

## **2 Promoting the children's development in early childhood care and education**

### **1 The children's development: what does it mean in early childhood care and education?**

Children stacking blocks, or setting about pretend play. Digging in the sandbox, or taking care of rabbits. All of these situations are often encountered in kindergarten<sup>[1]</sup>. And in each and every scene, there is a budding of intellectual development. The point is whether the children are using their heads to be creative and innovative at each opportunity; it is whether they are thinking.

Is the child who is stacking blocks merely doing so in a mechanical manner and by brute force? Or is there a process of thought after each block is stacked, to reflect on how things are going? Once the child becomes accustomed to stacking the blocks, is he or she then taking in the whole, thinking about whether the creation looks like a house, for example, or a living room or kitchen, and making modifications accordingly?

When approached by a child complaining about being unable to build a car, does the teacher respond, "Think for yourself?" Or does the teacher build the car for the child right away? If the teacher judges the child to be more or less capable of building the object, and decides that just a little more creativity will do the job, the child will probably be encouraged to think about it. If not, as in the case of a three-year-old with no concept yet of how to go about the building process, the teacher might take over the task. The teacher might do so slowly, showing the child each step, so that the child may understand how the object is made. Perhaps for the child who shows some capability, the teacher will do a certain amount of the job, and leave the final steps to be completed by the child.

The way in which the teacher elicits the child's ability to think is linked to the respect for the child's sense of competence. In order to let the child think "I did it by myself," the teacher provides assistance in small doses, while ensuring that the object can be completed and the child's image realized. The teacher identifies what the child seems capable of doing right now, and lets the child proceed up to that point, while in situations where the child seems to be unable to resolve by himself or herself, or that are beyond the ability of the children to resolve by themselves, the teacher may make suggestions or offer help.

At kindergarten, there are many different kinds of things and people. Through encounters with these objects and individuals, children develop a sense of curiosity about many different things and engage themselves. The child may desire to do this or that, or want to have the finished object look a certain way, or wish to attain a certain level of prowess. Such aspirations drive the child to try to make those ideas come true.

In trying to do so, the point is not only to push forward with all one's might, but to pause a

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<sup>[1]</sup> As mentioned in the previous section, there are two main types of pre-school education center in Japan, kindergarten and daycare center. However, in this handbook, the term 'kindergarten(s)' refers to all types of care and education center for young children.

little and think about how one can do things better. Such pauses not only raise the level of perfection but also promote the development of the child's ability to think. Perhaps there is a classmate who is good at doing whatever it is. The child may wonder how the classmate does it. The child may observe closely, and try to imitate that classmate. The child may then realize that it is not all that easy to imitate. There is no choice but to use creativity, however humble it may be.

During the process of engrossed engagement, and trial and error, the child may happen upon a good way to do it, or complete the project without realizing he or she has done so. Here too, an intellectual awareness is born when the child begins to look back on the creative moves that led to success, and any discoveries in the process. This awareness lives on in subsequent innovations.

That said, no play starts from thinking about it. This is particularly true with small children. The important thing is, first and foremost, for the child to become engrossed in play. With constant repetition, the child gradually becomes more skillful with blocks, or with taking care of rabbits. Only then is there any room in the child's mind to be innovative, or to ponder, or become aware of something. While the child is small, one is well advised to allow plenty of experience in getting used to things and in process of trial and error.

## **2 Nurturing the spirit of inquiry**

When children go to kindergarten, they encounter many kinds of new things. When they are at home, the children of today usually live with their families and engage in indoor play, such as watching television or playing video games. For children up to three years of age, it is undoubtedly a narrow range of experiences; and in addition, with our society having fewer children than in the past, it is taken for granted that children spend time enjoying themselves in front of machines. The role of the kindergarten is to greatly expand that range, that lifestyle of spending time in cramped quarters and that passive mode of interaction of expecting to be entertained.

Perhaps it is an exaggeration to say it is to "encounter the world," but let us think for a moment of the child's environment before coming to kindergarten: what a wealth of things the child encounters at kindergarten. There are large building blocks in the room. Perhaps this is the first time the child has ever used scissors. Some children have never played in a sandbox before. They have probably never played with such copious amounts of water, either. They spot their first bug in the grass; they raise vegetables in the garden.

Perhaps the children have never experienced playing with others the same age. They may have had one or two playmates, but not this many. By the likes of it, they have never hung out with any adults besides their parents, either.

The child discovers for the first time that the world holds so many things and so many different kinds of people. Not only does each one of these things and people exist, but also each has their own characteristics and personality, and must be dealt with appropriately. The child gradually finds out: this happens when I do this. I look under a rock, and I find a pill bug. Touch it, and it curls up into a ball: what fun! But leave it on the floor, and it dies.

