PROGRAMMES FOR ECE CENTRES:
A HYPOTHETICAL MODEL

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ROLE OF THE PRESENT HYPOTHETICAL MODEL

In order to critically assess the programmes conducted at the early childhood education (ECE) centres in Kerala a hypothetical model of programmes that could be implemented at the ECE centres in Kerala was developed by the investigator. The term hypothetical model used in the present investigation suggests that it is subject to experimentation and modification based on research. This model envisages judicious combination of activities by the child and the teacher under suitable conditions provided by means of space, facilities and materials.

BASIS OF THE MODEL

This model was developed based on the theoretical views of prominent persons in the field of ECE and the findings of various researches conducted in this area. Opinions of the present day experts of ECE in Kerala have also been obtained. All these educationists and researchers had emphasized the importance of providing learning experience to young children through play way methods and child centered activities. The opinions and theoretical views of ten of the prominent persons viz., Plato, Comenius, Rousseau, Pestalozzi, Froebel, Dewey, Hill, Montessori, Tagore and Gandhi and the findings of various researches have already been presented in Chapter 11.

ASPECTS OF DEVELOPMENT

The objective of ECE is the all-round development of the child. According to the hypothetical model this objective can be achieved through the followings:
A. Socio-emotional development;
B. Physical and motor development;
C. Language development;
D. Cognitive development; and
E. Development of creative expression and aesthetic appreciation; of the child.

Again, the hypothetical model views that each of the above mentioned five aspects of development can be further sub-divided into various components of development as given below.

COMPONENTS OF EACH ASPECT OF DEVELOPMENT

A. Socio-emotional development is sub-divided into seven components, viz.,

(i) Adjustment of the child to the ECE centre;
(ii) Development of a positive self-concept;
(iii) Development of personal cleanliness;
(iv) Development of good personal habit;
(v) Development of leadership quality;
(vi) Development of ability to control emotions; and
(vii) Development of ability to respect the feelings and rights of others.

B. Physical and motor development is sub-divided into three components, viz.,

(i) Physical development;
(ii) Gross motor development; and
(iii) Fine motor development.
C. Language development is sub-divided into six components as follows:

(i) Development of sound discrimination;
(ii) Development of listening span;
(iii) Development of vocabulary;
(iv) Development of oral expression;
(v) Development of visual discrimination; and
(vi) Development of writing readiness.

D. Cognitive development is sub-divided into seven components as follows:

(i) Development of sense of touch;
(ii) Development of sense of smell;
(iii) Development of sense of taste;
   (Development of sound discrimination and visual discrimination has already been included under language development).
(iv) Development of classification skill;
(v) Development of colour concept;
(vi) Development of concept of shape; and
(vii) Development of pre mathematical concept.

E. The three components into which the development of Creative expression and aesthetic appreciation is sub-divided are:

(i) Development of creative thinking;
(ii) Development of creative expression; and
(iii) Development of aesthetic appreciation.
It may be mentioned here that the collection of data regarding the programmes conducted at the centre and the analysis of the data collected were done based on these components.

According to the hypothetical model, each of the above mentioned components can be developed only through the implementation of suitable plays/activities at the ECE centre.

**DESCRIPTION OF SUGGESTED PLAYS/ACTIVITIES TO BE IMPLEMENTED IN ECE CENTRES (Vide description of items in the Questionnaire given in Chapter IV)**

A description of various plays/activities suitable for the development of each of the components mentioned above is given below. (It is presented here in accordance with the items in Part B and C of the questionnaire).

**Q.1 & 2 (B) Warm welcome and encouraging words to children**

A child leaves home and comes to an unknown environment for the first time when she joins an early childhood education (ECE) centre. So the primary requirement at this stage is to make her familiar with the environment and help her to adjust with it. For this the teacher should do many things, especially in the initial days. She should be very friendly with the child; she should play and sing with them. Besides, for catching the impression of the child and creating in her a liking attitude towards the teacher and the centre, on the arrival of the child at the centre everyday, the teacher should welcome her warmly with a sweet smiling face.
Such a welcome will attract the child. The smile of the teacher will feel to the child as a signal to smile back and began to talk. Thus the smile and the warm welcome of the teacher will initiate to start interaction and social relation between the child, teacher and the pre school.

Coupled with this warm welcome the teacher can say some encouraging words to her. For example she can tell the child like this: Jerry! Your dresses are very beautiful today! Or Anu, very good, you have cut your nails properly.

Encouraging words are signs of admitting the correctness of one's action. It is a kind of acceptance. It strengthens the relationship between the persons. It is especially true in the case of little children. When teacher tells encouraging words to the child the attachment between the child and the teacher increases. This attachment helps the child to get adjusted with the centre.

A number of famous educationists like Montessori (1948) and Hill (1926) have stressed the importance of maintaining a close relationship between the teacher and the young children in the pre schools. In the opinion of Montessori the directress (Montessori has replaced the word teacher by the word directress as the function of a teacher, according her, is to direct the child and not to teach) should have an intimate relationship with her children. The primary function of a teacher, according to Hill, is to produce an atmosphere conducive to engage in activities.

To know whether at the ECE centres teacher welcomes every child every day morning or not, and to know while doing welcome does she use some words of encouragement or not, two questions (Q. 1 and 2 (B)): ie,
Questions 1 & 2 of Part B of the Questionnaire) are asked in the questionnaire of the present study.

**Q.3 (B) Opening day celebration**

Children are often reluctant to mingle with others in new situations. To avoid their inhibition to interact with others festivals and celebrations, which would help promotion of interaction with others, are very effective. Lower primary schools and nursery schools usually conduct a real festival in the opening day itself.

The importance of celebration of festivals in pre schools has been studied by Sharma (1985). She has pointed out that celebration of festivals should be an important activity in pre schools. In her opinion celebrations provide an insight into the self of the child, so that self-awareness is created, which would pave the way for interaction with others.

Whether or not the preschool has such celebrations in the opening day, is therefore, included an item (Q.3 (B)) in the present questionnaire.

**Q.4 (B) Allowing mother or anyone close to the child spend a little time with the child in the ECE centre in the initial days**

When a child joins and comes to the ECE centre everything there will be unfamiliar to her for the first few days. This may make a sort of stranger feeling and the child may fear the centre and the atmosphere. So if needed, her mother or anyone the child is close to can be allowed to spend a little time with the child for a few days in the initial days. Some teachers do not allow this as they think that if the mother or any member is
allowed for some days, it will negatively affect them. They think that after some days it will become more difficult to the child to leave her mother from the centre. But this opinion is not correct. As the child gets adjusted with the centre the family member can be gradually withdrawn without much difficulty. Researchers on pre school education like Kaul (1991) have suggested to allow a family member to spend a little time initially for a few days at the centre.

In the questionnaire of the present study one question (Q. 4(B)) is included to know whether teachers allow a close relative of the child to spend a little time with her at the centre or not, in the initial days, if the child wants so.

Q.5 (B) Take children around the premises in the initial days

A child, usually, has complete freedom at home. She can move any where in the house and the premises. She can play at anytime, as she likes. No restrictions were imposed on her. She might not have the habit of sitting in a room for a long time.

When she comes to the ECE centre everything is changed. She has to sit in the classroom. This may be a matter of uneasiness to many of the children for a few days, until they get adjusted to the centre. For such children it is better to give freedom to move about within the premises. This will give her a sort of relief and mental easiness.

Whenever children are allowed to move in the premises in such a way the teacher should be very careful in keeping their safety. Responsible and matured persons like Ayah or members of parents should always accompany them.
In the opinion of Ainsworth, Bell and Staylon (1973) going round in the premises with the children is a good practice in the pre schools for getting the child adjusted with the centre in the initial days. So in the questionnaire of the present study it is asked (Q.5 (B)) whether those children who hesitate to sit in the classroom are initially allowed moving about the premises or not.

**Q.6 & 7 (B) Flexibility in the time, and no compulsion in activities in the initial days**

In the initial days a lot of relaxations and flexibilities are desirable at the centre. For example, initially they should be allowed flexibility in the time to be spent in the centre. There should be no compulsion for the children to attend the full day's programme because "attendance for a short while in the initial stage helps the child to adjust to the programme" Kaul (1991 p. 54).

All children like to engage in plays and activities. Even though, for the first few days they may not be mentally prepared to involve in the activities. So, then they should not be forced to engage in activities.

There are certain teachers who believe that from the very beginning itself the children should sit in the centre for the full time and they should start learning from the initial days onwards. This kind of thinking from the part of teachers will bring negative effect in children.

In order to know about the time flexibility and freedom in engaging activities at the initial days two questions are included in the questionnaire of the present study (Q.6 & 7 (B)).
Q.8 & 9 (B) Celebration of each child’s birthday and giving gift to the child

When the birthday of a child is celebrated in the class she feels happy and importance about herself. If the number of children in the class is much it may be difficult to celebrate each one’s birthday. In such occasions a month-wise calendar of birthdays can be made and hung in the class. One day in a month can be kept for birthday celebration and all the children whose birthday falls in that particular month can be celebrated on that day. Those children should be told in advance about the celebration so that they do not become absent.

