2. Auditory : This modality accessing any kind of sound, voice, music, tones, rhythms, stories, dialogue, and understanding of the subject matter by answering or listening to a story song, poetry and other things.
3. Kinesthetic : This modality accessing any kind of movement, the activity of the body, emotions, coordination, and others.

According to the study of the three most prominent modalities are kinesthetic and visual modalities. Besides learning is always related to everyday learners will be easier to understand than the knowledge that has never seen, felt or done by learners. Emotional experience involving learners will also continue to be meaningful and memorable, and make the memory last longer is the absence of respect for him so that learners are able to actualize oneself fully.

In understanding the character of students, teachers will find the uniqueness of each learner is different from one another. Each learner has 8 consisting of visual capability, logical mathematical, linguistic, musical, natural, kinesthetic, interpersonal, and intrapersonal The source of a person's intelligence is his habit to create new products that have cultural values (creativity) and his habit of solving problems independently (problem solving) (Munif Chatib, 2010). Every intelligence will always evolving (dynamic) is not static. Multiple Intelligences is an appropriate learning strategy with a comprehensive curriculum, with educating learners in the cognitive, affective, and psychomotor. While curriculum -based material only see and judge the success of students in learning partially, see the extent of knowledge and memorization field of study. So far only seen the ability of learners of the value, rank, or trophies obtained. The learning process is a process of knowledge transfer in both directions, as a conduit of information between educators and learners as recipients of information. To obtain maximum results necessary learning strategies appropriate to the activity.

By applying the MI learning strategy, then educators must thoroughly understand any potential learners, have high creativity in developing the concept of knowledge in self-learners. By developing the eight intelligences learning atmosphere that is created will be more fun and not boring. There will be innovations that appear in every meeting prose learning.

Pestalozzi in more detail and scientific mention of the three basic aspects of education is the intellectual education, moral education, and physical education. Although he describes the three basic aspects of education is to facilitate and rationalize, he stressed bahawa whole personality learners should be educated (whole personality of the which had to be educated) or it can be said that the main task of education is to develop the personality and form the character of students. Pestalozzi believed that learners have the potential natural (innate), talent or natural talent, has a capacity of moral, intellectual, physical naturally built into the unit. No one of the three basic aspects that should be forgotten, everything must be developed to build unity harmony. The task of educators is not imposing from the outside, but to motivate, guide, and assist the development potential of the learner to achieve the full development of the (optimal). The method of education is to provide the stimulation needed for basic potential learners can be fully developed. In the use of educational methods based on the belief that there are two sides is important for the development of behavior, intelligence, and personality of the students are on one hand the innate potential of the birth and the other side of the physical and social environment in which students thrive both of which affect the development of self- learners intact and harmony. Harmonious education methods are not insisting that the mind and the desire of educators or teachers. So is not the imposition of the subject matter selected and programmed by the educator (parent or teacher) to be followed and accepted by learners. Learner - learner as a personal, active subject has desires, thoughts, and ideas

to be developed into natural personal healthy should not be destroyed by impositions from outside him self. Learners personal coercion of another person or the education system can lead to the development of unhealthy personality and not a draw. The subject matter is not chosen by adults (teachers, parents) with adult standards used, but the material must be tailored to the interests of learners and according to their ability level. The material is abstract and difficult to understand by learners, must be simplified into something more concrete so that it can be understood by learners.

Dimensions of intellectual education is not simply convey the thoughts of others, but building thinking ability of students, so that students are able to draw up their own minds. Developing knowledge not because of something given or imposed from outside himself, otherwise knowledge driven and built from the self-learners.

Knowledge must be represented in stages in accordance with the thinking ability of students from simple to complex and abstract direction of observation (observation) to the concrete reality is the absolute basis for the development of learners' knowledge because of the look, feel, feel an object of material objects, then learners can build an idea to know the concept in mind. Here John Dewey conceptualize that the knowledge gained through experience, namely the activity of material objects act on objects around the learners live. accordance with the view that knowledge is rooted in pragmatism experience. Humans have an active and explorative mind and not the mind that passive - receptive (George R. Knight, 1982 : p.63). And with language learners convey an idea or concept that exists in the mind of others. The development of knowledge can not be separated by language, because language learners must convey ideas or concepts that have been built in the minds of learners. It could be argued is a language of symbols desire to take action on the environment on the basis of ideas and thoughts that exist in the brain lings that may develop.