When the child comes to kindergarten, it's as if there's something new to discover every

day. A large group of children stacks up blocks and connects a piece of play gym equipment: voila, a big house. Ideas are formed and shared: now they have a living room, or a bathtub, or the house becomes a beautiful, two-story mansion with a penthouse. The structure may become a space station, with a rocket blasting off. Lots of strange and wonderful things happen. Children pick flowers, put the petals into water, and crush them: the water turns a lovely color. Like fruit juice!

In developing an interest in many different things, and displaying curiosity, the foundation of the child's development is formed. Building on that, in wanting to make things more interesting, the child begins to discover the nature of the object. Some child wants to find a pill bug. He or she goes looking all over the kindergarten. Gradually, it dawns on him or her that pill bugs seem to like damp places. Now he or she wants to collect and raise these bugs. How does he or she keep them alive? The child may ask the teacher, or consult an illustrated book on bugs. And then he or she understands and learns that these bugs need food and water.

The child's curiosity expands, and develops into the spirit of inquiry. What does he or she need to do to make things happen the way he or she wants them to? What happens next? Where can he or she find someone or something that can tell him or her how this works? The child's interest gradually develops into something that is intellectual.

To nurture the spirit of inquiry, there is a need to further deepen the curiosity that has expanded. As the child's inquiry advances to the second step, then to the third, the spirit of inquiry gushes forth. It is based in the experience of wanting to know more, pursuing it further, and being rewarded with more fun. It is not enough to have a dazzling spectacle unfold with the push of a button. The child must make the most of his or her own capabilities, be creative about how to deepen the experience, and take possession of the expanse beyond. The wish to know the deeper reaches is developed not through satisfaction with what is on the surface, but by actually seeking what lies beyond.

### **3 Nurturing an interest in matters**

#### **(1) Nurturing an interest in letters**

Perhaps because it is the most basic academic skill at the elementary school level, the ability to read and write letters is also emphasized for small children. It appears many of us associate the ability to read and write letters with intellectual development. But in fact, reading and writing letters in the period of preschool child, early childhood is not something that has a strong effect on the intellect. Intellectual development is far, far broader, and crops up at every opportunity in the child's activities. In language development, notwithstanding the importance of being able to read what is written, the point is to grasp the meaning of the words.

Take the word "ice," for example. It is not enough to be able to read it out. It is not even nearly enough to know that ice is frozen water. Without understanding that ice is cold when touched; that it melts and turns into water when warmed up; that the ice in a glass of juice, and the ice that forms on a winter puddle, and the ice in a skating rink, are all the same ice; that ice when the weather is hot to have you feel good, but when it's freezing cold in winter, it can stick to your hand when you touch it unguarded: without having understood these kinds of things, one cannot be said to have acquired the use of the word, "ice." What is more, it is

not enough to understand these things through looking at scenes in picture books. The facts are remembered and take on meaning in conjunction with memories, such as that winter morning when your breath came out all white, when you stepped on the ice around the washing area and it cracked; or that when you picked it up, your fingers got numb, but it was so transparent and pretty; or that it shattered like glass when you dropped it.

In modern society, letters are no longer something special to be memorized. Long ago, children may have come into contact with letters for the first time in the schoolroom. But today, letters are everywhere around the small child. Children experience picture books from a considerably young age. Although small children do not read newspapers and magazines for grown-up, they do see adults reading them, and are familiar with the act of reading letters. Perhaps there is a Hiragana (Japanese alphabet) chart on the wall. The jars and packages of food, and bottles of beverages, in the kitchen and on the dinner table all have labels bearing trademarks and description. Outside the home, there are advertisements and traffic signs everywhere. The “stop” sign, with its distinctive shape and color, as well as its location at every corner, is immediately remembered.

The fact that activities dealing with letters are a normal part of life also supports the learning of letters. This is because the child perceives that using letters is a normal everyday routine, and understands the purposes for their use. Letters are used as a means of communication, and also for enjoyment.

Thus, modern-day children, for the most part, are able to read simple letters like Hiragana and Katakana, one letter at a time, by around the end of kindergarten, without being intentionally taught. In pretend play in kindergarten, one often encounters situations where children playing restaurant are writing out menus, or asking the teacher to write it for them when they can't do it themselves. Whether the child can read smoothly and easily is a separate issue. For that to happen, children must be in contact with books, become personally interested, and begin to read on their own. It is important to raise children so that they grow to love books.

It should be noted that writing letters is a considerably different kind of activity from reading them. The process of learning is also quite different. While there are children who fall in love with writing their letters, and keep up writing, most children do not acquire the capability to write their letters properly without being intentionally taught. This is because writing letters involves many complicated rules, such as the order of the strokes, or where to slant a little bit, and so on. Therefore, it is probably wise to leave the child's full mastery of letter writing in the hands of the elementary school teachers.