While celebrating the birthday children should be seated together in a specified place separate from others. Each of them may be given a small gift, for example a fun toy made of paper, or a paper cap or cup.

The sense of importance at being singled out for the celebration contributes a great deal to their feeling of self worth.

Two questions (Q.8 & 9 (B)) on birthday celebration are included in the present questionnaire. The purposes of these questions are:

1. To know whether the birthday of every child is celebrated or not at the centres; and
2. To know whether small gift is given or not to the children whose birthdays are celebrated.
Q.10 & 11 (B) Display of children's products and praising their efforts

In an ECE centre every child engage in different kind of activities like drawing, painting, paper folding and clay modeling. Each child likes her own products. She will be proud of it and interested in showing her products to others.

So, it will be helpful to the development of a positive self concept of the child if her hand works like drawings, paintings and printings are displayed in the class. While these things are displaying their name can be attached on it.

Children usually like to be praised always. Praising them liberally for their efforts is a desirable activity in pre schools. A child can be praised in different ways like by the clapping of other children, or by the praising words of the teacher. Such a praising affirms her sense of worth and helps for the development of a positive self-concept.

In order to know whether the products of children are exhibited at the centre and to know whether children are praised for their efforts, two questions (Q. 10 & 11 (B) are asked in the present questionnaire.

Q.12 & 17 (B) Encouraging children to cut their nails properly and examining each one personally

Cutting nails properly and keeping fingers and hands always neat is a good personal habit. To possess this quality for a person it is better to start practising it from the early childhood itself as in the case of many
other habits. So teachers of early childhood education should be careful to start practising this habit at the centre.

If nails and fingers of children are not clean germs may enter in the tiny spots between the nails while they play, especially in clay and sand. This will cause for affecting various illness to them.

As children imitate others especially those whom they like much, the teacher should act as a good model in this aspect by cutting her nails properly and keeping her fingers always neat. Then she can tell the children to do as she does.

Though the teacher has persuaded the children for doing certain things some of them may not come up to the expected level. So the teacher should examine every child personally and initiate for further changes. For example even after the teacher has behaved as a good model in cutting the nails and persuaded them to do so, some of the children may not have done it properly. In such cases, personal observation of the teacher is necessary. Frequent personal observation itself will motivate children to do things properly and regularly. So frequent observation of every child, not in strict and rigid manner, but in a friendly way, is a good practise in pre schools. Also, this will help the teacher to adopt certain new strategies, whenever it is required.

So in the questionnaire of the present study two questions (Q.12 & 17 (B)) are included. The purpose of one is to know whether the teacher motivates children to cut their nails properly and keep the fingers clean. The other is to know whether the teacher continuously observes or not the habits of the children.
Q.13 (B) Encouraging children to wash their hands before and after taking foods

It has rightly been said that 'Cleanliness is before Godliness'. This off-quoted phrase implies that one should behave oneself neatly, and cleanly whenever and wherever possible. The basic lessons regarding cleanliness are to be taught during the younger years of life. Though not much is taught at home in this regard, ECE centres can do a lot for the same. One major aspect of cleanliness rests in washing hands before and after taking food. In order to know whether the teacher is or not practising this good quality at the centre, one question (Q. 13 (B) is included in the present questionnaire.

Q.14 & 15 (B) Practising to use a wastebasket

The basic attitudes and behaviour pattern, the way in which the child feels and acts, are developed in the first five years or six years. Since the time of Confucius, back in sixth century BC, childhood has been known as the foundation age of life.

Therefore all good habits should be started practising from the early childhood period itself. Otherwise it will not assimilate to their behaviour pattern. Keeping rooms and premises always clean by using a waste box is such a good habit to be developed from the early years.

By keeping a waste box at the ECE centre and putting waste things in it by the teacher children can be directed to do so. Fallen leaves, flower petals or waste paper pieces scatter in the floor can be picked up by the children as a group activity. The teacher herself can lead and demonstrate
this activity for some days – every day morning. After some days the children will do themselves.

In a similar way the teacher can easily train children to put the wastes of food products properly by keeping a waste plate/piece of paper on the dining table.

On regular practising this will become a habit of children. In the questionnaire two question (Q.14 & 15 (B)) are included to know whether the system of using a waste box is practised or not at the centre.

Q.16 (B) Put things in the proper place after use

The world at present has forgotten the systematic and routine things happening all over. Training is inevitable to keep the right pin in the right hole. If it is not done, materials will be scattered around and much time and energy will be expended to find out an object, which is required in emergency. What is needed is very simple: keep the materials at the appropriate place after use. Needless to say that a teacher in the ECE centre is the apt person to train children along these directions. Using different methods and techniques, an ECE teacher will be able to do the same. This is the issue handled by the present item (Q. 16 (B) in the questionnaire.

Q.18 (B) Activity of material distribution by children

Play should be the medium of early childhood education. For achieving the objective of all-round development of children various play activities are to be conducted in all centres. It includes both free and structured play activities.
Different kinds of play materials are required to perform various play activities. These materials include items such as balls, ring, pebbles, stones, leafs, sketch pens, brushes, dolls and puppets. In many occasions, these materials are to be distributed among the children. In such situations the teacher herself should not undertake the activity of distributing them. Instead, she should distribute this job to one or two children of the group. In a similar way, during snack time children can be given chance to distribute the snacks among their friends. The teacher in such contexts should ensure that all the children get chances for it on rotation.

This kind of opportunities to children at various occasions will foster their leadership capacity and ability to initiate new activities. Researchers like Clifford and Cohn (1964) have suggested including these kinds of activities in nursery schools. The importance of fostering leadership quality in early years has been studied by Zaccaria (1965). He has pointed out the significance of arranging opportunities to pre school children for the development of leadership quality.

Considering these facts one question (Q.18 (B)) is included in the present questionnaire to know whether the opportunity to distribute the play materials is given to the children or not.

Q.19 (B) Assigning responsibility of small chores to children

In an ECE centre there are a number of chores that can be done by the children. Bringing registers to the class, return them to the office, arranging the chairs in position, getting the room in order, placing the play materials in its proper place etc are some such activities.
Children like to do these kinds of responsibilities. They feel very important and responsible in doing such small chores. When they complete these duties successfully they feel proud of it and their confidence in doing activities successfully will be improved.

The eminent educationist Pestalozzi has stressed the importance of assigning these kind of activities to children. Montessori, in her school, encouraged children to do activities like putting articles in a room in order, setting a table and moving chairs quietly. She found that these kinds of activities are effective for the development of various skills such as motor skills, creativity, aesthetic appreciation, involvement in-group activities, and leadership quality in children (Johnstone, 1948).

This activity can be practised in all the centres without any additional cost. While assigning such duties to children teachers should be careful to give chances to all children equally on rotation. Considering the suitability and practicability of this activity in ECE centres one question (Q.19 (B)) is included in the questionnaire of the present study to know whether such a system of assigning small chores to every child is practised in the centre or not.

Q.20 (B) Giving leadership to children for conducting various activities at the centre

Various activities are to be performed everyday in an ECE centre. It includes individual activities and group activities; free plays and structured plays.

While performing some of the activities its leadership can be given to one of the children. For example in singing a song or playing "in the
pond – on the back” game, its leadership can be given to a child. Similarly, in a story telling session opportunity can be given to a child to narrate the story. If children are given these kind of chances in the class it will enable them to improve their capacity of leadership and self-confidence.

In the present study one question (Q.20 (B)) is included in the questionnaire to know whether chances are given or not to children for taking leadership in various activities performing at the centre.

Q.21 (B) Practising to wait for turn taking

When children are engaging in certain activities like try cycling, sliding, playing on seesaw, swinging and ball throwing, frequently they have to wait for one’s own turn. But children of pre school age may not have the patience to wait for their turn while some of them are involved in the activity.

In such situation teacher should practice them by direct experience to wait for their turn. In certain contexts children can be instigated to wait for their turn by keeping them to stand in a queue. Examples for such situations are distribution of snacks, going to toilet or washbasin, playing on slide etc.

On continuous practising, it will become a habit of children. As a result whenever such a situations arise in their daily life they will like to act only by obeying this social value.

These kind of activities are suggested in the hand books for ECE teachers prepared by Swaminathan (2000) and DPEP (2001). In the
present study one question (Q.21 (B)) is included in the questionnaire to
know whether the system of turn taking is practised in the centre or not.

