect. Problem solving is a mental process and is part of the larger problem process that includes problem finding and problem shaping. Considered the most complex of all intellectual functions,
problem solving has been defined as higher-order cognitive process that requires the modulation and control of more routine or fundamental skills (Goldstein & Levin, 1987). Problem solving occurs when an organism or an artificial intelligence system needs to move from a given state to a desired goal state. A general and widely accepted definition of problem solving is that Problem solving is (goal directed) thinking and action in situations for which no routine solution procedure is available. The problem solver has a more or less well-defined goal, but does not immediately know how to reach it. The incongruence of goals and admissible operators constitutes a problem. The understanding of the problem situation and its step-by-step transformation based on planning and reasoning, constitute the process of problem solving (Reeff, 1999).

The social problem solving skills involve: A core of thinking skill such as the ability to understand signs of one’s own and others feelings, the ability to decide on one’s goals and the ability to think in terms of long and short term consequences for both oneself and others. A set of readiness or learning to learn skills which include the main areas of increasing self control and building social skills for group participation and social awareness and applying social decision making skills in academic and interpersonal situations that occur throughout schooling.

Social decision making skills and social problem solving skills help children to understand what is going on around them and provide a frame of reference for dealing effectively with new or difficult social situations. Deficiency in social problem solving skills may hinder social and emotional growth of the child. The deficit in social problem solving skills leads to cyclical patterns of increased levels of both peer rejection and inappropriate social behavior. Social problem solving skills is also found to be related to moral, social and personal adjustment to child. Problem
solving in response to obstacles was found to be strongest predictor of self-concept and teacher’s rating of student’s adjustment. Thus screening the children early in life and introducing social problem solving skills (SPSS) training program would enhance competence and moral responsibility, especially when children move away from parental control.

Teaching social problem solving to students: Students with behavior problems often have difficulty dealing with interpersonal problems, which further limit their academic and social success at school (Nelson, Dykeman, Powell, & Petty, 1996). For that reason, teaching social problem solving skills has become a common feature of prorammes designed to prevent and remediate discipline problems (Bear, 1998). Social problem solving skills are skills that students “use to analyze, understand, and prepare to respond to everyday problems, decisions, and conflicts” (Elias & Clabby, 1988). Learning these skills help students to improve their ability to cope with stress (Dubow & Tisak, 1989; Elias & Clabby, 1988), handle interpersonal situations (Elias & Clabby, 1988), experience more positive social adjustments, improve academically and show improvements in behavior (Dubow & Tisak, 1989; Gootman, 2001; Nelson, Dykeman, Powell & Petty, 1996). Social problem solving skills also help students to better “read” analyse the various demands associated with social situations (Elias & Clabby, 1988) and exercise greater self-control over their behaviors (Gootman, 2001). Like any new skills, children who have difficulty with social problem solving need to be directly and systematically taught the skills and given frequent opportunities to use them in a normal context (Elias & Tobias, 1990; Gootman, 2001; Van Acker, 1993). Social problem solving skills can be taught in a number of ways. For example, they can be worked into the curriculum (Elias & Clabby, 1992; Elias & Tobias, 1990; Elias & Tobias, 1996; Gootman, 2001), taught using cooperative learning strategies that
give students the chance to develop and practice their social and academic skills at the same time (Van Acker, 1993), or taught in a group counseling setting (Nelson et al., 1996). Peer mediation programs also are a popular forum for teaching student’s conflict resolution and problem solving skills (Cangelosi, 2000).

School personnel developing school-wide programs find that having use of a common language and skills that are to be reinforced throughout the entire school has a positive effect (Elias & Clabby, 1992; Quinn, Osher, Hoffman, & Hanley, 1998). Bear’s (1998) evaluation of a number of different social problem solving programs observed that they are either (a) functional—they teach the behaviours students should use or (b) structural—they teach the cognitive strategies students should use to know when and how to employ the skills, or both. Neel, Jenkins, and Meadows (1990) emphasize the fact that teaching the skills alone is not enough. The goal of any effective program of social problem solving instruction, however, is to teach students that interpersonal problems are within their control and how to more effectively manage or avoid the events and situations that lead to such problems (Nelson et al., 1996).