## **(2) Nurturing the child's relationship with books**

There are read-aloud sessions in every kindergarten. There also are picture book areas, with books available at all times. What could be the purpose behind this?

Of course, first and foremost it is because we want the children to develop a love for picture books. As has been proven through a variety of studies, acquiring a love for picture books helps to develop reading habits for the future, and it goes without saying that reading is the foundation of Japanese language ability. Loving picture books is far more useful in improving one's Japanese language ability than learning to memorize a few letters. A child

who loves books does not only enjoy being read to, but will access picture books voluntarily during spare moments. In the future, this develops into reading books voluntarily. It is unreasonable to try to improve one's Japanese language skills solely through Japanese classes at school, without reading books during one's spare time. This is because language is made up of such an abundance of expressions that there is a need to spend a long time on them, and also because books are the very places where one can encounter advanced phrases.

The importance of acquiring a love for books is not just because it makes you read a lot of them, illustrated and otherwise. Reading with interest prompts us to use our imagination when we read, while associating what we are reading with what we know may astonish us, or make us think. It is precisely because sensitivity and thought are both utilized in this way, that reading plays a useful role in the growth of the child.

The quality of the books is also important. But the quality is based on reading lots of picture books in any event. It is good to read many different kinds of books, instead of having a bias for a single kind. If the child develops a favorite book, he or she might read it over and over again, and end up memorizing it. The phrases encountered in the book become the child's own.

Of course, picture books are not only for memorizing words. They are also for expanding the child's world through imagination. Many different kinds of situations appear in picture books: they convey to the child, look at what can happen, look at what you can do in the world. In a book, a child traveling all alone (or with a stuffed companion) may go on a train journey. Not only is something impossible in real life made possible, but the book also illustrates the concept of travel. It opens the young reader's eyes to the many amazing things in the world, such as the sights of the city or the country, or the life of an insect in a corner of the garden.

Stories teach children about courage. The smallest errand, the shortest wait at home while Mommy is at the market – these are big adventures for the child. Going to an island inhabited by monsters is a true adventure indeed. The main character overcomes dangers, at times appearing to have fun, at other times feeling anxious. Such stories teach children that they are the main characters in terms of what happens to them, and impart the wisdom to muster up courage or to deal with matters patiently.

Picture books also create a secret, intimate space in the kindergarten (even more so at home). The child, in reading alone, leaves behind the surrounding clamor and becomes absorbed in the world described in the book. When the teacher reads books out loud, the child can gaze intently at the pictures, and become immersed in the intimate relationship with the teacher. Granted, for that to happen, read-aloud times must not be used as mere tools for keeping order, or be limited to simple, mechanical explanations; attention needs to be paid to ensure that children can feel a one-on-one relationship with the teacher.

Picture books are created with painstaking, creative detail on every page. The appreciation of such creations comes with investigating, and thoroughly enjoying, every nook and cranny. Merely following the story line is not the point. Having an intimate space is a must not only in terms of human relationships but also from the standpoint of appreciating the book. One hopes that more efforts will be made to be creative when reading aloud to groups of children.

### **(3) Nurturing an interest in numbers**

Small children, when they are about four or five years old, reach a stage where they will start counting whenever they see more than one of the same kind of thing. Or, the child may tell a parent to start counting, go around the park once, and upon returning, ask the parent what number they got to. It appears that children are interested in counting for its own sake. Perhaps children feel as though they have grown when the number they are counting gets bigger.

Why, one wonders, are children so interested in numbers? No doubt it is something like instinct. There is nothing so fundamental in human cognition as the understanding objects in terms of numbers. Recognizing that there is one of something, and grouping like objects together Both form the basis for human thought. Numbers start from grouping like objects together, and then repeating, “one, one, one...”

But there are so many of us who hate doing sums, or who are hopeless at math. What makes us so different from small children? When paper and written sums become involved: that is when things suddenly get hard. You write, “12,” which must be read, “twelve.” “One two” is a mistake. Then you have to start adding, and subtracting, and digits have to be moved up and down. Such methods for doing written sums are extremely specialized, and are not usually mastered immediately upon being taught. That is the very reason why there are math classes in elementary school, with long hours spent practicing sums. This is as true as ever when it comes to fractions and equations and the like: they are highly advanced techniques.

This is different from case with small children counting happily. The fact that anything can be counted is what delights them. Apples, people, cars, whatever: you can count them, “one, two, three.” In a sense, counting is an all-around power of abstraction in the small children’s hands.