Q. 22 (B) Encouraging children to wait till all children come to start
eating

One of the most important characteristics of human being is that he
leads a social life, which necessarily implies that one co-operates with
others, shares his feelings with others, and keeps the codes of etiquette
and inter relationships. If an individual fails to learn these basic aspects of
human nature and culture, one may not be able to observe the same in
real life. This implies that teachers in ECE centres have a lot to do in this
connection. While she asks children to wait for others to come and join
together to start eating food simultaneously, it creates in children, not only
a feeling of eating together but also, develops in them higher human
qualities such as patience, endurance and oneness. This is the context,
which prompted for the inclusion of this item in the questionnaire (Q. 22
(B).

Q.23 (B) Monthly checking of height and weight

The rate of physical growth is slow during the pre school years
compared to infancy and toddler hood. However, pre school children
show a steady gain in height and weight. They gain two to three inches in
height every year. At the same time the weight increases by about two
kilograms every year. The following table gives the average height and
weight of normal healthy pre schoolers (ICMR, 1990).
Table 2
Average weight and height of preschool children

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Weight in kilogram</th>
<th>Height in cms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>3 +</td>
<td>14.78</td>
<td>13.79</td>
</tr>
<tr>
<td>4 +</td>
<td>16.12</td>
<td>15.85</td>
</tr>
</tbody>
</table>

Source: Nutrient Requirements and Recommended Dietary Allowance for Indians. ICMR. 1990.

Height and weight are used as indicators of physical growth. To ensure that the child is growing to the norms for her age, her growth has to be checked from time to time. Monitoring the growth pattern of children helps to detect growth failure at an early age. Growth monitoring is necessary, as various studies have showed that a large majority of children in the country do not get adequate food and fall ill frequently.

Considering these facts, it is essential to conduct monthly checking of height and weight in all ECE centres. The world famous educationist Montessori (1914) has stressed to keep the physiological records of each child’s development: the height, weight and other measurements.

However it is suspected that many of the ECE centres are not conducting it properly. Due to the importance of this activity, to know whether it is adopted at the centre or not one question is included in the present questionnaire (Q.23 (B)).
Q.24 (B) Maintaining Growth Chart properly

Based on observations of several children, experts have specified how much a child should weigh every month from the time she is born. Using this statistics growth charts are also prepared by experts by plotting the age on the X-axis and the corresponding weight on the Y-axis. For a ready assessment of a child’s growth pattern or status it is helpful to maintain a growth chart for every child. By checking the child’s weight against the growth chart one can easily find out whether her growth is in accordance with the norms or not. So maintaining growth chart for each child is very useful for giving special care to needy children. To know whether such charts are maintained in the centre or not one item is included in the questionnaire (Q.24 (B)).

Q.25 (B) Special medical attention to children with disproportionate increase in weight

There are several ways of monitoring the growth of the child. One of the best indicators is the child’s weight. A healthy child gains weight steadily. With the increase of age, the weight too must increase. If not, the teacher can understand that there are some problems to the health conditions of the child. But she may not be able to find out the causes of it. It can be determined only by a medical officer. In such situations the attention of a doctor is required inevitably. So the ECE centres should invariably find out children whose weight is not increasing according to their age and should make arrangements for getting special medical attention to such children. To know whether nor not such facilities are provided at the centre one item (Q. 25(B)) is included in the questionnaire of the present study.
Q.26(B) Discussion with the parents of children with disproportionate weight increase

The pre schoolers normally maintain a steady pace of growth. But it may not be true in the case of certain children. For such children, besides giving special medical attention, the matter should be brought to the attention of their parents.

To discuss the matter with the parents either they may be invited to the centre, or the teacher may visit the home of the particular child. More details regarding various aspects such as the quality and quantity of the foods given to the child and health conditions of the parents can be studied from the parents. Collecting such information, the teacher can give counselling to the parents. In order to know whether such discussions are conducted or not at the centre one item (Q. 26(B)) is included in the questionnaire.

Q.27 (B) Conducting periodic medical check up

Helping children develop their physical abilities and encouraging them to be physically active is certainly important. “Historically, health care was an important goal of pre school programmes. In today’s world of more personal responsibility for health, education for healthful clinics continues to be important; however it tends to be in many programmes” (Bruhn and Nadar, 1982). Studies conducted by various researchers such as Gochman and Sancier (1982) have found that the intellectual, emotional and psychological well being of a child is highly correlated with her physical condition. Considering this fact, educationist like Kingsbury and Hall (1998) have recommended that health programmes including
periodic medical check ups should be conducted in pre schools at least twice a year.

In such medical check ups each child should be examined thoroughly. All major aspects of the child related to her health status should be examined by the doctor. The height, weight and body structure reveal a lot about the child’s health status. For eg., from the relationship of the height and weight, experts can determine whether the child is in the normal condition or not. Similarly, noting the weight and comparing it with the growth chart, it can be determined whether the child suffer from malnutrition or incipient obesity. By examining the body structure indication of illness or disease can be identified. Therefore, factors like height, weight and body structure should be thoroughly checked up.

In the medical check up the power of visioning, hearing and mental responsiveness should be examined. Besides these, physical examination including inspection of body parts like skin, fingers, nails, scalp and hair, head and neck, eyes, ears, mouth, teeth and throat is to be done. Examination of chest, abdomen, limbs is also to be included in the medical check-up programme. Since the pulse, breathing and temperature reveal a lot about the child’s state of health, these health indicators also should be measured and noted in the medical check-up.

As a thorough medical check-up of this kind is highly effective in maintaining the good health condition of the child, it should be done in all the centres of ECE. Therefore, one item (Q.27 (B)) is included in the questionnaire to know whether the programme of medical check-up is being conducted at the centre or not.
Q.28 (B) Regular supply of nutritious food at the centre

Nutrients are essential constituents of food that must be supplied to the body in suitable amount. As mentioned by Herr and Morse (1982) there are forty essential nutrients which based on structure and properties are placed in five categories. They are carbohydrates, fats, proteins, vitamins and minerals. For the proper growth and development of children they should be supplied with different types of food from which they get all the nutrients in the required amount and proportion.

The pre school children are in a steady pace of growth. During this period, her bones of the arms, legs and trunk grow rapidly. Her muscular growth at this age is significant with improvement in muscle tone and strength. Also, she will be very actively engaging in activities. The needs for growth and activities determine the quantity of nutrients she required. It will be different for children of different ages. Experts have already prepared tables of nutrient requirements for people of different age groups. The Recommended Diet Intakes (RDIs) for children in the age group 3-6 (Beverly and Thelma, 1981) is given below in Table 3.

Table 3
RDI for Energy and Proteins for children of 3-6 age group

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>RDIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (KCal)</td>
<td>1600</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>30</td>
</tr>
</tbody>
</table>

To be consumed by this amount of nutrients by all children sufficient food items should be supplied to them at the ECE centre. If it is not supplied to them at the centre a big portion of the children, especially those who are hailing from economically and socially weaker sections of the society, will not be getting it. To know whether the nutrient foods are supplied to the centre of not, one question is included in the questionnaire of the present study.

Q.29 (B) Special attention to children who hesitate to consume adequate food

There are children who hesitate to consume adequate food. They do not enjoy eating, as do by the normal children. This may lead to poor health and illness.

There might have various reasons for their lack of interest in taking food. Slow way of eating, showing dislike for certain food items, etc may be some such reasons. The teacher must give special attention to such children. Authors like Rothlein (1989) and Barbara (1989) are of the opinion that in such occasions the appropriate approach of the teacher can make positive changes in children. So one question (Q. 29 (B)) is included in the questionnaire to know whether such an attempt is made at centre or not.

Q.30 (B) Play activities involving walking

When a child completes the early childhood education at the age of 5, she should be able to walk forward and backward with co-ordination and ease. She should be able to walk on a straight line or a circular path and be able to control speed more efficiently in walking (Kaul, 1991). For
achieving these basic abilities, direct experiences should be given to the children. Opportunities should be provided at the centre for all children to engage in play activities involving walking.

A teacher can develop various types of play activities, which involve walking. Whether an activity for children is a play or not depends upon its procedure. If it is performed in such a way that children like it and feel enjoyment in doing it, then it is a play to them.

An effective teacher in a preschool can introduce, without much effort many type of play activities involving walking. An example to show how an ordinary activity involving walking can be converted as a play activity is given below:

If a teacher simply asks the children to walk from one side of the ground to the other side, the children will not enjoy it. They may feel bored; and think it as a punishment. Instead, an expert teacher can convert the very same activity into a play which children like the most. She draws two curved lines, like a road, on the ground from one end to the other end. Then the teacher standing at one end tells the children that it is a road and at the other end there is a shop. She adds that they shall go to the shop then by walking through the road. Then all the children accompanied by the teacher go to the shop. On reaching the shop they take rest for a while and then return to home (starting place) by walking. In the coming days they may repeat the same activity by changing the shop to market, school, post office etc.

This is a zero cost play activity and much useful for physical and motor developments. It can be practised in all pre schools. So one question (Q.30 (B)) is included in the present questionnaire to know
whether such activities involving walking are conducted at the centre or not.