Most effective programs are designed to teach students social problem solving in ways that combine both cognitive and behavioural problem solving skills (Elias & Clabby, 1988; Elias & Tobias, 1990; Goldstein, 1999; Gootman, 2001; Williams, 1991). First, students learn an ordered set of skills that are broken down into their component parts and modelled by the teacher (Elias & Tobias, 1990; Goldstein, 1999; Gootman, 2001). Students are also taught to employ some combination of the following steps that are practiced repeatedly with feedback from the teacher and then implemented in real-life situations (Burden, 2003; Elias & Clabby, 1988; Curwin & Mendler, 1988; Goldstein, 1999; Gootman, 2001; Nelson et al., 1996; Shure, 2001):
state the problem; gather information from self and others; think of possible solutions; evaluate each solution, choose the best; mutually acceptable solution; try out the solution; evaluate the solution; and decide what to do next time.

While researchers have evaluated individual programs for their effectiveness with students and found many to have positive short-term outcomes, there is limited long-term data on any social problem solving programs (Bear, 1998; Nelson et al., 1996). The results that are available show that students who receive social problem solving instruction demonstrate better knowledge of problem-solving skills, more empathy for other students, increased acceptance by peers, and are more likely to expect positive outcomes from problem solving (Elias & Clabby, 1992; Shure, 2001; Williams, 1991).

The study by Gibbons (2010) described a cooperative classroom art therapy intervention in a public elementary school among sixth-grade students. The group explored the roles of fictional characters in conflict by including group discussion, writing, art-based reflection, and problem solving. Results indicated a culture change in the group that is essential for incorporating conflict resolution and problem solving in the classroom. Brigman and Molina (1999) described the Living, Learning, Working (LLW) program used with fourth and fifth grade students. The objective of the program was to enhance listening, attending, empathy, social problem solving, and contributing skills. Key strategies of the program are using stories, teaching story structure, role play, and modelling. Results indicate positive effect on enhancing listening, attending, empathy, social problem solving, and contributing skills.

It is important for programs to be highly useable by both educators and parents, so that the programs can be implemented in school and at home. Teachers should also be sure to incorporate activities to help ensure that the problem solving
skills the students are being taught can be maintained and will generalize to other situations and settings (Elias & Clabby, 1988).

As discussed earlier in the present study, an integrated combination of intervention programme is being used. The package consists of a combination of art and craftwork, play, cultural activities, number, word and language games and life skills activities. In the programme a child-to-child approach has been adopted. This intervention programme aimed at overall development of the individual. Very specifically keeping in mind the accessibility of tools and the availability of time some important developmental aspects in terms of cognitive aspects like attention, memory, intellectual functioning; and psychosocial aspects like adjustment, self concept, and social problem solving ability were planned to be assessed pre and post intervention programme to study the outcome of intervention programme.

1.5. Origin of problem

In the first and second survey of Research in Education post independence there was no separate mention of the education of disadvantaged groups of children or tribal children. In the Third Survey of Research in Education (1978-1983) also there was no independent section dealing with education of tribal children. The first contribution to the study of the educational problems of scheduled tribes in India was made as early as 1944 by Professor Furer-Haimendorf. The dawn of independence and the establishment of Tribal Research Institutes in states having a sizeable tribal population boosted research efforts in the field of tribal welfare, of which education was an important component. Chattopadhyay analysed the characteristics of the educational system among the tribal people. Later survey studies on different aspects like physical conditions, enrollment rate, crowding, drop out, facilities given, wastage rate, teacher’s level of training, attitude towards education, traditional teaching
methods, etc about the rural and tribal schools were conducted by various researchers like Desai and Patel (1981); Pratap et al., (1971), which did not portray a positive picture about tribal area and the schools there.

