

## NATURAL SCIENCES LEARNING MODEL WITH STIMULATING NATURAL INTELLIGENCE TO DEVELOP POSITIVE CHARACTER IN EARLY CHILDHOOD

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### **Abstract**

Natural Sciences (IPA) is a branch of knowledge that originated from natural phenomena. IPA is defined as a set of knowledge about objects and natural phenomena derived from the result of thought and investigation conducted by skilled scientists experimented using the scientific methods. Intelligence is the ability of a person's mindset formed scientifically. Brain intelligence is not the only type of intelligence because there are other intelligences such as spiritual, mental, emotional, and naturalist intelligences. Naturalist intelligence is a person's ability to interact with nature and the environment. Characters are abstract. Character is the personal characteristics inherent in every human being. If a child already has a positive character since childhood, he later possibly will have a competent personality.

**Key words:** Science, naturalist intelligence, positive character, early childhood

### **INTRODUCTION**

Increased intelligence in early childhood is essential. Early Childhood (AUD) ie children aged 0-6 years. Age was a golden age in the period in which the child will experience growth in both her physical, intellectual, social, emotional and language.

An understanding of the importance of early childhood, have an impact on government policy at this time. One of the policy by the Act No. 20 of 2003 on National Education system whose contents are as follows: Education is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing the potential for him to have the strength spritual religious, self-control, personality, intelligence, noble character and skills needed him, the community, state and nation. In particular it aims to help early childhood growth and development of mind and body so that children have a readiness to enter further education. Related to the optimization of the development at AUD

required a learning method that can stimulate intelligence.

As we know the intelligence of each child has a different intelligence but we need to realize that every child will have a tendency to have one of the intelligence that stands comparison with other intelligence. According to Gardner (1999), intelligence is not only single, but each individual has a different intelligence, called the multiple intelligences (multiple intelligence). Multiple intelligences can be broken down into eight intelligences are: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. Through eight types of intelligence, every individual access to information that will be entered into him.

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Based on the background of the issues that has been said above, it will be delivered in this paper about how the development of the naturalist on a model of learning science in AUD

## DISCUSSION

Or multiple intelligences (Multiple Intelligences), which includes eight intelligences is basically a pengembangann of intelligence (IQ), emotional intelligence (EQ). All kinds of intelligence needs to be stimulated in children from an early age, ranging from birth to early into the school (7-8 years).

Developing multiple intelligences child is key to a child's future success. Thus the purpose of the development of multiple intelligences in early childhood to develop and improve basic intelligence of every child. Train children to improve the intelligence and stimulating its plural. If children are often trained and facilitated to develop the intelligence it will show trends stand out from one of the multiple intelligences in children. One of multiple intelligences was naturalist intelligence, this intelligence can be developed through learning models Natural Sciences (IPA). Therefore Armstrong (2002) mentions, that intelligence is a modality to boost the ability of each child and make them the champions, because basically every smart kid. Naturalist Intelligence, characterized among other things: (a) like and familiar to many pets, (b) is enjoying a walk in the open air, (c) like gardening or close to the park and keep animals, (d) spending time in near the aquarium or the nature of living systems, (e) taking home the insects, leaves flowers or other natural objects, (f) achievement in science, biology, and the environment.

### 1. Characteristics IPA.

IPA has scientific value is truth in science can be proven again by everyone by using scientific methods and procedures as practiced earlier by the inventor. Examples: scientific value "chemical changes" at the burned candle. This means that objects that undergo chemical changes, resulting in the change was the result of objects cannot be restored to the nature of the object before the change or not be restored to its original nature.

IPA is a collection of structured knowledge systematically, and in common usage is limited to natural phenomena. IPA is an IPA theoretical. The theory of knowledge acquired or organized in a way typical or special, by observation, experimentation, inference, theory development, observation and so on are interconnected between the way that a different way. IPA is a series of interrelated concepts. With charts concepts that have developed as a result of experiments and observations, roomates are useful for further experimentation and observation (Ministry of Education, 2006).

IPA includes four elements, namely product, process, application and attitude. Products may include facts, principles, theories, and laws. The process is a problem-solving procedure through the scientific method; scientific methods include observation, formulation of hypotheses, design of experiments, trial or investigation, testing hypotheses through experimentation; evaluation, measurement, and conclusion. Application is the application of scientific methods and concepts or science in everyday life. Attitude is a curiosity about objects, natural phenomena, living beings, and the causal relations that give rise to new problems can be solved through the correct procedure.