**Q.31(B) Play activities involving jumping**

Children learn to jump in a co-coordinated and graceful manner only after they have gained the strength and balance to leave the ground with both feet at the same time. Children of three-year-old can jump stiffly without bending their legs at knees. This jumping pattern becomes smoother during the preschool years as they learn to crouch and use their arms to thrust themselves up while jumping. Their bending is better balanced, as they are able to bend their knees. From stepping off low platform they are now able to jump off low stools and boxes with both feet together. Then they successfully negotiate platform that are one to one-and-a-half feet high, they find higher plat forms to jump off – a chair, a bed, a wooden crate or from a step constantly changing themselves to see how far they can go. Hurlock (1999) has mentioned that by the age of 5 years they should be able to jump from a higher position approximately four feet. Also, by this age they should be able to jump forward for a distance approximately two feet.

For attaining these abilities suitable play activities involving jumping should be properly conducted at the centre. Brewer (1992) advises to encourage children to explore how they can turn while jumping or how they can stretch their bodies or make them as small as possible while jumping. To know whether play activities involving jumping are conducted at the centre or not one question (Q.31 (B)) is included in the questionnaire.
Q.32 (B) Play activities involving running

The child should acquire the ability to run steadily, with controlled starts and stops over the pre school years. By the age of five, she should be able to run smoothly and with speed in a well-coordinated manner. By this age she should be able to start and stop and run abruptly again when asked, with ease and co-ordination (Leithwood and Fowler, 1971).

To attain these abilities for all children various suitable play activities involving running should be practised at the ECE centre. There are many such activities that can be practised at the centre without any difficulty. One question, to know whether activities involving running are practised or not at the centre, is included in the present questionnaire (Q.32 (B)).

Q.33 (B) Play activities involving throwing

Games of throwing and catching are interesting to children. During pre school years their ability to engage in play activities involving throwing like throwing a ball improve steadily. To throw the ball, in the initial periods of pre schooling, she hurls the ball forward in a simple over hand, back-to-front motion. This activity enables the child for better visual-motor coordination. Gradually she learn to rotate her body slightly to the right as she prepare to throw the ball and then rotate the body to the left while making the throw.

Games like throwing a ball is easy to practise in all ECE centres. It can be done as an indoor or out door game. The research studies of Dusenberry (1952) have admitted the merit of play activities involving throwing on the gross motor development of children.
In order to know whether this type of play activities are conducted at the centre or not one question (Q.33 (B)) is asked in the present questionnaire.

**Q.34 (B) Swinging**

Swinging is an activity which is much enjoyed by children of all age group. It is best encouraged to them by providing with a swing for free play.

While the child moves forwards and backward in a swing, she is spontaneously doing a good exercise suited for her gross motor development. Also she gains the ability to maintain body balance while swings in a sitting position (Davies, Barnes and Godfrey, 1972).

The swing can be easily made at all centres by attaching a strong rope to a plank or tyre or any kind of seat on both sides and tying the rope to a steady branch of a tree or the beam of veranda.

While making the swing it should be ensured that the rope to tie and the branch of the tree where it is to be tied is strong enough and the path of the swing is free from any kind of obstacles.

In the present questionnaire one item (Q.34 (B)) about swinging is included. The purpose of it is to know whether this activity is being conducted at the centre or not.
Q.35 (B) Play activities involving balancing

Children should have the ability to do various things by keeping balance to their body. Activities like walking through a narrow path, standing on one foot and walk on the heels or toes are some examples of such activities.

According to the researchers Ames (1964) and Jones (1973) who have conducted studies in the area of motor development of children, a child in the age group of 3-4 should have the ability to walk slowly with hands outstretched for support on paths of 8 cm width. Gradually by the age of 4-5 years she should be able to walk on even narrower paths – approximately 6cm width. By the end of the preschool age (5 years) she should have developed the ability to walk on an inclined plank or a beam.

Teachers of ECE can develop various play activities for improving children's capacity for balance keeping. Such activities will help to develop their motor co-ordination and control.

To know such play activities are included or not in the programmes of ECE centres one item is included in the present questionnaire (Q.36(B)).

Q.36 (B) Play activities involving climbing

The activity of climbing up and down is interesting to most of the children. If there is a small tree in the neighbourhood, children in the age above four, most probably, will be climbing on it much enthusiastically. Such activists come naturally to pre schoolers who are gaining control and balance in their movements. But very often parents and elders feel
frightened in seeing children perching on a narrow seat at a height from the floor. But while caution is important, one must also remember that most of the four to six year olds do have the strength, agility, intelligence and reasonable caution to attempt such manoeuvres. Rarely will children try something, which is completely beyond their abilities.

Considering the benefits of doing activities involving climbing, facilities should be provided in pre schools for children to involve in it spontaneously. Ely, Healey and Smidt (1972) who have conducted studies on the motor development of children have suggested activities like climbing, creeping, crawling and rolling for the proper motor development of children. Brewer (1992) has recommended encourage children to think of different ways to hang, move, stretch, or curl and to find different ways to get on and off the climbing apparatus safely.

To know whether such activities are being conducted at the centre or not one question (Q.36 (B)) is included in the questionnaire of the present study.

**Q.37 (B) Stringing activities**

Using various things such as leaves, paper pieces, cardboard and cut out strips various stringing activities can be performed in ECE centres. For example, at the centre children can be asked to collect leaves and provide them with a string or thread. Then using these leaves children can be initiated to make interesting things such as necklaces and crowns. Alternatively, the teacher can provide beads for stringing.
Another variation of the stringing activity can be like this: Put holes in a cardboard and give children coloured ribbons, threads or lace to string through the holes. Thus, interesting patterns can be made by them.

All these activities can be easily practised in all kinds of preschools, and these are suitable for the fine motor development of children. The eminent educationist Montessori (1914) has attached the importance of fine motor and gross motor development of children and the role of this kind of activities for attaining the developments.

The importance of motor development has been studied by the researchers such as Kaul (1984) and Seth (1973). They have suggested various activities such as stringing; finger exercises and peg board play for the fine motor development.

In the present study one item about the stringing activity (Q.37 (B)) is included in the questionnaire to know whether it is being adopted at the centre or not.

Q.38 (B) Activity of listening various types of sounds in the environment

An interesting activity of listening various sounds in the environment can be included among the programmes of ECE centres. A teacher can arrange it in the following way: Let the children be seated outside the class, if possible under a shady tree, in a semi circle. Ask them to close their eyes for a short while and listen the different sounds in the environment. After a while ask them to open their eyes and describe the sounds that they had heard.
On practising this activity, children get the capacity to discriminate between various common sounds in the environment. Also, it will help them to develop their ability to locate direction easily from the sound.

This activity is a zero cost one. It can be practised either as an in-door or out-door play. One question, in the questionnaire of the present study, is about this kind of play activities (Q.38 (B)). The purpose of the question is to know whether activities of listening various types of sounds in the environment are being adopted at the centre or not.

**Q.39 (B) Activity of identifying familiar animal sounds**

Children enjoy in imitating the sounds of various familiar animals and birds. Also, they like in hearing such sounds imitated by somebody else. Using the pictures of such animals a play activity can be conducted at the centres of ECE.

For this play the teacher should arrange small pictures of various animals familiar to children. Each of it should be stucked on one side of a small card. The sounds of all these animals should be tape-recorded.

Put all these cards in a box and place it at the middle of the classroom. Let each of the child come and take one card from the box. When all the children took each card play the recorder so that the sound of each of the animals comes one by one. For each sound, the child/children who got the picture of that animal should stand up and show the picture to other children.

For conducting this activity the teacher has to take a little pains; she has to arrange the picture cards and a tape recorder. Instead of cards,
she can draw the pictures on small pieces of sketch paper. Similarly, the teacher herself can produce the sounds of animals, instead of using the tape recorder.

The educational researcher Martin (1978) who has developed various play activities for pre-schoolers has included this kind of activities for fostering different developments such as the power of sound dissemination, ability to associate one-to-one relationship and the vocabulary development in children.

In order to know whether such activities are being practised at the centre or not, one question (Q.39 (B)) about this play activity is asked in the present questionnaire.

**Q.40 (B) Sound identification plays**

Sound identification plays are conducted in many of the ECE centres. It is usually practised as follows: Children are arranged to sit in a semi-circle and they are told to close their eyes. Then any sound familiar to all children will be made by the teacher. For example, the sound of pouring water from a glass, sound of clapping the hands or making the sound of bangles or stamping the foot on the ground.