Small children also start to add and subtract naturally. If the child is shown two marbles in the right hand, and three in the left, and is asked, “how many in all?” the child will come to recognize “five!” without having to count them over. But this is not about doing calculations on the basis of a written equation. The child holds a mental image of the marbles, and changes that into an image of numbers during counting.

As the child continues to count, add, and subtract various things in various ways, the numerical system takes on solidity. The child moves beyond simply being able to count to ten or twenty, and comes to grasp the relationship between numbers, such as that two and eight make ten.

Opportunities for counting numbers are everywhere. That is because the special characteristic of numbers is that they can be used to count anything. However, for counting to take place, there must be more than one of the same kind of object, which moreover must be arranged neatly so that they are easy to count. Otherwise children are not motivated to count, and make mistakes even if they do count. It becomes important to have an environment in which things are kept organized and arranged neatly.

Are the shovels for the sandbox all hung up neatly? Does the shelf hold a number of cups for playing house? When children collect nuts or berries, can they line them up and see how many there are? Children need not be able to count everything. Sunflower seeds, for

instance: that is asking too much. The point is that there are lots of something, and that children sense they can be counted.

Arranging things in order from short to long, or from small to large, also invites children to count. Of course, things can also be weighed. Who dug up the largest sweet potato? Weigh the vegetables, and you have the answer. A scale can be made available, or a length of measuring tape, or notches carved into a pillar. Having children use measuring tape to measure everything they can think of makes for a fun activity. The important thing is not about learning the correct answer, or memorizing the correct way to measure or count. The basic idea is for children to perceive they can count and measure just about anything.

#### **(4) Nurturing the child's relationship with nature**

It goes without saying that children are excited with nature. A walk in the grass yields an encounter with an insect, or a berry, or an unusually shaped leaf. Children love to play with wild flowers and plants, look for insects, and so on.

What kinds of intellectual significance could there be in such interactions with nature? Yes, it is the beginning of scientific interest. This develops into science at school.

But nature has an important significance where it intertwines with the small child's growth. More than anything, the child's interest is aroused because the animals and plants are alive, and are full of variety. Yes, it's fun because it moves, but more than that, such living motion must be intimately related to our lives as living creatures. Perhaps small child feels the stirrings of sympathy on encountering a fellow living thing.

Not only does nature come with its own unique motions, it also boasts infinite diversity. Ants, pill bugs, butterflies, and helmet beetles move differently, and look different too. When one takes a more detailed look at each species, one discovers more differences. While all butterflies share certain characteristics, each kind has its own unique traits. Infinitely diverse, yet possessing living motion: such are the things called animals.

Plants do not move around as much, but they are alive just the same, as is evidenced by their rich diversity and how they change with time. The branches put out shoots, the leaves grow and turn deep green, the flowers blossom, the leaves turn red and gold, and they fall. They have a delicate exquisiteness that is not possible with artificial objects, while simultaneously having a certain pace that follows the flow of time.

Opening the child's eyes to these things greatly expands the child's intellectual interest. Natural things are not shaped the way they are to make our lives more convenient. They are their own unique selves. And, each one is a different entity. And yet, there is an infinity of the same thing. How many leaves on a tree? It is all but impossible to tell.

In order to discover these wonders of nature, children need to go beyond looking, and relate with their entire bodies and their fingertips, by touching, by smelling, by playing with grass and wild flowers. Just looking only gives one a vague idea that there are many different colors and shapes. By using the five senses, relating with the whole body, and using the fingertips delicately, one begins to appreciate the fine details of nature. What is more, the impressions of nature are deeply imbedded into the heart through bodily contact, for example by wading into a pile of leaves.

Granted, children are not always enthralled with nature. Bugs may be disgusting to a child

whose knowledge of insects is limited to cockroaches. Nature is baffling to children who have never played in it, as it lacks the formulaic functionality of artificial objects. Nature moves in unpredictable ways; even when there are instructions, things don't always go by the book.

Putting children into contact with nature may be a time-consuming and labor-intensive task. Since it does not always entail playing nicely in hygienic locations, there may be resistance from the parents at times. But when that is overcome, and the children are led into a relationship with nature, then gradually, the fun begins. That is because when one discovers one of nature's secrets, it leads to other, totally unexpected discoveries.

As children engage in play with insects, grass, and flowers, they begin to notice natural objects that do not move. There is water; there is soil; the wind blows, and clouds float in the sky. Such natural phenomena are the grand stage on which living things are sustained. Children discover that crayfish live in the water, hiding in the mud in the water. In time they will uncover the mysteries of water and mud as well.

### **(5) Nurturing an interest in life outside the kindergarten**

There is deepening concern about the shrinking of children's living environment. The child goes to kindergarten and back, and then spends the rest of the day playing in the house. The child may even be shuttled to and from kindergarten by school bus or in the family car. What is more, even a trip to buy groceries may consist of nothing but a car ride and a stroll down the aisles of the supermarket.