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PROFESSIONAL TEACHER ROLE DEVELOPING INTELLIGENCE IN CHILDREN IN SCHOOL COMPOUND

Written by:
Rohinah
Lecturer Faculty of Tarbiyah and Teaching UIN Sunan Kalijaga Yogyakarta

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ABSTRACT

The demands of teacher professionalism coupled with financial support in the form of allowance for teachers, would have an impact on the outlook and pattern learning more dynamic, progressive, and humanist. Teacher professional it should not only required to have three abilities, namely cognitive ability, psychomotor ability, and affective abilities alone, but also need to do a professional teacher in the classroom effectively. While learning in the classroom effectively will be done well if the teacher has a positive outlook towards their students. That on every student has a unique personality, the potential for diverse, and outstanding ability, so teachers should strive to build each child's potential in students to develop naturally and maximum. By understanding and attention to intelligence possessed students, the teacher will see and treat their students equitably and humanely. Because the students acknowledge that each has its own uniqueness and distinctiveness, teachers become more thoughtful force in the process of interacting and communicating in a learning process in the classroom.

Keywords**:** *teachers, professionals, multiple intelligences, students*

INTRODUCTION

The role of the teacher in the school not only as teachers deliver the subject matter in the classroom alone, but rather on aspects of educating and guiding, directing students to become better human beings, and deliver them to the glorious future.

But unfortunately, there are teachers in schools in general have not been fully aware of the great tanggugjawab behind his role as an educator. So what happens teacher only acts as a transmitter of information and transfer of knowledge, and supported by assessment systems that measure the success of students with few figures in nominal terms, while other aspects, tends to be less attention.

The phenomenon of teachers who measure and assess their students only from one aspect, the actual cognitive abilities have ignored the other students. Even worse when the teacher has had the notion that the intelligence of the students only viewed from the aspect of intelligence alone, and considers foolish children who lack the cognitive ability in the field.

Along with the demands of teacher professionalism coupled with financial support in the form of allowance for teachers, would have an impact on the outlook and pattern learning more dynamic, progressive, and humanist.

Professional teachers are not only required to have three abilities, namely cognitive ability, psychomotor ability, and affective abilities alone, but also need to do a professional teacher in the classroom effectively. [1]

Effective learning in the classroom will be done well if the teacher has a positive outlook towards their students. That on every student has a unique personality, the potential for diverse, and outstanding ability, so teachers should strive to build each child's potential in students to develop naturally and maximum.

Understanding the Role of Teachers in Schools

In Big Indonesian Dictionary, the term teachers are people who work, livelihood or profession of teaching. [2]

Meanwhile, according to A. Malik Fajar, a teacher is a person who took on the task of teaching, educating and guiding. If all three are not inherent in the nature of a teacher, then he can not be regarded as a teacher. [3]

According to Henry Adam, as quoted by A. Malik Fajar, that "the teacher had a lasting impact, he never knew, where the influence stops".[4]

According to Moh. Uzer Usman, a teacher is a job title or profession that requires specialized skills as a teacher. This work can be done by people who do not have the expertise to perform activities or work as a teacher. To be a teacher is required under certain conditions, especially as professional teachers who must master the intricacies of true education and learning with a variety of other science that needs to be nurtured and developed through specific training period or pre-service education. [5]

Meanwhile, according to Indonesian Law Number 14 of 2005, Chapter I, Article 1, paragraph, first mentioned, that is the teachers are professional educators with the primary task of educating, teaching, guiding, directing, train, assess, and evaluate students on early childhood education, formal education, elementary education, and secondary education. [6]

The role of teachers in schools is a vital role which can not be ignored. How teachers interact and communicate with students into a process that is crucial in the learning success of the students. This is because the main community, an area in the school teacher's job is to provide exemplary, experience and knowledge to them.