Then ask the children to identify the sound made. Later the children can one by one take over the act of producing the sound. These kinds of plays are effective to improve the sound identification ability of children. In the collection of activities prepared by DPEP (2000) for ECE teachers three kind of activities are included for this purpose. To know whether this game is conducted in the centre or not, one question (Q.40 (B)) about it is included in the present questionnaire.
Q.41 (B) Game of identifying a child from her sound

In this game all the children of the class are divided into two groups. One group hides behind a sheet and one of the children in that group say something, for instance, a line from a nursery rhyme. Then the teacher asks the other group to identify the voice, that is, who was the child made the sound? Initially if the children could not identify the child the teacher should help them for it by giving some hints about the child: for example what the child is wearing. Even though the children could not identify the child the teacher can discover her.

The activity can be repeated by giving the chance to make the sound to some other children.

By practising this game the ability of the children to identify the difference between sounds will be improved. In the opinion of researchers like Bates and Votterra (1975), these kinds of play activities are helpful for improving the sound discrimination ability of the child.

In the present study one question (Q.41 (B)) about this kind of activities is included in the questionnaire. The purpose of this question is to know whether it is practised in the centre or not.

Q.42 (B) Sound matching game

Using little tins or boxes, sound matching games can be practised at the ECE centres. For this the teacher should arrange some little tins or boxes and fill it with one of the substances like sand, pebbles, matchsticks, buttons, coins or grains to make sound boxes. Let there be two of a kind. Teacher gives boxes to the child. They are not allowed to
open the box. But can tinkle it. Then the teacher asks children to match the boxes on the basis of sound they heard from the box while tinkling.

In the opinion of Jessen and Kaess (1973), who studied the effects of training on the inter sensory communication of five year olds, these kinds of play activities are effective for developing the sound discriminating ability of children. Kaul (1991) has suggested it as one of the activities for improving the sound discrimination power of pre school children.

Considering these facts, in the present questionnaire one question (Q.42(B)) is asked to know whether sound-matching game is included in the programmes of the centre or not.

Q.43 (B) Play activities based on sense of touch

To learn about anything children need to experience it – that is, touch it, see it, hear it or smell it. Listening to, looking at, touching and smelling comes naturally, without anyone telling to the children. However, by carrying out play activities that are based on these senses, children can be helped to observe things and events in more details.

Experts of ECE like Kaul (1991) have identified that a child by the age of 5 years, that is by the completion of early childhood education, should be able to name, classify and seriate (place in order) rough and smooth surfaces or hard and soft surfaces to three levels, ie, rough-smooth-more smooth.

For achieving these objectives various play activities can be conducted in an ECE Centre. For example, put some objects of two
different textures which children are familiar with (eg. wooden and iron blocks) in a bag or a box. Ask them to dip their hands into the bag, feel the objects and identify them in this way without seeing them. Same type of play activities can be repeated using hard and soft objects like wooden plank and sponge, smooth and rough objects like marble piece and stone piece, shape differed objects like square blocks and triangular blocks.

All these activities are practicable to an ordinary ECE centre. Also, these activities are much useful not only for the development of sense of touch but also for various developments such as fine motor development, vocabulary development and concepts formation. Montessori (1914) has stressed on these kinds of activities for the development of sense organs.

In the present study, one question (Q.43 (B)), to know whether activities providing opportunities to touch and feel objects of different kind are being conducted or not at the centre, is included.

**Q.44 (B) Play activities for the development of sense of smell**

With respect to the development of sense of smell, experts have identified that by the age of five a child should be able to discriminate between pleasant and unpleasant odours. Also she should be able to identify objects on the basis of their smell. For achieving these objectives, activities like nature walks, bringing strong smelling familiar objects into class, collecting objects with different smell from the environment giving direct experience for various smell at the time of cooking and structured conversation are recommended by educationists like Sharma (1985) and Thakkar (1987).
To know whether sufficient number of this kind of suitable activities for the development of the sense of smell is conducted or not at the centre, one question is included in the present questionnaire (Q.44 (B)).

Q.46 (B) Play activities for the development of sense of taste

For the development of sense of taste, various play activities for preschool children have been suggested by various researchers such as Muralidharan and Banerji (1991). It includes activities like bringing samples of food articles with distinct taste in the class, giving opportunities to children for tasting food of different taste, discussion at the snack time about the taste of various food items, classification of picture cards of objects with distinct tastes, identifying food items by tasting them with closed eyes, and songs on taste.

Activities of these types are practicable at all ECE centres. Considering the utility and practical aspects of these activities one item (Q.45 (B)) is included in the present questionnaire to know whether sufficient number of these kinds of play activities are included or not at the centre.

Q.1(C) Free Plays

Children like to play always. It would be rare and very surprising to see a group of children sitting together quietly without doing anything. Even if a child is alone, she would find something or the other to play with. Trying to engage always in plays is the nature of the child.
Plays serve as a natural way for children to express ideas as well as to explore and understand the world around them. It also helps to build social relations among children. Plays, nurture spontaneously the basic learning skills like the observation, experimentation, classification and reaching at conclusions. It also caters to the promotion of the physical, language and social skills of the children.

The plays are categorized as structured plays and free plays. The plays planned and administered by the teacher or somebody else aiming at the attainment of certain specific goals are structured play.

The plays where children have full freedom to select and do according to their own interest are categorized as free plays. Both the types are inevitable at ECE centres for attaining the objective of all-round development of the child.

Considering all these facts one question (Q.1, part C) is included in the questionnaire of the present study. The purposes of asking this question are:

(i) to know whether free plays are being conducted at the centre or not; and
(ii) if conducted, for obtaining which of the developments?

Q.2(C) Group play activities

For the all-round development of the child various type of play activities should be conducted at the ECE centre. It should include individual activities and group activities. When the child plays by herself, it
is referred to as individual play and when she plays with other children, it is referred to as group play.

Playing in a group requires the child to take into consideration other children's point of view and follow rules. Group play fosters in the child various social skills necessary for interaction with others.

A number of researchers like Gravey (1977), Sylva (1976) and Lunzer (1959) have suggested group play as an essential component of ECE. Different child psychologists like Denzin (1975) have mentioned that children like to involve in-group activities after the age of three. Till the age of about three years they mostly play by themselves; interacting with others only for a short duration.

Children in the ECE centres are at an age of 3 plus. So they can engage in-group plays effectively. Considering these facts, and the various benefits of group activities, to know whether it is practised in the centre or not, one question about group activities is included in the questionnaire (Q.2 (C)). If conducted, it is also intended to know the various developments expected through this play.

Q.3(C) Story telling

Stories fascinate children of all ages. Small children enjoy in hearing a story even if it is heard a dozen times before.

There are various reasons for the child to like stories. Its ability to arouse their curiosity, its capacity to entertain them, its power to stimulate their imagination, and its ability to be in tune with their hopes, desires and fear are some relevant aspects to be mentioned in this context.
There are different types of stories for children and they can be categorized into three types. They are:

(i) **Stories based on real life**

This would include items such as stories on some phenomena of nature, science stories and stories about brave men and women.

(ii) **Stories based on imagination and fantasy**

This includes stores such as fairy tales, folk tales, stories containing impossible events and stories based on superman or batman.

(iii) **Stories from a specific culture**

This category contains stories such as myths, legends, epics and other folklore.

Whatever be the type of the story, the effectiveness of narrating a story depends on certain factors. Sound modulation is one among them. When a story is narrating to children the narrator must modulate her voice to make the story interesting. For example, the voice must became loud and deep if the lion is talking and soft and trembling if the rabbit is speaking, fast if the rabbit is running and slow and soft if the tortoise is crawling. Also, the narrator must modulate her facial expressions by widening her eyes and baring her teeth when the lion is speaking and making a crying face for a scared rabbit. It is also important to make appropriate sounds like lion roaring, dog barking, goat bleating and child crying. Gestures too are to be used for holding the child’s attention – the tiger’s claws, the pouncing cat or the monkey peeling a banana.
Story telling can be used in all ECE institutions for obtaining various developments such as language development, social development and cognitive development in children. Many of the famous educationists have suggested to include story telling in the education of young children. Comenius (1642) believed that the children should be told 'spiritual' and 'secular' stories. Froebel (1826) has included story telling as a compulsory item in his kindergarten programmes. A number of researchers like Roser and Wilson (1986), Morrow (1979) and Nessel (1985) who have studied the effectiveness of story telling in the education of young children have concluded that story telling can have very positive effects on children's literary development. It has various benefits “such as developing listening abilities, helping children gain a sense of story, modeling the teacher's appreciation of good literature and motivating the children to read” Brewer (1992).

All the teachers can adopt story telling in their ECE centres without any expense. In the present study one question (Q.3 (C)) is asked about story telling. The purposes of this question are:

(i) to know whether story telling is conducted at the centre or not; and
(ii) if conducted, for obtaining which of the development?