Perhaps children need to be taken out more to explore the neighborhood. Together with the importance of encountering the natural environment, Children seem to need the experience of encountering and mingling with the lives of people. Of course, in kindergarten, the teachers share their lives with the children, and there is a life within the kindergarten as well. Not only do children engage in play, but they may also participate in tidying up, cleaning up, preparing meals, and caring for animals. But while it is obvious to adults that life within the kindergarten is a part of the greater whole of life outside it, one suspects that the same is not true for children. It seems that only by being rooted in life outside the kindergarten can there be meaning to early childhood care and education provided through life in the kindergarten.

It seems that the home exists and the home is the very place of living. However, unless the parent is extremely vigilant, it may be the case in many households that, aside from being fed, there is not much more for the child to do at home besides watch television or play video games, and perhaps study a bit and get praised, without much opportunity for doing chores or for watching housework being done. And when it comes to watching people work – in many households, it just doesn't happen any more.

Out in the neighborhood, there are shops and houses; there are companies, post offices, banks, fire stations, and train stations. There are art galleries, museums, and libraries. There are trees lining the streets, flower gardens along the lane, yellow dandelions or pink cosmos blooming in the tiniest patches, and cats prowling around. There are old shrines and temples. The stone-carved dogs guarding the shrine, and the statue of Buddha in the temple, look pretty scary.

There are many different people doing things: walking down the street, tending their garden, or shopping in stores. Some people are young; others are old. Perhaps there is a blind



person walking with the help of a white cane. There may be someone using a wheelchair to get around. People from other countries may be speaking in their native language, or they may be one of the growing numbers of foreign speakers who speak Japanese with great fluency. The girls at the fast food counter may be greeting customers in a bright, cheerful voice. Senior person may be sweeping up the leaves in front of the school gate.

To what extent should the kindergarten consider part of its early childhood care and education? Or should the kindergarten ask the families to broaden the scope of the child's experience? Such matters will vary with the circumstances of each kindergarten and local area. While children are indeed playful beings, their play can only take on the potential to be the children's own creation, and not some arbitrary dispensation, if the inspiration for that play comes from the real lives of the household or the neighborhood. What is more, play lives on as learning only when, as a part of the greater whole of life, it takes on a back-and-forth relationship with real life.

Obviously, the point is not in just taking children around to see this and that. The experience needs to be given meaning in the intellectual and social context. The children must be approached directly, and supported, so that they can make sense of what they see. Pretend play, building blocks, drawing pictures, or making illustrated storybooks can be used to re-create what the children have seen with their own eyes. When children are taken on a visit to see something, they should be encouraged not just to look, but to try some activity there, or make full use of their five senses.

The intellect is enhanced when one acquires the habit of using it everywhere. One does not engage in thinking only when one is sitting at a desk, or when the teacher is teaching something, or when one looks in a book. At the same time, there has to be an array of materials in order to enrich one's thinking. By becoming connected with every place in life, intellectual functioning takes on broader horizons, and begins to put down roots in the child's very act of living.

## **4 Nurturing the child's relationships with peers**

Making hills and mud pies in the sandbox. Stacking blocks to create a house or something to ride. Playing with equipment such as the swings, the slide, and the jungle gym. In the classroom, children can draw pictures, play with clay, and make things with materials... In the kindergarten, there is a wealth of different kinds of play for the children to engage in, more than can be written down here. While they can play alone at times, children often do things with their peers. That tendency becomes more pronounced, particularly with the sense of companionship that starts to emerge at about four years of age. The children start arranging to play together more often, or tell family members all about what they were up to when they come home.

Out of many different kinds of play, one of the most popular with children, particularly in the period of preschool child, early childhood, is "pretend play." They may re-create the lives of their family in the play house corner, or use dirt and grass and flowers to make cakes to play store with, or go on expeditions from their building-block base camp. As one might expect, such play is far more fun with friends than alone. And through this kind of pretend play with peers, the child is experiencing many different things.

Pretend play proceeds along some kind of theme, with each child playing a role. Therefore, the children must decide who is going to be what, and what the pretend is going to be about. For example, if they are going to play store, they must decide who is going to be the storekeeper, who are going to be the customers, and what the store is going to sell.

In addition, even if the children decide to do things a certain way when they start out, things change impromptu in pretend play according to what is happening. One of the “customers” may now feel like being the “storekeeper.” The store may start selling more merchandise, or change the product lineup. While the children may have started out by simply pretending to hand money over to the storekeeper when they “buy” something, they may eventually hit upon the idea of using leaves for money. In such a process, it becomes necessary to communicate clearly to your friends about how you think things should unfold. At the same time, it is important to listen closely to what your friend is saying.

