Stimulation of Multiple Intelligences Using Information Technology

Christine Wibhowo
Faculty of Psychology, Soegijapranata Catholic University
Semarang, Indonesia
xtine_w@yahoo.com

Ridwan Sanjaya
Faculty of Computer Science, Soegijapranata Catholic University
Semarang, Indonesia
ridwan.sanjaya@gmail.com

Abstract- Actually, all of children are intelligent. They have intelligence that is unique and may differ from others, or called as multiple intelligences. Even though they are intelligent, but their intelligence must be supported by stimulation from their parents to make their potential become real. Their parents do not need a special time or special tools to do stimulation for them. All existing facilities can be used in stimulating their children to learn, as long as they have creativity.

The best stimulus is come from their parents, the natural and the environment. However, in the multimedia era today, parents have a lot of options to provide stimulation to their child. One of the options is using the information technology or computer. By utilizing the improvement of graphics and programming techniques, children can use many program to support their learning. The programs that is called as edutainment makes the children feel comfort and happy in the learning.

This paper will focus on the utilizing of information technology to stimulate the multi intelligence of the children. It will also emphasize on how the information technology helps the children to be smart, not only academically but also in terms of understanding everyday problems.

Keywords- creative, edutainment, information technology, intelligence stimulation, multiple intelligences.

I. INTRODUCTION

The development of Information Technology (IT) has changed all aspects of life very quickly. Previously, it was very difficult to get information from very far place. But currently, everyone is able to get any information from around the world. Its growth has been realized by some experts in education to be used in teaching and learning process.

Initially, teaching and learning process was very conventional, that is the face to face meeting between educators and students and using only the voice of teacher as the medium. With progress of IT, the learning process is becoming more attractive by using multimedia. By using IT, children can learn in comfort and supported. Because the current learning process is equipped with sound, motion, light, and color. The children can learn and imagine the information easier. As the result, the information transferred to the children is able to be captured in maximum level [5].
II. LITERATURE REVIEW

Every child has each development tasks he/she must accomplish. The task of his/her development must be fulfilled by each person based on his/her phases of age and norms of society. However, the child will fulfill that duty naturally. For example, most newborn babies soon are able to breastfeed his/her mother. However, there are some babies who still need more stimulation than other babies are able to be able to breastfeed his/her mother [2].

Similarly with other development tasks, like the learning to walk, to understand the rules, to master the knowledge are requiring stimulation from their parents. Because the intelligentsia are not only depending from the natural factors only or by the number of brain cells that have been taken from birth, but also because of stimulation from their parents.

There will be a lot of differences between children who received stimulation and children who did not received stimulation. One of the differences is children who received stimulation would more readily meet the challenges. In contrary, the child without adequate stimulation will be hampered in fulfilling the task of development. As the result, the task of his/her development at next age will be late.

Stimulation of parents covers all aspects of the children lives. The parents should give stimulation to their children because the parents are the people who have an obligation to educate their children. Educating the children is not only in terms of science, but also in all of aspects of life. The children are entitled to get appropriate stimulations without discrimination intelligence.

III. MULTIPLE INTELLIGENCE

Howard Gardner, a professor in education, has conducted a research on the development of human cognitive capacities. He said there are at least eight human intelligences. They are intelligence of mathematical, language, motor, intrapersonal, interpersonal, visualspatial, music and naturalist. Other intelligences are also available, such as spiritual intelligence, financial intelligence and other intelligence.

Parents are expected to provide enough stimulation for their children. By getting the appropriate stimulation, the children are able to be smart in their own field [1]. However in the beginning, the parents may not understand the intelligence field of their child. In the process of providing stimulation, parents will understand about the strong and weak of their children’s intelligence.

After finding the intelligence of children, parents are increasingly able to provide appropriate stimulation. Parents are an important stimulus for the child. All they do, think, and feel, will be the guidelines for their children because parents are the primary role in the stimulation.

However, parents may request assistance from various parties who are competent to provide stimulation for their child. For example, parents can choose school that excellent in sport for their son because he has motor intelligence. Parents also may request assistance to another family to teach their daughter in playing music because she easily understands the tones and rhythms.

The nature can also help parents in educating children. From ant behavior, parents can teach the importance of cooperation and good relations with others. It can increase interpersonal intelligence of their children.

The essence, parents have to be the supervisor in providing stimulation to their children, but parents may be assisted by various parties, including IT.
Stimulation of Multiple Intelligences Using Information Technology

IV. IMPLEMENTATION

In this era of technology, parents can be more helped in stimulating their children because there is IT that can also provide stimulation to the children. The children can improve their intelligence happily. Children can be more enjoy in the learning process by using multimedia. The children will more easily understand any information transferred when the medium has elements more interesting of a stimulus, children will be easier to concentrate on the learning material. As a result, it would make the intelligence of children increased.

Actually, all intelligence that Gardner named as Multiple Intelligence [4] could be stimulated by TI. However, in this paper only a few intelligences will be described to focus on the children. It will emphasize that IT is also suitable for children for the purpose to increase children`s intelligence.

![Fig. 1 Intelligence stimulation through IT and conventional way](image)

A. Logical Intelligence

One of which is considered as unpleasant lesson is mathematics. Actually, no child does not like math if the learning process is provided in interesting way. For children under three years, this intelligence can be helped by creating an application to calculate falling down leaves, weighing the material to make a cake, and compare big and small of an thing. Alternative answers can be provided to teach the children to be able to choose the correct answer.

B. Linguistic and Verbal (Language)

Intelligence Language is very useful to be mastered by the children because it will bring him to master other knowledge. In increasing their intelligence in language, a computer program can be created to persuade the children to catch a letter using the mouse. The letter that is grabbed should match with the instruction that is using a sound.

C. Intrapersonal Intelligence

Intrapersonal intelligence has no direct link to the academic achievement in school, but it is a capital for a more comfortable life. By using interpersonal intelligence, a child will be able to manage his/her life well to avoid stress.

To stimulate this intelligence, the example of computer game that can be utilized is a facial expression recognizer. A certain expression can be displayed and has to be asked to the children to guess the expression. The game should also provide the knowledge to solve each of expression if the children feel the same thing. Another computer application can be created, such as a story telling. For example, the story of a bear that his birthday forgotten by his friends. Encourage the child to choose an answer, what should he do if he becomes the bear. To make it easier, alternative answers should be provided to make the children able to choose.

Applauses or praises can be sounded to give the reward to the children if they succeed in choosing the correct answer. Rewards that come on time will increase a child's confidence. This confidence is a part of intrapersonal intelligence.

D. Visual-Spatial Intelligence

By using his/her visual-spatial intelligence, someone will able to make a shape or an object becomes increasingly attractive. The examples of work associated with this intelligence are architects, photographers, and sculptors.
To stimulate this intelligence, parents can use the computer program that encourages the children to give colors in the pictures, match the image with its shadow, puzzles, and construct the blocks.

V. CONCLUSIONS

In the past, IT was not one of the choices in stimulating children's intelligence. At that time, there is an assumption that IT is only suitable to facilitate some specific jobs. Parents often do not care to the era of internet and computers. Most of the parents are even afraid to introduce his/her children to the computer. They usually fear the negative effects to their children.

Parents should select the positive benefits of computers, to provide optimal stimulation to their children. If parents insist to use only the conventional way of learning, the children’s intelligence may not able to be pushed to the maximum level.

It is recommended for the parents to utilize IT for stimulate the children’s intelligence. Some programs that are currently named as edutainment, makes children learn in a happy atmosphere. The child’s joy is able to make the learning result will be stronger attached into the children’s memory.

REFERENCES