Q.4 (C) Songs

Almost all children enjoy singing. They sing loudly, often with more energy. They pick up songs they hear, sometimes repeating a phrase over and over and sometimes mispronouncing the words. At times the pitch is off but that seldom deters a young child. Learning and singing songs are probably the most common musical experiences in the early childhood years
There are different types of songs for children such as ballads or story songs, lullabies, humorous songs, number songs, songs about modes of transport, songs about festivals, celebration and nature, game songs and songs describing family relationship. Each of these songs can play its own specific purposes, if it is properly conducted in the pre schools. It can be used for promoting children's language development. Through songs children learn new words, sentences and even new concepts. Various social values can be taught them through songs. Froebel (1826), the father of kindergarten, suggested songs and special games to enhance learning. In the "Children's House" developed by Maria Montessori a room was allotted for music and games. Researchers, in the area of child development, such as Gardner (1973) and Reiber (1965) have stressed the importance of songs on developing social values in children. McDonald and Simons (1989), Merrion and Vincent (1988) have studied the importance of songs in the education of young children. In their opinion songs are valuable tools for helping children gain content knowledge, and make sense of their experiences. Gilbert (1981) has listed the following points to consider when choosing songs to teach children.

1. The songs should appeal to the child.
2. The songs should not be too long and, in general, the younger the child the greater the need for repetition.
3. Songs with a chorus encourage even shy children to join in.
4. Songs, which lend themselves to movement often, have greater potential with young children.
5. Avoid tunes with very high notes or difficult leaps.

While songs are practising in the centres, the teachers should bear in mind that competition has no place in pre schooler's singing. Teachers
should never make comparisons among children to hurt their feelings, or to create rivalry among them. Also, child should not be forced to sing, if she is not ready for it.

To sing a song in the class the teacher should know it well before she sings. She should sing the song fully to children and breaking of lines should be avoided. As the teacher sings she should articulate clearly and distinctly. Children can be encouraged to sing with the teacher, whenever found necessary.

Considering the importance of songs in the ECE centres, a question (Q.4 (C)) is included in the present questionnaire with two purposes:

(i) to know whether songs are included or not, in the programmes of the centre; and
(ii) to know, if it is included, for the attainment of which of the developments it is used?

Q.5(C) Action songs

One question (Q.5 (C)) on action songs is included in the questionnaire to collect information regarding two aspects viz., (i) whether this item is being performed at the centre or not. (ii) if performed, the varieties or types of component aspects.

In certain songs children act according to the theme of the song. Weikart (1982) suggests that movement exercises to help children learn to feel and move should begin with speech activities. She has mentioned that in the age of three to four the self-expression power of the child
through music increases. At this age as the child listens something she is increasingly aware of some of the components that make up her favourite music. "She may love to dramatize songs and may also enjoy trying out different ways of interpreting music" Brewer (1992).

Researchers like Fraser and Roberts (1975) have indicated that good personal and social habits can be developed in small children through indirect methods which children are willing to practise. One of the most suitable methods in this regard is the practice of action song. Studies conducted by Jalongo and Collins (1985) has highlighted that action songs, repeated frequently, would promote good behaviour in children.

Q.6 & 7 (C) Free conversation and structured conversation

Children have a lot to tell as soon as they reach school in the morning. They like to share with everyone what happened at home, what they did the previous evening or what they may have seen on the way. This activity provides opportunity to every child to express herself and share her experiences. Once satisfied the child can settle down to other activities.

While on some days the activity can be left totally ‘free’ on other days the teachers can instruct the children to observe something on their way to the ECE centre and talk about that, for example, “observe carefully all that you saw on the way and then tell us”. This will encourage the skill of observation also.

In free conversation teacher’s role should be only to encourage and ensure that each child gets a chance to speak. Under no conditions
should the teacher dominate the conversation. If a child uses incomplete sentences or grammatically incorrect sentences the teacher should not correct it directly. That will tend to discourage them to speak openly. At the same time the teacher can encourage children to use complete sentences and grammatically correct speech by repeating their phrase/sentences in correct form.

In the opinion of teachers of various pre schools, free conversation and structured conversation are very effective for the upbringing of various developments in children. In the activities for pre primary school children developed by former State Institute of Education and Training, Kerala (1991) and the activities for children of early childhood education prepared by the District Primary Education Programme (2001) free and structured conversation are included as compulsory items in the programmes of ECE centres. According to Kaul (1991) “free conversation should, as far as possible, be the first activity of the day after welcome and prayers”.

Free and structured conversation can, without any expense or difficulty, include in the programmes of all ECE centres. So two questions (Q. 6 & 7(C)) are included in the questionnaire of the present study with the following purposes:

(i) to know whether free conversation and structured conversation are included in the activities of the centre or not;
(ii) to know, if included, for the improvement of which of the developments, these are being conducted.
Q.S(C) Creative Drama

Creative drama means dramatizing a story or event in an informal way with children creating their own dialogues as far as possible. According to Brewer (1992) "Creative drama usually refers to spontaneous productions in which children create or re-create stories, moods or incidents without learning lines or practicing their roles". Mc Gregor, Tate and Robinson (1987) state that the essential characteristic of creative drama is acting out. In acting out

"there is an agreement to suspend the normal social roles with each other in identifying with the new imagined roles. There is an agreement to make a different use of the environment". (p. 12).

In creative drama children get ample opportunities to develop imagination. It fosters independent thinking too. When they make their own dialogues one's own ideas and views are expressed. This will help the child to develop her own ideas.

Dramatic play provides opportunities for group interaction, which will nourish their co-operative mentality. As they say many things while the drama is in progress, it will help to improve their vocabulary and ability for verbal expression.

Brewer (1992) has summarized the benefits of creative play as follows. It foster:

1. the development of critical thinking and problem solving skills;
2. the ability to work co-operatively with others’
3. the ability to understand the perspective of others;
(4) the ability to communicate more effectively; and
(5) the integration of ideas from many sources into a meaningful whole.

Considering these benefits of creative drama different researchers of early childhood education like Benson and Pryon (1973) have recommended dramatic play among the activities of pre school programmes. In the questionnaire of the present study one question (Q.8 (C)) about dramatic play is included. Its purposes are:

(i) to know whether dramatic play is included as an activity of the centre; and
(ii) to know further, the purpose of inclusion of dramatic play, if it is included.

Q.9(C) Nature Walk

Nature walk refers to taking children on an outing to places like park, garden and plants nursery to observe natural phenomena. It is an excellent activity for getting plenty of opportunities for first hand observation of natural phenomena, for example, changes due to seasons, plant growth, the physical environment, activity of birds and insects etc. This programme creates so many occasions for children to involve in various group activities, which will lead to the development of various social values. Children's power of observation, ability for comparison and classification can be improved through this activity. Nature walk can pave the way for developing imagination and creativity. As it involves walking, it is a good activity for motor development also.
Educationists like Rousseau and Dewey have emphasized the importance of activities like nature walk to know and get acquainted with nature.

Before starting nature walk teacher should prepare children by conversing with them about where they are going and what they should observe. Also, teacher should try to give specific assignments, for example look out for and collect dry leaves, fallen petals etc. The children should be encouraged to talk about what they are seeing around them.

This activity is a zero cost one. It can be conducted at all ECE centres if the teacher is willing. The help of parents can also be made use of in this activity. In the present study one question (Q.9 (C)) about nature walk is included in the questionnaire with two purposes:

(i) to know whether nature walk is included in the programmes of the centre or not; and
(ii) if included, for obtaining the development of which components?

Q.10(C) Gardening

A garden in a nursery school can be a place of fun, beauty and new learning. So under the help and guidance of the teacher a small garden should be made and properly looked after in all ECE centres. Young children cannot themselves put up garden walls, fences or gates or dig garden plots. But they can dig small water channels, carry a little water, plant seeds, sweep leaves, water the plants, sow seeds in prepared plastic bags and pull up weeds. So teacher should assign those kinds of small duties to children for making the garden.
While doing these kinds of responsibilities the teacher should ensure that all children are involved in it. She should welcome any suggestion from the children about gardening and encourage them to come forward with new suggestions.

Different activities children do for making garden will help their various developments. Activities like digging small channels, walking and running in the garden while they are doing various kind of works, sweeping leaves, watering the plants and pulling up the weeds are suitable for their gross and fine motor developments.

When they engage in various activities of gardening, they spontaneously learn much new words such as seeds, seedlings, growth, manure and weeds. Besides this, children get opportunities for the formation of different new concepts while they participate in the works. All these things foster the language development of the child.

Gardening provides different chances for the cognitive development also as the children get opportunities for observation, comparison and classification in it. For example they can observe, compare and classify plants of various kinds, its different stages of growth, different types of leaves and flowers, and colour and smell of flowers. Also, they can touch and understand the softness of petals of flowers. In addition to these benefits, the scope for children to engage in-group activities too is much in the gardening programme.

Thus the educational values of gardening in an ECE centre are very high. Froebel (1826), the father of kindergarten has insisted on practising various tasks, like gardening at nursery schools, which according to him serve to build character and nature study. Considering
the importance of gardening in ECE centres, one question (Q.10 (C)) is included in the present questionnaire with the following two purposes:

(i) to know whether gardening is there in the centre or not; and  
(ii) to know, if it is done, it is used for the development of which of the development components?