One does not always get one’s way. A difference in opinion may develop into a fight. These kinds of experiences are also important for a child’s development. The children must put on their thinking caps and talk things out to resolve problems. In the process, if a child pays no attention to what his or friends are saying, and insists on having his or her own way, then that child is just being selfish. Children learn that at times they need to suppress their own wishes and yield to the other party. They realize that without sharing their ideas and working together, they cannot move ahead with the play.

Of course, such matters are not limited to trying pretend play. As children interact with many different friends, they gradually acquire the skills to communicate with others. Also, when they give a helping hand to someone in trouble, or when they ask a crying friend, “What’s the matter?” and offer consolation, they nurture their capacity for empathy. The children can be said to be learning how to build the human relationships that are essential for people to live their lives.

That said, sometimes children are not able to interact effectively by themselves, or are unable to solve the problem at hand. That is when the teacher’s appropriate direct action exerts its effect. Depending on the children’s age, and the situation at hand, the teacher may spend a considerable amount of time sharing the children’s activity, or may simply say a few words that enable the children to continue interacting successfully on their own resources. By flexibly adapting his or her approach to the situation at hand, the teacher can skillfully nurture the children’s ability to relate to their peers.

It has been pointed out that children who, in the the period of preschool child, early childhood, could not relate to their peers successfully, or were rejected by their peers, can sometimes have problems in later years adjusting to school and society. Therefore, it is highly important for children in the period of preschool child, early childhood to be given plenty of opportunities to interact with their peers. At the same time, any interpersonal problems need to be identified at an early stage and, when necessary, appropriate assistance given by parents, teachers, or other familiar adults, to correct the situation.

## **5 Experiences that promote the children's development**

### **(1) Nurturing the capacity to innovate**

Within the child's play, there is learning. Children learn in every conceivable area of their lives. Whatever the child may do, there is an intellectual function there, and from that function, the intellect grows. That said, however, the way the intellect is used may come in different levels of intensity. When the child thinks deeply, and the child's world is expanded through that thinking, the child's intellect is enriched.

In what areas of the play, then, is the child's intellect exerted with particular strength and delicacy? In a nutshell, children use their heads when they stumble over block during play, and try to make some further innovation. Children do not sit in silent meditation. They think while doing some type of activity. Children cannot come up with the energy to think when they feel no interest. Furthermore, when there is an image that the child wants to achieve something, it opens the floodgates for ideas, plans, and the motivation to make it a reality.

That scene is what innovation is all about. There is something the child wants to do, something the child wants to give shape to. But then there is a stumbling block, such as a difference in opinion with one's peers, or the thing doesn't move like the child wants it to, or the concept is too nebulous and the child has no idea how to go about the specifics. The child overcomes that obstacle, trying hard to give shape to what it is that he or she wants to do. But things don't come that easily right away. The child tries again. The child tries to remember if there was a different way to do this, or a way that works. The child looks around to see whether there is anyone who can be imitated. The child is tempted to give a tantrum, but doing so won't make the image a reality. During the process of randomly trying this and that, it dawns on the child: hey, that's right, maybe this is the way to make it work. The child tries it out. Yes, I see, it looks like it's working; let's try it a little more. The process suddenly speeds ahead.

These are children; they are probably trying whatever occurs to them, in a process of trial and error. They are not scientists; they do not conduct methodical experiments. It is a case of the hands going ahead and doing their own thing, rather than about deep thought. But the child's intellect takes shape through letting one's hands get ahead, through trying things out. As the child moves his or her hands, handles and manipulates objects, and moves around with friends, the child continues to think.

However, just running around or thrashing about at random does not lead to innovation. Neither does daydreaming in front of the object move one toward forming constructive thoughts. Innovation is born when, upon encountering a stumbling block, takes an unhurried look around, and thinks – well, what can I do about this, I want it to be this way, but it's like this right now... A calm emotional state is needed. And at the same time, expanding on the image in various ways, one thinks: what happens when I do this, what happens when I do that. When an idea occurs to one, one tries it out; and while trying it out, one looks closely at the result, and if it is not working, makes some changes.

Times for vigorous motion, and times for unhurried tranquility; times for gazing at the results so far and the process to come, and for imagination – one would like to try to make it so and a rhythm is born as these alternate. The teacher's giving of advice, showing of how something is done, and supporting the child's efforts at innovating, must be additional to this

condition. When there is no outlook, or when the child has absolutely no idea what to do, the child becomes discouraged. When the child glimpses what lies ahead, either through his or her experience so far or because of a tip from the teacher, the child feels like trying. If the problem is a technical one, the teacher may provide instructions. Perhaps it is best if the teacher takes over certain portions of the task. On the other hand, if the scene has fallen into one of listless repetition, or there is a loss of focus, it may be necessary to try some dialogue and stimulate a new direction. The important thing is for there to be some place for the child to exert innovation.