In this case, the teacher must be creative, professional and fun, by positioning itself as a parent, loving to the students. It could also be as a friend, a place to complain and express their feelings for the students. She also acts as a facilitator, who is always ready to provide convenience, and serve students according to their interests, abilities and talents, teachers can contribute ideas to parents to be aware of the problems faced by children and advise solutions, foster self-confidence, brave and responsible, familiarize the students to interact with others appropriately, develop a reasonable

1 Suyanto dan Asep DJihad, *Bagaimana Menjadi Calon Guru & Guru Profesional*, (Yogyakarta: Multi Pressindo, 2011), hal. 8
2 Pusat Bahasa Departemen Pendidikan Nasional, *Kamus Besar Bahasa Indonesia*, Edisi III, (Jakarta: Balai Pustaka, 2001).
3 A. Malik Fadjar, *Visi Pembaruan Pendidikan Islam*, (Jakarta: Lembaga Pengembangan Pendidikan dan Penyusunan Naskah Indonesia [LP3NI], 1998).
4 *Ibid*.
5 Moh. Uzer Usman, *Menjadi Guru Profesional*, Cet. IX, (Bandung: Remaja Rosdakarya, 1998).
6 Undang-undang Republik Indonesia Nomer 14 tahun 2005, Tentang Guru dan Dosen.

process of socialization among the students, others, and the environment, develop creativity, and be servants of all those who need help.

Social role of teachers in the school have a very important role, especially in the effectiveness and efficiency of individual learning in school is dependent upon the role of the teacher.

Abin Syamsudin (2003) argues that in terms of education broadly ideal teacher should be able to act as:

Conservator (maintainer) is a value system that is the source of the norm maturity.

a. Innovators (developers) that the value system of science.
b. Transmitter (successor) is the system value to students.
c. Transformer (translator) is the value system through incarnation in the process of interaction with target students.
d. Organizer (organizer), namely the creation of an educational process that can be justified, either formally (to those who raised and assigned him) and morally (to target students as well as the God who created it).

While limited in terms of education, citing Abidin Syamsudin thought Gagne and Bermiler, suggests the role of the teacher in the learning process of learners that includes:

a. Teacher as planner (planner) to prepare what will be done in the learning process (pre-teching problem).
b. Teachers as implementers (organizer) to be able to create a situation, lead, stimulate, mobilize and direct the teaching and learning activities in accordance with the plan, where it acts as a source (resource person).
c. Teachers as assessors (evaluators) who must collect. Analyze, interpret and ultimately must give consideration (judgment) on the success rate of the learning process.
d. Teachers as mentors (teacher counsel) where teachers are required to be able to identify learners who presumably deal with difficulties in learning, performing diagnosis, prognosis, and if there are still limits its authority, must help solve. [7]

Thus, the role of teachers in these schools; must understand the child's individual differences, the identification of the strengths and shortcomings of each of their students, grouping the students in the class into several groups according to the level of problems that need to be addressed, in collaboration with parents and other professionals to get the hash optimal learning, preparing materials, strategies and instructional media to suit the demanding needs of learners, teachers can develop learning model enrichment and/or acceleration in children who have a high learning speed in children who have a low learning speed, teachers can provide remedial services and or serving more time than others, teachers should not be enough to simply measure the academic aspect of that achieved by the child. Aspects of the field of non-academic ability is also worth noting, as well as provide feedback on the success already achieved their students.

Becoming a Professional Teacher

The demands of being a teacher maybe everyone can run. But how to become a teacher and a professional who has expertise in educating certainly there needs to be a process of education, training, and experience are adequate.

According to CO Houle as quoted Suyanto and Asep Djihad, that the characteristics of so-called professional jobs include; [8]

7 Nasution, *Sosiologi Pendidikan*. Jakarta: PT Bumi Aksara, 2004)
8 Suyanto dan Asep Djihad, *Bagaimana Menjadi*…, hal. 6-7

1. Must have a strong knowledge base;
2. Should be based on individual competence;
3. Having a system of selection and certi f cation;
4. There is cooperation and healthy competition among peers;
5. High professional awareness;
6. Have ethical principles (code of conduct);
7. Having a system of sanctions profession;
8. The existence of individual militancy;
9. Having a professional organization.

Professionalism of teachers is the teacher's ability to perform its main task as educators and teachers including the ability to plan, conduct, and carry out the evaluation of learning. In principle, every teacher should be supervised periodically in performing their duties. If the number of teachers enough, then the principal may request the help of his deputy or senior teacher to supervise. The success of the school principal as a supervisor, among others, can be demonstrated by a marked increase in the performance of teachers with awareness and skills responsibly carry out the task.