Q.11(C) Tearing and Pasting of Papers

Children enjoy the activity of tearing papers and pasting it. It can be conducted in the ECE centre in the following way:

Provide the children with pictures from old magazines or newspapers. Ask them to tear the pictures from them. Have some home made glue and sheets of papers ready on which the children can paste the pictures they have torn off. In the first time the teacher should have to demonstrate how to stick the pictures on the paper.

Children can also use their earlier drawings for this purpose. When children are able to paste the pictures, ask them to do the same activity using small bits of paper.

Gradually the teacher should draw an outline of something on a paper. For example, let it be an outline of an animal, bird, hut or a tree. It should be large and spacious. Let children to put glue on it. Then ask them to tear pieces of paper given to them and paste it within the outline. After sufficient practise, the outline can be made smaller.

Experts of child development like Hurlock (1999), Goodnow and Lehman (1974) have pointed out that when a child complete 5 years of
age, she should be able to tear paper along simple shapes and paste them neatly in a given outline.

Paper tearing and pasting activity helps children for their fine motor development. It fosters their creativity. It can be easily practised in all pre schools. A question (Q.11(C)) on paper tearing and pasting is included in the present questionnaire with two purposes:

(i) to know whether paper tearing and pasting activity is included in the programmes of the centre or not; and
(ii) if it is included, which of the developments are it aimed at?

**Q.12(C) Clay Work**

Children enjoy very much in doing spontaneously certain activities using clay or plasticine. If they get some clay they will immediately start to make various objects with it. She may pull, throw, drop, pinch and roll it in many ways. When the child becomes familiar with clay, she starts using it to represent objects. She begins by making small balls or curls. Naming of these objects come later. Handling the lump of clay is a sensory experience, which will further develop the ability to learn by feeling. It will also improve the fine motor co-ordination. Experts in the field of pre school education like Kaul (1991) have spelled out that a child in the age of 4-5 should be able to mould clay into various simple shapes and decorate with other accessories like twigs colour and flower petals. Montessori has suggested clay work as an activity for fine motor development, cognitive development and for the development of creativity.

Clay activity can be practised in all pre schools. Clay can be prepared by crushing the mud and keeping it submerged in water for a few
days. Later the water is drained, the major portion will by then have been absorbed by clay. Then the clay is pounded well with the feet or a flat-based pounder. It is then ready for use.

To motivate children for engaging in clay work the teacher can put a small piece of wooden board or cardboard in front of every child and give her a lump of clay for moulding. While children are making something with it let her talk about what she is making. But the teacher should not ask the children to copy from her. Teacher should assure that children wash their hands after working with clay.

In the present study one question (Q. 12 (C)) about clay work is included in the questionnaire. It is meant to:

(i) to know whether clay work is included in the activities of the centre; and
(ii) to know, if it is included, which of the developments are its objectives?

Q.13 (C) Paper folding

In paper folding various shapes and objects are made by folding papers in various ways. This activity is liked by all preschoolers.

As an initial stage of performing this activity, let children to fold their handkerchiefs using one to two folds. After this, gradually they should be motivated to make more shapes and objects like boat, ship, hat and bag by folding the papers.
In paper folding activity teachers should guide and demonstrate whenever it is required. For motivating children to make some objects by folding the paper teacher herself should make some such objects and show it to the children.

Paper folding helps the fine motor development of the child. It enables for developing her imagination and creativity. At a later stage various concepts can be introduced through it. For example the concepts of various shapes such as triangle, square and rectangle and concepts like half, and quarter can be introduced by folding papers accordingly. Also, it is a good activity for improving the eye-hand co-ordination of the child. Researchers like Cooke and Cooke (1973) have suggested paper folding as one of the suitable programmes for obtaining various developments in children.

Paper folding activity is not an expensive one. It does not require any additional space for practising. So it can be easily adopted in all centres of ECE. A question about paper folding (Q. 13 (C)) is included in the questionnaire with the following two purposes:

(i) to know whether it is practised in the centre or not; and
(ii) to know, if practised, for obtaining which of the developments?

Q. 14 (C) Printing

The preschoolers can do block printing. The blocks for it is not so intricate; it can be made easily at a low cost. By cutting horizontal sections of vegetables such as potatoes, onions and ladyfinger printing blocks can be made. The cross section of many vegetables like ladyfinger and lotus stem has their own patterns. On the cross section of potato
patterns can be easily carved with a knife by the teacher. Then provide children a bowl of paint and a layer of cloth or a thin piece of sponge in it. Children may be demonstrated by the teacher to touch the block on the sponge or layer of cloth so that only a limited amount of paints adheres to the block. With the block, print can be made on paper, floor, cloths or even palms too.

As another simple method, leaves and coins can be kept under a thin paper and impressions can be lifted from them by rubbing them with crayon or pencil from the top of the paper.

Kaul (1997) have pointed out that a child by the age of 4-5 should be able to do simple printing initially with adult guidance and then her own. "Printing can range from quite simple experiences such as dipping a sponge or a piece of junk into paint and then pressing it on to a paper to complex projects such as preparing a print form, rolling ink on it with a brayer and then printing with it" Brewer (1992, p. 360).

Printing activity is much suited for developing finger control. Besides, it enables for developing creativity and imagination. In the present questionnaire one question (Q. 14 (C)) on printing is included to know:

(i) whether printing is being conducted at the centre or not; and
(ii) if conducted, for obtaining which of the developments?

Q. 15 (C) Drawing

Young children, before they start writing, are usually much enjoyed in doing various types of scribbling on any surface they get. Sometimes
their scribblings may be on a slate or a paper using a pen or a pencil. Some other times it may be on the walls of their house using a stick, leaf, pencil or even a piece of charcoal.

In the initial periods all such scribbling might be almost in a closed circular shape. Gradually they acquire the ability to draw vertical lines and horizontal lines. While the toddlers delight in the sheer physical activity of moving a crayon or pencil around and produce marks on paper, a child entering the preschool age attempts to control her scribbling and discovers a connection between these marks and the world around her. Lines are no longer simply marks on paper but begin to have a meaning for the child. As mentioned by Zaccaria (1965) a child in the age of 4-5 should have the ability to draw recognizable figures and meaningful drawing with crayons.

While children engage in drawings they are spontaneously obtaining various benefits. Their fine motor development is one among them. Improvement in their various abilities such as imagination, creativity, and creative expression are some other merits of it.

Researchers like Govatos (1967) Gutteridge (1939) have mentioned the effectiveness of drawing in the fine motor development and the development of imagination and creative expression of children.

In the questionnaire of the present study one question (Q.15 (C)) about the drawing activity is included with two purposes.

(i) to know whether drawing activity is practising in the centre or not; and

(ii) if practising, it is planned for which of the developments?
Q. 16 (C) Painting

When children are given materials like paints, brushes, and papers they get a chance to do something original. They enjoy in paintings and drawings. Painting as an activity provides great opportunities for the fine motor development, experimenting, and for the formation of various cognitive concepts.

While they are handling materials like brushes, crayons, and pencils children train the small muscles of the hands and the eyes. While painting children get opportunities to learn the names of the colours. A child, who dips a brush in yellow paint and then in blue paint, learns that by mixing yellow and blue one gets green. Excited about this discovery, she may try mixing other colours. Researchers like Connolly, Brown and Bassett (1968) have suggested painting as a suitable activity for the fine motor development and for the formation of many cognitive concepts. They have described that a preschool child in the age 3-4 years should be able to colour within a large outline, though not very neatly and in the age 4-5 she should be able to colour within given outlines fairly neatly and accurately. Also, by the age of 5 she should be able to do brush painting with large sweeping movements and show a few meaningful figures like man, animal and tree. By this time she should be able to hold the brush properly.

In an ECE centre the painting activity can be practised without much difficulty. The colour for painting can be made by the teacher with powder colours. Let children paint freely with brushes. If brushes are not available it can be improvised with broomsticks and cotton or in other ways.
As another activity for painting teacher can draw a large shape on a sheet of paper on the floor and ask the children to colour within the shape with crayon or a piece of chalk.

Considering the practicability, and benefits of painting activity in ECE centres it is considered as an apt programme at the centres. The purposes of including one question (Q. 16 (C)) in the questionnaire about the painting activity is the followings:

(i) to know whether painting activity, as a programme, is conducted at the centre or not; and
(ii) to know, if conducted, for the development of which of the components?

Q. 17 (C) Picture reading

Children like to see pictures. Even before they start reading they like to go through a book seeing its pictures. It is common to see very young children, though do not know how to read, take a book and open it page by page, looking on each of the pictures very seriously and saying some comments on them according to their imagination. It is due to their interest in seeing the pictures.