Various mental health services have tried to meet the needs of the child population which is almost half the population of the entire nation. India has seen the emergence of concern for children at the policy-making level. Some of the policies include Integrated Child Development Services (1972); National Policy for Children (1974); National Policy on Education (1986); National Mental Health Programme for India (1982) and National Integrated Education for Disabled Children (1988). The National Mental Health Programme for India strongly advocated the provision of mental health inputs in schools (Government of India, 1982). In spite of the enlightened policies mentioned above, the literacy rates as well as the quality of education in the Indian schools are disappointing. The translation of the policies into reality at the grass root level has been unsatisfactory. All these efforts are aimed at improving the academic achievement in specific curricular subjects. These are segmental as they focus only on academic achievement and not on the overall healthy development of the children.

Because of the large number of children’s current and future psychosocial functioning is of concern, it seems both logical and critical to establish effective social competence promotion programmes in the schools. Therefore schools, for many, may be the most sensible point of intervention (WHO, 1994). The National Mental Health Association (NMHA) commission on prevention of mental and emotional disabilities recommended that “Programmes should be developed in schools that incorporate validate mental health strategies and competence building as an integral part of the curriculum” (Long, 1986).
Promotion of the child development in the contemporary context of developmental psychology emphasizes approaches which are creative, flexible and child centered. So, if one needs to provide quality education, there should be shift of focus from teacher initiated instructional practices to improve academic skills to child initiated play way methods, to promote development across all domains.

Despite the growing interest in play way and child centered approaches to teaching and learning in India, these approaches are still the exception rather than the norm (Prochner, 2002). Play is the most popular tool which enables a child to achieve overall normal development without the domineering pressure of adults. The fact that even a young child can create and learn from his or her environment through play has strong support from the current research in developmental psychology.

Hence, in the present study an integrated combination of intervention programme is planned to be used. The package consists of a combination of art and craft work; games and play; word and vocabulary games; number games and cultural activities. The programme consisted of a package of activities, which adopted a child-to-child approach. This intervention programme aimed at development of the individual in terms of cognitive abilities like attention, memory and intellectual functioning; and psychosocial aspects like self concept, adjustment and social problem solving ability.

1.6. Importance or relevance of present study

Children are considered to be the assets of our nation. Children are capable of enormous learning if given the opportunity. The school environment is one of the primary contexts for the development of social relationships during childhood (Lyne & Brue, 1989). In India, education is particularly compromised for females, schedule caste and schedule tribe children, especially in rural areas (Kapur, 2007). The socio-
economic-cultural disadvantage has its impact on some of the cognitive aspects like brain development; cognitive development and cognitive processing; academic progress; memory; intelligence; reading ability and vocabulary; mathematics; pictorial perception and attention; motor development and visuo-motor skills and higher mental processes.

The National Mental Health Association (NMHA) commission on prevention of mental and emotional disabilities recommended that “Programmes should be developed in schools that incorporate validate mental health strategies and competence building as an integral part of the curriculum” (Long, 1986). Promotion of the child development in the contemporary context of developmental psychology emphasizes approaches which are creative, flexible and child centered. The methods to promote the psychosocial development are child centered, and are to be based on principles validated in the current context of developmental psychology (Kapur, 2007). So, if one needs to provide quality education, there should be shift of focus from teacher initiated instructional practices to child initiated play way methods, to promote development across all domains.

Play is universal phenomenon of childhood. Play promotes motor, cognitive, language, emotional, social and moral development. For many educators, the value of play is beyond dispute but there are many teachers who believe that play serves very little purpose except to keep the children amused. Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child (Office of the United Nations High Commissioner for Human Rights, 1989). Despite the growing interest in play way and child centered approaches to teaching and learning in India, these approaches are still the exception rather than the norm (Prochner, 2002).
At the tribal level keeping in mind the limited man power, financial and implementation limitations, intervention has to be planned adequately for overall development of such children. The review of literature showed the possibilities of some of the interventions that worked to an extent in this background which included art and craft work; games and play; word and vocabulary games; number games and cultural activities. Hence the present study concentrated on evolving a play way intervention programme for development of tribal school children in terms of cognitive aspect (attention, memory and level of intellectual functioning) and some of psychosocial aspects (adjustment, self concept and social problem solving ability).