Law Teachers/Lecturers and PP. 19/2005 states the competence of teachers includes personal competence, pedagogical, professional, and social (Wicoyo, 2007; Direktorat Ketenagaan Dirjen Pendidikan Tinggi Depdiknas, 2006). These four types of teacher competencies and indicators along with essential sub-competencies described as follows:

1. Competence Personality

Personal competence is a personal abilities that re f ect the personality of a solid, stable, mature, wise and thoughtful, authoritative, becoming role models for students, and noble. In detail subkompetensi can be described as follows:

a. Sub competencies steady and stable personality has an essential indicator: act according to the norm of law; act according to social norms, proud as a teacher, and have consistency in acting according to the norms.
b. Sub competencies that adult personality has an essential indicator: displays independence in acting as an educator and has a work ethic as a teacher.
c. Sub competencies personality wise and prudent to have an essential indicator: displays the actions that are based on the bene f t of students, schools, and community and demonstrate openness in thinking and acting.
d. Sub competencies authoritative personality has an essential indicator: behavior that has a positive effect on the behavior of learners and have respected.
e. Sub noble character and competence can be a role model has the essential indicators: act in accordance with the norms of religious (faith and piety, honest, sincere, helpful), and have exemplary behavior of learners.

2. Pedagogical competency

Pedagogical competencies include understanding of learners, instructional design and implementation, evaluation of learning outcomes, and the development of learners to actualize different potentials. In detail, each sub-component are translated into essential indicators as follows:

a. Sub competencies in-depth understanding of learners have the essential indicators: understanding learners by utilizing the principles of cognitive development; understand learners by utilizing the principles of the personality, and identify supplies-taught learners.

b. Designing learning, including understanding the foundation of education for the sake of learning. Sub competencies has essential indicators: understanding the educational foundation, apply theory and learning; determine instructional strategies based on the characteristics of learners, the competency and teaching materials, as well as draft the strategy selected based learning.
c. Sub competencies implementing learning has essential indicators: arranging background (setting) learning, and implementing learning conducive.
d. Sub competence to design and implement instructional evaluation has essential indicators: designing and implementing evaluation (assessment) process and learning outcomes on an ongoing basis with a variety of methods, analyzing the results of the evaluation process and learning outcomes to determine the level of mastery learning (mastery learning), and utilize the assessment of learning for the improvement of the quality of learning programs in general.
e. Sub competencies develop learners to actualize all its potential, has an essential indicator: facilitating learners to develop a range of academic potential, and facilitate learners to develop a range of non-academic potential.

3. Professional Competence

Professional competence is the mastery of learning materials is broad and deep, which includes mastery of subject matter in the school curriculum and the substance of the shade material science, as well as mastery of the structure and methodology of science. each sub-competency has the following essential indicators;

a. Sub competencies mastered the science of substance related to the field of study has an essential indicator: understanding the teaching materials are in the school curriculum; understand the structure, concepts and methods of science that overshadow or coherent with teaching materials; understand the relationships between concepts related subjects, and applying concepts scientific concepts in everyday life.
b. Sub competencies mastered the structure and methods of science have an essential indicators.

4. Social competence

Social competence is the ability of teachers to communicate effectively with students, fellow teachers, staff, parents/guardians of students, and the surrounding communities. This competence has subkompetensi with essential indicators as follows:mastering the steps of research and critical analysis to deepen knowledge/subject material.

a. Able to communicate and interact effectively with learners. Sub competencies has essential indicators: communicate effectively with students.
b. Able to communicate and interact effectively with fellow educators and education personnel.
c. Able to communicate and interact effectively with parents/guardians of students and the surrounding community.

Thus, characteristics of a person who performs professional teachers would also refer to these indicators. Or in other words being a professional means to be an expert in his field, and an expert (expert) must carry out the work with no perfunctory and only pursue the sheer quantity but quality elements being resized.

Multiple Intelligences in Students in School

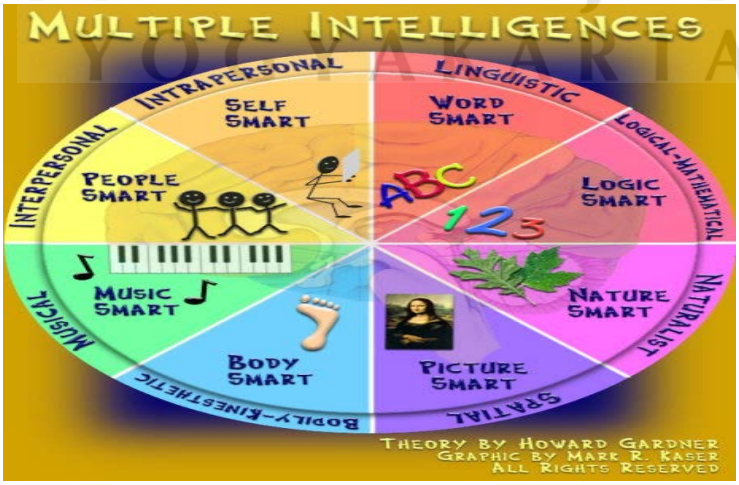
The theory of multiple intelligences opened a new paradigm for many people good parents, academics, educational practitioners, to the observer education and much more. This theory better understand the meaning of the uniqueness and the uniqueness of each child, thus changing the way that the child looks at academic achievement in school, not always able to show that the child is more clever than other children.