## 2. Characteristics of Learning IPA

Based on the characteristics, science deals with how to find out about the systematic nature, so that science is not just a mastery of knowledge in the form of facts, concepts, or principles, but also a process of discovery. An understanding of the characteristics of the IPA's impact on science learning in schools. In accordance with the characteristics of science, science in schools is expected to be a vehicle for students to learn about themselves and the environment, as well as prospects for further development in implementing them in everyday life. Based on the characteristics of the IPA Similarly, coverage of science is learned in school is not just a collection of facts but also the fact that the acquisition process is based on the ability to use the basic knowledge of science to predict or explain many different phenomena. Coverage and learning science in schools has its own characteristics. Description of the characteristics of learning science can be described as follows.

- a. The process of learning science involves almost all the sensory organs, the whole process of thinking, and wide range of muscle movement. Example: to study the expansion of the object, we need to carry out a series of activities that involve the senses of sight to observe changes in body size (length, area, or volume), involves the movement of muscles to perform measurements using a measuring instrument in accordance with the object being measured and how to measure right, in order to obtain an accurate quantitative measurement data.
- b. Learning science is done using a variety of ways (techniques). For example, observation, and experimentation.

- c. Learning science requires a variety of tools, notably for helping the observations. This is because the ability of the human senses are limited. In addition, there are certain things when we get the data based only on observations with the senses, will provide results that are less objective, while prioritizing objectivity IPA. Example: observations to measure the temperature of objects necessary tool of the thermometer temperature gauge.
- d. Learn science activities often involve scientific meetings (eg seminars, conferences or symposiums), the study of literature, visit an object, making hypotheses, and others. The activity we did solely in order to obtain the recognition of the truth of truly objective. Example: a new scientific findings to gain recognition of the truth, the findings should be taken to a scientific trial of local, regional, national, or even international level to be communicated and maintained by presenting experts.
- e. Learning science is an active process. Learning science is something that students do, not something that is done to students. In learning science, students observe objects and events, ask questions, acquire knowledge, construct explanations of natural phenomena, test explanations by different ways, and communicating ideas to others.

Motivation in learning science lies in two aspects, namely the active act of physical or hands-on and active thinking or minds-on (NRC, 1996:20). Activeness physically is not enough to learn science, students also have to gain the experience to think through the habit of thinking in science learning. The education and learning science experts state that learning science should involve students

in a variety of domains, namely the cognitive, psychomotor, and affective.

### 3. Science Learning Model

Science learning model is divided into several types. Among learning with lecture method. On the other hand some are developed using practical tools. IPA is an enjoyable and fun science to be studied as it relates to everyday life, even very close to us, but in some cases, children find it difficult to understand the science itself. Basically, science is easy because it is real / real and make children know and are familiar with the environment and love of nature. Difficulties in learning science more children due oriented learning model used in the theoretical aspects and practical aspects aside.

IPA if the developed learning model that is good and right, can trigger the curiosity of children. Through the curiosity that is, children will explore, understand, and find answers. It is different if the methods used are lectures and theory oriented. Children tend to be passive and rely on the cognitive ability to pursue value. Memorization is not a guarantee of a child understand the material. Many children who do not know when the exams are held and only remember the theory. But learning systems force students to use their imagination with what he learned and memorized. This is very alarming. If allowed to continue, the child does not have the sensitivity to recognize and direct experience in the environment. Unfortunately, the memory of the child in terms of learning is so limited that the greater the possibility of cheating. It can be bad for children. Cheating trigger negative culture and negative shape the character as well. Character is usually carried into adulthood.

All started from learning model. So, how is a good model of learning science? The characteristics of good

science teaching model is a model of learning that the child can learn scientifically, understand, and form positive character of the process. So like if the model lesson? One of the applied bias learning is a method of stimulating naturalist intelligence. The method itself is not widely known.

Children should be accustomed to work scientifically. Not only learn in the classroom, but also to learn for free but controlled in open space. Children are given more tasks, to be active, develop critical properties, and introduce problem solving. Learning is part of the process of stimulation naturalist intelligence.