Making use of this interest of children in seeing pictures play activities can be introduced at the centres of ECE for accelerating various developments in children. As an activity let the teacher shows the children a picture of anything; for example, the picture of a good habit – a child brushing her teeth. Showing the picture teacher initiates for discussion by asking some simple questions about the picture like: What is Ramu doing
in the picture? What is the use of brushing the teeth? Do you brush your teeth daily? When do you brush your teeth? etc.

Through these kinds of questions, answers and discussions the children come across the various aspects of that particular picture. Different eminent educationists have advocated the use of pictures in developing various abilities in children. Comenius, who wrote the first book that used pictures to aid in teaching young children, is one among them. Pestalozzi made great use of objects and picture albums during his teaching of young children. He would put an object or picture before the children and then asks them what they saw, encouraging the children to observe and express their observations in correct language.

Pictures can be used in preschools in yet other different ways. As an example shows the children a picture of a familiar animal – say a dog. The picture might have missed any one of the notable organs – say tail. Children can be asked to find out the missing part.

As another example two pictures identical in all aspects except one difference, can be shown the children and asked to find out the difference.

All these activities are well suited for improving their power of observation and some other skills like classification, identification, vocabulary development and improvement of memory power.

These activities do not need extra expense or special facilities and arrangements. It is practicable in all ECE centres. Considering these facts a question (Q.17 (C)) is included in the present questionnaire to know:
whether picture reading is included in the programmes of the centre or not; and

(ii) if included, it is conducted for fostering which of the developments?

Q. 18 (C) Play Activities Using Small Things like Pebbles and Beads

Playing with small things such as pebbles, beads and seeds fosters precision and the child’s ability to control in using the fingers. It also enables for the development of her eye hand co-ordination. Using such small things a teacher can plan a variety of play activities at the ECE centre.

As an example, give children an assortment of pebbles, beads, and seeds and ask them to separate into different piles. This will help children to develop some idea of classification. Alternatively, the teacher can draw some shapes on the floor and ask children to place small objects like pebbles, leaves, bottle caps and seeds on the outline. This will foster their eye-hand co-ordination and will help to develop the concept of shape, besides helping the fine motor development.

Researchers like Leithwood and Fowler (1971) have described the benefits of children’s play with objects like pebbles beads and seeds. As these things or things of similar type are easily available to a preschool, play activities using these type of small things can be practised there.

One question (Q.18 (C)) on this kind of play is included in the questionnaire to know:

(i) whether activities using small things are performed at the centre or not; and
(ii) if performed, the varieties or types of the component aspects.

**Q.19 (C) Collecting objects from the premises**

Children like collecting things from the premises. There are various kinds of objects in the environment that can be collected by them. When children go out for open play or nature walk the teacher can encourage them to collect objects. Such objects may be of different colours, shapes, sizes and feeling different on touching. Certain example for such things are leafs, fallen flowers, petals, feathers, stones, sticks, sand, bark of a tree and pebbles. After collection the children can be given the activity of classifying and grouping the objects.

The activity of collecting objects helps to improve various developments in children. For example, when they collect objects of different shapes their concept of shape and when they collect objects of different colours their concept of colour will be developed. When they collect hard objects like the bark of a tree and smooth objects like a leaf or a soft object like a feather they get opportunities for touching these objects and feel the difference between them on touching. Collection of objects of different size, help to develop in them certain pre mathematical concepts like big and small and long and short.

The activity of collecting objects is helpful for fostering their language development and also for improving their skill of classification and matching. This activity can be easily adopted in all ECE centres. Swaminathan (2000) in her collection of play activities for young children, these kinds of activities are included for developing different concepts in them. Considering the values of this activity at the pre schools, to know whether it is adopted at the centre or not, one item (Q.19(C)) is included in
the questionnaire of the present study. If it is conducted at the centre, it is also intended to know for obtaining which of the developments it is used for.

**Q.20 (C) Simple Experiments**

Various types of simple experiments which are interesting to children can be conducted at the ECE centres. The objective of these experiments at pre-primary level is to encourage the children's curiosity, to provoke them to think and ask questions and not necessarily to make them understand the deep cause effect relationships.

Simple experiments on various topics such as water, air and plant can be done at the ECE centres. For example, using a variety of commonly available objects such as twigs, pebbles, nails, feathers, small stones and coins teacher can help the children to do “float or sink” experiment. In this experiment the children are allowed to drop these objects into water one by one and observe that some objects float and some sinks.

As another example of experiments in water the children can be provided with different kinds of things such as salt, sugar, mud, pebbles, sand and small stones. Also given them a couple of glasses of water. Let them observe that some of the things dissolve in water and the others do not.

In such experiments the teacher should not tell the children what is the effect/result. Encourage them to predict. Then let them verify their prediction, for example, not to say the coin will sink and the feather will float. As the child put the coin into water the teacher should ask them
“what do you think will happen? Will it float or sink”? Then let them observe and say what they see.

Whether it is a child doing the ‘float or sink experiment’ or a scientist working in a laboratory, the process involved in thinking and problem-solving are the same-doing something, reflecting upon the outcome and deriving conclusions. Both the scientist and the four year old experimenting with water or air are “doing science”.

It is also important to remember that it is not advisable to present pre schoolers with a lot of information and concepts at once. Like the ‘float or sink experiment’ and ‘dissolving and non dissolving’ experiment described above, various other simple experiments that can be easily done in an ECE centre have been recommended by Swaminathan (2000). Some of those experiments are: “covering a burning candle with a glass” experiment, experiments “using magnet”, experiments on ‘shadows’, ‘reflection in water’ and simple experiment of ‘observing the sprouting and growth of plants’.

Due to the importance of doing simple experiments by pre schoolers, one question (Q.20 (C)) to know whether or not such experiments are being conducted as an activity at the centre, is included in the questionnaire of the present study.

**Q.21 (C) Play with sand and water**

Playing with sand and water is spontaneous and children find it fun. They are much interested in pouring water from one vessel to another by using small vessels like cup or coconut shell. Also they like to splash in the water.
When children play with sand and water parents and teachers tend to get concerned about their clothes and they themselves, getting dirty. In this concern if children are prevented from playing thus with water a major source of discovery is being curtailed to them. Water play leads the child to discover many concepts such as heavy and light, more and less, shape, space and colour (Dansky and Silverman, 1973). So the children should be allowed to play with water.

Educationists like, Rousseau and Patty Smith Hill have mentioned the importance of children's play with materials of the immediate surroundings such as sand and water. This activity can be practised in all pre schools. Extra expense or playing space is not required for it.

In the present questionnaire one question (Q.21 (C)) about play activities with sand and water is included. Its purpose is to know whether such play activities are practised at the centre or not. If it is conducting at the centre, it is done for which of the developments is also expected to be understood through this question.

Q.22 (C) Game of identifying the odd item

In this game children are given a challenging opportunity to identify from a group of things, a specific item that does not go with other members. This game can be conducted in different ways – with real objects, pictures and vocally. For example, the teacher places three pieces of green cloths, one piece of yellow cloth on the table and tells the children that three of them are friends, but one is not, which is that one?

It is a good game for fostering various developments such as concept of colour, power of observation and skill of classification.
The same game can be given by alteration in various aspects like shape, size and material of the object. For example, repeat the game by giving them three cardboard pieces of triangular shape and one piece of circular shape. This activity is effective for improving their concept of shape. If the teacher conducts this game using three squares/circles of same size and one big in size, then it will be useful for developing their concept of size. Both the concepts – concept of size and shape – are pre number concepts.

Instead of using the real objects, this game can be conducted using pictures also. For example the teacher can show the pictures of three familiar animals and one bird. Same game can be practised even by vocally. For example teacher says car, bus, lorry and table with necessary instructions.

The games mentioned above are suitable for fostering various developments in children like power of observation, classification and concept formation. Swaminathan (2000) has mentioned these kinds of play activities for the cognitive development of children. In the opinion of educational researchers Eckerman and Rheingold (1974) who have studied about exploratory responses to toys, games like "identifying the odd item" is highly effective for improving the power of observation, comparison and classification of children.

In the present study one question (Q.22 (C)) about "identifying the odd man" game is included in the questionnaire with two purposes:

(i) to know whether this game is being conducted or not, at the centre; and

(ii)
(ii) to know, if conducted, for the development of which of the components?

EVALUATION OF THE ECE CENTRES BASED ON THE HYPOTHETICAL MODEL

The details given above were hypothetical to the basic essential requirements or conditions stipulated for realizing the objectives formulated for various aspects of developments of the child.

In the case of the existing centres suitable modifications can be done in terms of activities meant for children. It is relevant and important in this context that suitable assessment and evaluation procedures are made available, so that a critical appraisal can be done with respect to the programmes of each centre. For this purpose the present investigator has constructed a questionnaire, which contains three parts viz., part (A), (B) and (C). The relevant details of questions, which are in accordance with the components of development has already been presented in this chapter under "description of suggested activities/plays".