The theory of multiple intelligences was proposed by Howard Gardner in 1983, a prominent psychologist from Harvard University. This theory is based on observations appear Gardner, who saw that a child in school, with a prominent academic achievement, not then automatically said to be more intelligent, than children who look effortlessly follow school and spend more time playing or exercising. *Intelligence, particularly as it is traditionally defined, does not sufficiently encompass the wide variety of abilities humans display*. According to intelligence children can not only be seen from his achievements in school. Children who fall behind in school lessons may be prominent in other intelligence areas. For example, sports, music or art.

Gardner observed frequently intelligence assessment will only be seen from a child's ability to follow an academic at school. And if all parents agree that each child is unique and has their own special potential, a lot of factors that should be examined before deciding on a smart kid or not. Then, based on the few facts he found, Gardner discovered another fact that those who suffered a brain injury, it was awesome to have the intelligence prevalent in certain areas that make it into the specialist field or even a mogul. The brain injury may be due to congenital or accident.

Based on these things, Gardner then begin to formulate the theory with intensive observations on people who either from birth or due to brain injury accident. Among the many interesting things that happen, Gardner revealed that a person who had a normal life with other like-quality capability, and then accidentally have an accident that causes injury to the brain, he suddenly has the ability to really stand out in certain areas. From these facts, Gardner saw that intelligence can be categorized and each individual has a particular tendency prominent intelligence, consciously or not. However, this prominent intelligence may be seen more significant in those with brain injury. While that does not, most likely impartial intelligence in every area of intelligence.

In his book, Thomas Armstrong (2002) also mentions that intelligence is the ability of each modality to unleash the students and make them champions, because basically every intelligent child.



Picture.1

Multiple Intellegences

So far, only a person's intelligence is measured by IQ (Intellectual Quetiont) alone, but by May Lwin IQ only measures two components of intelligence that exist in human beings, the linguistic abilities of verbal and mathematical logic. Therefore, the idea of Gardner trying to complete the IQ fndings that measure a person's intelligence is not enough to simply be measured from two sides only, because it has a variety of real human intelligence more. According to Gardner, there are 8 of intelligence possessed by the child; [9]

1. Verbal linguistic intelligence, the ability to formulate thoughts clearly and is able to use that ability competently through the words in speaking, reading, and writing.
2. Logical-mathematical intelligence, the ability to handle along with a count of numbers, patterns and logic, as well as scientists thought.
3. Visual-spatial intelligence, the ability to see the exact picture of the surrounding natural visual, and also pay attention to the small details.
4. Intelligence rhythm of the music, the ability to store the tone in someone's mind, given the rhythm, and infuenced by emotions or feelings that music.
5. Kinesthetic (physical intelligence), the ability to build an important relationship between the mind and body so that the body is able to regulate the movement of objects and creating.
6. Interpersonal intelligence, the ability to relate to the people around. It is the ability to understand and predict the feelings, temperament, mood, intentions and desires of people, and respond appropriately.
7. 7. Intrapersonal intelligence, the ability to understand themselves and the responsibility for his life.
8. Naturalist intelligence, the skills to recognize and categorize species of fora and fauna in the surrounding areas (sensitivity to natural phenomena).

By understanding and attention to intelligence possessed students, the teacher will see and treat their students equitably and humanely. Because the students acknowledge that each has its own uniqueness and distinctiveness, teachers become more thoughtful force in the process of interacting and communicating in a learning process in the classroom.

Teacher Professional role in developing a Multiple Intelligences Students in the School

Along with the times becoming a professional teacher becomes a necessity. Choosing a teacher profession demands integrity and strong personality. Because the face is not an inanimate object that can be moved like a robot, but a living creature who has desires, feelings, and knowledge is very dynamic and varied.