### 4. Naturalist Intelligence

Activities concerned with nature with a variety of activities to do, such as planting trees, plants, flowers, watching the growth, nurturing, loving pet, observe its behavior, as well as animal and plant breeding efforts. These activities are a positive activity. The function of such activities to develop the character of the child to be closer to nature and recognize the environment.

Environment and nature is a very important rationale for early child development mindset. Through the environment and nature, free kids activities and develop skills. Small activities can be done from the literature of nature. For example, children can paint a landscape, drawing animals, talking about the beauty of the flower color and so forth. Such small activities can develop children's potential. Activities that rests on the naturalist has a very wide coverage areas. From plantations, farms, ranches, sky, mountains to the sea.

Naturalist intelligence is the ability to recognize, differentiate, disclose and make categories of what is encountered in nature and the environment. The point

is the human ability to recognize plants, animals and other parts of the universe.

Spending time outdoors can improve the child's brain function, particularly attention, concentration, memory and impulse control. Nature seemed to rejuvenate the brain by providing the opportunity for the muscles to rest mentally. Let the kids play around in nature for at least 20 minutes a day. Children can spend time in nature by playing games or tools provided by the school with her friends, cycling on a tree-lined streets, and playing soccer. This happens because the motion activate brain regions important in influencing the thinking of children. Encourage the child to exercise choice or take your child biking regularly.

In Indonesia, the teachers have yet to apply the learning model using stimulation naturalist intelligence. Teachers as initial holder of forming characters, few of them know about this naturalist intelligences theory. A study conducted by Aryza et al (2002, 14-20) suggests that the naturalist intelligence gained very little stimulation compared with stimulation verbal linguistic intelligence, logical-mathematical, visual-spacial, musical, kinesthetic, interpersonal, and intrapersonal. Naturalist intelligence is considered a less important aspect. Even got a less than optimal treatment when compared with the types of the other intelligences. The essence of intelligence that a person has the ability to solve problems that occur in reality, unable to find a problem and then analyze and be able to solve it.

Naturalist intelligence can be grown in many ways. First, teachers can invite children to enjoy the outdoors and watching. Learning can be done outside the classroom. Second, teachers can provide books and CDs relating to the ins and outs of animals and plants, and is equipped with good pictures and

interesting. This learning can make kids identify flora and fauna. Third, teachers can provide appropriate materials related naturalistic ways of thinking, such as watering flowers, planting crops, and observe its growth. This serves to train children to be sensitive to the environment. Fourth, teachers can create a game that deals with the elements of nature, a case of comparing different forms of flowers, fruit, or leaves. Guessing certain animal sounds can also be used as an alternative.

## 5. Positive Character

Characters are abstract. Character is the personal trait inherent in every human being. If the positive character traits in children has been formed since childhood, will be forming a competent personal. When early childhood already formed a positive character, this will make it easier for children to learn at a higher level. Character formation is most easily done in grades 1 Elementary School (SD).

Stimulation of learning models naturalist intelligence (nature smart) desire of knowledge (curiosity) of the children will be formed. Curiosity of children will be formed if the child is given the task of learning. For example, search for spiky plants. Children will be encouraged to look for these plants. Another example is the material of plants. Children invited to walk to see the neighborhood. Teachers are creative able to lure children to ask and active. Of learning tasks, such as providing more and see first hand the environment can make a child more curious to explore more of the lessons learned related knowledge.

With the method of the naturalist and exposes children to the environment, it will indirectly sensitivity training. For example, when studying the properties of water, the child is shown directly on the water flow.

Another thing to do, the teacher facilitated by making props.

To be creative and innovative child, the child is led to draw animals and plants. For example carnivores (carnivores), children not only hear his name but also know what kind of animal. From there the children will be creative and innovative. Critical associated with curiosity. To train children to be critical in thinking, teachers can rotate videos about nature and relate to real life.

The main character is important to have in a person is honest. IPA can embed nature of honesty in children through learning the right. Naturalist intelligence (nature) will form the child is able to understand the science. If children understand, test current and child will not cheat an honest alias in doing the task.

## CONCLUSION AND SUGGESTION

The above description can be summed teachers must diligently apply the naturalist intelligence that children really understand the science well. Child's positive character will be formed as the application of stimulation of the naturalist on science learning. Positive character traits can be environmentally sensitive, active, critical, creative, innovative, love the environment, and honest.

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