## **(2) Nurturing the sensitivity for surprise**

Perhaps children nowadays are not that often surprised. Elaborately detailed computer-generated images pour forth from the movie or TV screen. A trip to Disneyland guarantees amazement and delight with every contrivance imaginable. After all, children watch television and video games every day; they think pretty much anything is possible with machines and computers. Perhaps it is more accurate to say, these children can be surprised, but it takes a pretty significant setup to do so. Or even if something surprises them initially, it's old hat the second time around. If that is the case, there is nothing much that's interesting at kindergarten. Everything is dismissed with an "Oh, I know that." The child may examine something briefly, and if no change happens, it is tossed aside: "This is boring."

The act of being surprised is originally a function of the intellect. That is because it is about something being different from what one thought it would be. The surprise comes from it being outside expectation. Of course if something suddenly pops out in front of one, one is surprised. Whether or not that transient surprise can be transformed into sustained interest – that may be what determines whether surprise takes on meaning in the child's growth and development.

The state of becoming bored without a constant stream of surprises, thrills, and excitement like the latest movies offer, is not exactly conducive to bringing the child's intellectual function into play. These surprises come from the shock given by stimulating material. Rather, the surprise that lies within a process – anticipating that something will turn out a certain way, finding out that it doesn't, and wondering why – that is what forms the core of intellectual development.

For that to happen, surprise must be changed from something that is given to the passive recipient, to something that is discovered and created on one's own. The point is to seek surprise for oneself, instead of waiting for someone to bring it. It is to recognize that surprise is not found only in movie theaters or on TV or in amusement parks, but something that can happen right in front of you right now, if you are willing to look for it.

In that sense, it may be more appropriate to describe that type of surprise as "wonder." This is the function of the heart and mind that thinks, "Wow, that's awesome" and "How wonderfully strange." A simple flower excites wonder in its intricate workings. Observe an ant very closely: what an oddly shaped body it has. When one thinks about it, nature is full of that kind of wonder. Perhaps that is why the natural environment has an important significance in the small child's development.

That being the case, would throwing a child out into Mother Nature's bosom prompt that

child to feel wonderment and go about happily exploring? Not necessarily, one suspects. “Ugh, gross,” “Ow, this hurts,” and “That’s dirty” are some possible reactions that come to mind. “Isn’t there anything to play with?” the child may say, and start to look for a slide, or even more likely, a game machine. It is difficult for children to understand the fun of nature without some degree of guidance from the teacher. How to convey a sense of wonder to the child? Just offering the leading, “isn’t this amazing?” and showing the child the amazing sight is nothing more than a magic trick. Can the reaction, “Well, TV is more amazing,” be overcome?

There is a need to guide the child to discover wonderment on his or her own. To invite that discovery, the teacher shows just a bit of the amazing sight, and leaves the rest up to the child. Or the teacher might join the child in the search. The idea that the child found it on his or her own transforms the surprise from something that is transient to something that continues, and guides the child to the next discovery and exploration. To move from passive surprise to wonder that one finds on one’s own – making that possible is what early childhood care and education in the kindergarten is all about.

### **(3) Nurturing the capacity for calm engagement**

When we talk about enhancing intellectual talent, many people appear to think the important factors are inborn capability and special educational training by parents or early childhood education experts. While there is no doubt that these are indeed important, there are some things that tend to be overlooked. One is to respond to the child’s interest that comes forth on occasions in the child’s day to day life. The other is to keep that interest from being a fleeting, temporary thing; to nurture it into something to engage in patiently and without haste. In particular, the ability to engage in something calmly plays an important role in the evolution of the curiosity that is shown by every child into the spirit of inquiry.

What is important in the capacity for calm engagement is, notwithstanding intellectual interest, the capacity for calming one’s emotions and taking one’s time. Hurrying and being impatient do not speed up the matters of the intellect. There are many things that simply require time. What is more, without the luxury of time, one cannot try out different innovations to solve a problem, or conceive of different measures, or try out time-consuming, but interesting, ways of doing the same thing. It is like going full speed ahead to one’s destination, only to run up against a wall. Or one ends up using the same old method, with no potential for development.

Of course there are times when pushing hard and going forward will yield success. But at times, it is necessary to change one’s approach. If that doesn’t work either, one can take a look around and muse whether there really isn’t another way. That is what innovating is about.