Interests, talents, abilities, and potential-potential of the students will not develop optimally without the help of a teacher. In this regard, teachers need to pay attention to individual students, because the one with the other students have a very fundamental difference.

If a teacher can perform its role as a facilitator, motivator, and inspiration, in the process of interaction and communication in the classroom, then all of the qualities within his protégé, will open. And openness potential creativity within the students will bring their own motivation and will fnd it to be individuals who are valuable and meaningful. [10]

Among the efforts and the role of the teacher in the learning process based on multiple intelligences is to design strategies and a variety of learning methods and contains elements of the

9 Suyanto dan Asep Djihad, *Bagaimana*…hal. 80-82
10 Suyanto dan Asep Djihad, *Bagaimana Menjadi*…, hal. 22

development potential of diverse students.

Learning strategies to enhance the child's ability to develop the myriad of intelligence can be done in various ways according to its intelligence. Teaching strategies that can be done include:

A. Linguistic Intelligence (Word Smart)
- Invite children to dialogue and discussion
- Reading stories
- Playing a role
- Sound off songs or children's tales
- Keeping a journal and writing a letter to a friend

B. Intelligence Mathematical Logic (Logic Smart)
- Play puzzle or snakes and ladders
- Playing with geometric forms
- Introduction of numbers through singing, tap, and rhythmic rhymes
- simple experiment, for example, mix colors
- Introduce how to use calculators and computers

C. Kinesthetic Intelligence/Physical (Body Smart)
- Encourage children to dance together
- Playing a role
- Playing the drama
- Exercising
- Impersonate another person's movements

D. Intelligence Visual Spatial (Picture Smart)
- Invite children to paint, draw, or coloring
- Provide opportunities for children to scribble
- Make a craft
- Describe the objects referred to in a song or poem
- Playing beams, lego, or puzzle

E. Intrapersonal Intelligence (Self Smart)
- Conversing about the ideal
- Fill out a simple diary or journal
- Playing facing the mirror and describe or tell what he saw
- Invite children to imagine the cast of a story in a book
- Make a schedule of daily activities

F. Interpersonal Intelligence (People Smart)
- Make rules through discussion with the family

- Provide opportunities responsibilities at home
- Train children to appreciate differences of opinion
- Develop a friendly attitude and caring fellow
- Train children to say thank you, ask for help, or apologize
- Exercising patience to wait their turn

G. Musical intelligence (Musical Smart)

- Encourage children to play musical instruments, either real or musical instruments homemade musical instruments
- Ask children to create their own rhythme
- Discography, namely the search for a song or piece of song lyrics that relate to a particular topic
- Ask the children to compose a simple song to replace either alone or with the melody of his verse
- Imitate a variety of tones, play instrumental music, and invite children to sing alone or together

H. Naturalist Intelligence (Nature Smart)

- Work nature
- Telling what is seen when looking out the window
- Keeping animals or bring the animal to the class and the children were asked to observe
- Planting trees in the yard and noting its development
- Creating a simple herbarium or create garden/park as a joint project

According to Gardner, as quoted Suyanto and Asep Djihad that if each person enough support, enrichment, and teaching, then that person has the ability to develop the eight intelligences to the high level of performance is sufficient.[11]

Thus, being a true professional teachers are required to carry out their profession that can accommodate all the interests, desires, and needs of each individual is unique and diverse. And by knowing the multiple intelligences, then the teacher will always provide treatment tailored to the indicators present in the students, because it could be a child who is less intelligent linguistic, or mathematical, but the child may actually smarter than the kinesthetic, and so on. In other words, the teacher is supposed to be a professional teacher who has a perspective that is more wise, creative and innovative. And teacher who continues to explore his or her creativity is a teacher learners who are hungry for insight, knowledge, and experience.

CONCLUSION

Being a professional teacher is certainly not simply demanding the right to benefits obtained professionalism. But must also be balanced with duties and responsibilities that should not be taken lightly. Among the duties and responsibilities that must be carried out in the learning process is to apply the learning to accommodate all the needs and trends of students who are by nature unique and diverse.

11 Suyanto dan Asep Djihad, *Bagaimana Menjadi*…, hal. 82

Being a professional teacher would be so understanding how to be a teacher who can treat their students are humane, positive thinking and uphold the principles of justice and equal rights of others.

Among the efforts and the role of professional teachers in the learning process based on multiple intelligences by way of design strategies and methods are varied and contain elements of the development potential of diverse students.

Learning strategies to enhance the child's ability to develop the myriad of intelligence can be done in various ways according to its intelligence.