When we talk about taking one’s time, it is meaningless to simply sit there daydreaming. On the other hand, becoming all flustered and upset is not conducive to hitting on good, innovative ideas. One necessary condition is to have an image of what lies ahead of the time-consuming matter. In any kind of play or task, one sometimes needs to simply persevere. That would be boring, but if one has an image of what will happen ahead, one can persevere with happy anticipation. As in knitting, it is good to know what each individual stitch is going

to look like as a whole.

The other is to be able to think of other methods when one hits a wall. For that, experience is important, as are tips from the teacher. But at the same time, what is important is simple trial and error, and careful observation of the results. Randomly trying this and that without looking at the results of those actions is of no use – it feeds the frustration. Trying something out, and getting an idea of what isn't working, or what seems to work a little bit, or what the overall mechanics seem to be – the gradual process of moving ahead, that is what is important. It is not so much getting closer to one's goal but understanding what seems to be happening, and why. As in untangling a puzzle ring, the point is not to go about blindly but to try something, observe the mechanism, and gradually work toward understanding.

To that end, the teacher provides support in various ways, but most of it is considerably subtle. It will not do to give instructions every step of the way, because it is important to innovate on one's own. Simply leaving the child alone may not necessarily result in calm, autonomous thinking. How to provide support for the task the child has begun with interest, and how to help its evolution – this is where the teacher's support can shine. The teacher may observe the child's demeanor and step in to give a hint. At times the teacher may join the child in pondering what to do, while calming the child down and implicitly conveying to the child that he or she can do it with a little thought. To what degree the teacher steps in will vary with the child's ability, experience, and personality. The desirable goal would be to sustain that engagement for as long as possible, and to encourage innovation. Together with hints on how to do the task, what takes on importance is to steady the child's emotions and to create a class atmosphere that encourages and excites children's interest.

#### **(4) Nurturing the ability to investigate**

In the first place, is there any room for the act of investigating in early childhood care and education, which centers on the play of children in the period of preschool child, early childhood? When one observes early childhood care and education actually taking place, it is not unusual to find a child who catches a bug in the yard and, wondering how to take care of it, looks at books about insects or keeping pets. There are a wide variety of illustrated reference books for child that are available, from simple ones to those that are quite detailed. Let us consider whether anything is possible above and beyond that.

Given the nature of the period of preschool child, early childhood, it is absurd to expect a situation where the child investigates a matter by sitting on a classroom chair and reading a book for long periods of time. That is not to say small children cannot read books. One often encounters kindergarten children reading picture books by themselves. Often the book is not a storybook but an illustrated book, or a picture book with information of some sort. Children may not understand the difficult bits, but they do like to collect information.

However, by itself, that knowledge is fragmentary, and has not yet been acquired. "Needle ice (frost that forms into slender, needle-like bristles in the ground) is when water freezes. It's called capillarity" – without having felt the coldness of needle ice, without a feeling of reality, such as gained through actually seeing water being sucked up into thin tubes, knowledge does not prompt further learning activity in the child. It does not become useful.

When the act of investigating is integrated into activities that the child can feel as being

real, the act of investigating expands. Investigating isn't just about reading books. Asking friends or teachers is good. The child may also ask a parent. Maybe the child will go a field trip. On a visit to the fire station, the child may enjoy the experience and also ask questions of the person giving the orientation. There are more occasions to go to museums and art galleries. Observing carefully, and looking back on the experience, all contribute to investigating. It is because it is about learning more detail about the object of interest.

What has been investigated is then acquired through expression. Children express in words and pictures. They talk with friends, and confirm what they saw as they relate what happened. When, at a later date, they go to see the same thing again, they can narrow the focus of what they are looking at, and come closer to the act of observation.

Dialogue between children and teachers also becomes important. A child is seldom, if ever, capable of investigating properly on his or her own. By the teacher prompting the child, "Remember what it looked like?" and "How about here?" the child can focus renewed energy into investigating and remembering.

The point is not in making a presentation of the completed investigation. Of course there is no harm in making presentations, but what is more important is that the child's act of learning develops and evolves. It does not end with one visit or one read through a book. It is more repetitive. The child continues to act in an effort to find answers to the question, "Why? What happens when I dig for more detail?" Bugs, fire stations, whatever; when the child takes a more detailed look, the next question, the next activity, gushes forth. That in turn prompts the child to investigate again. The activity is transformed from being satisfied with a one-time, fragmentary piece of knowledge to one that is more dynamic and time-consuming.

By proposing a stronger emphasis on investigating, We are not suggesting that more time should be spent sitting and taking notes, or reading for long stretches of time. It is about acquiring knowledge for the purpose of knowing more, relating more to the object of one's interest, and using that knowledge to know even more about the object, and enrich one's relationship with it. Linking the act of experiencing more with reading books or listening to other people – that is what we are suggesting.