Each of the students are intelligent, every student is a champion, so should the learning paradigm that must be adopted by a professional teacher. So that the learning process taking into account the diversity of interests, talents, and tendencies of each individual.

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STIMULATION OF MULTIPLE INTELLIGENCES IN ELEMENTARY EARLY CHILDHOOD EFFORTS HOLISTIC OPTIMIZATION OF POTENTIAL CHILD THROUGH SIMPLE ACTIVITIES AT HOME PARENTS TOGETHER

Written by:
Iyan Sofyan, S. Pd, M.A.
(PG PAUD Ahmad Dahlan University of Yogyakarta)

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ABSTRACT

Early stimulation is stimulus efforts made by parents to the newborn, even better since the 6-month fetus in the womb is done every day to stimulate the sensory systems (vision, hearing, touching, smelling, and tasting). Early stimulation also include coarse and fne motion stimulates the feet, hands and fngers, invites communicate, as well as stimulate the pleasant feeling and thoughts of infants and toddlers. Stimuli were conducted from birth, continuous, varied, with the atmosphere of playing and loving will stimulate various aspects of multiple intelligence child holistically for all elements of the child's intelligence section optimally stimulated, so that eventually the child will develop the potential for concurrent and balanced. The process gives these stimuli must be made by the parent or surrogate parent (every one at home or baby sitter) at any time when there is the opportunity to interact with children. It should be noted that when a child should not impose its will want to play alone, look at the condition of children's mood, and based on the genuine affection. There are some simple activities as a form of early stimulation can parents do to their children to optimize children's multiple intelligences. This simple activity should consider the appropriateness of the age stages in accordance with the task of child development. First, stimulate verbal language intelligence by taken the children chatted about various things that met or natural interest children read the story over and over again, induce him to talk and tell stories, sing children's songs. Second, stimulte logical mathematical intelligence by train children to classify objects, composing, arranging, counting toys, play fgures, checkers, abacus, chess, cards, puzzles, monopoly, and computer games. Third, develop visual spatial intelligence parentcan invites children to observe the images, photos, assemble and disassemble lego, cutting, folding, drawing, and play houses. Fourth, train intelligence gestures child by asking her to stand on one leg, squatting, bending, walking on one line, running, jumping, throwing, catching, gymnastics, dance, sports and activities together. Fifth, stimulate children's musical intelligence by listening to music vary according to their interests, took singing, playing musical instruments, the rhythm and the tone is simple. Sixth, stimulate interpersonal emotional intelligence by train children to play with the older kids and younger, sharing cake, toy lending, working together on something, the game control himself from anger, recognize a wide variety of ethnic groups, cultures, and religions through book or television program. Seventh, stimulate intrapersonal emotional intelligence by train children to tell their parents feelings and invite children to tell their feelings, desires, ideals, experiences, imagination, asking tells a story by playing a simple role. Eighth, stimulate children to invite naturalist by planted seeds to grow plants from seed, nurture the plants in pots, raise animals,

gardening, traveled on forests, mountains, rivers, beaches, and watching the sky.

Keywords: *multiple intelligences, early stimulation, holistic optimization of potential child.*

A. INTRODUCTION

Having a child for each parent is a boon. Children also become the foundation of future expectations of every parent. All parents want their children to grow and develop optimally and hope to achieve success in later adult life. It requires awareness of parents to always strive seriously to make sure their children live with the growth needs ful flled all the appropriate stages of development tasks.

Besides takes awareness and effort from parents there is also a problem that's often overlooked the child can not grow and thrive on its own like the animals without help from their parents and their environment. Given the newborn human child is helpless creature (Siti Partini, 1995). In connection with this, then the parents and the family environment alone has the primary obligation and the frst to help children grow and develop, not like in this era with the phenomenon of too many parents who entrust their children's growth through educational institutions and non- formal education formal.

In these days many parents assume that educatethe children are the responsibility of educational institutions after children enter formal school. Though actually learn not to be limited narrowly to the school environment and guided by the teacher alone, because the world is in fact the largest study room since the child was born and they are the frst teachers for their own parents.

Once the child is born until the age of three years is the golden period (the best potential) in life that should be used by parents to be stimulated so that the potential in the child develop optimally. In the book "*Increasing Your Child Early Multiple intelligences*", Sutan Surya (2007) explains that children under three years old has 100 billion brain cells in the disjoint condition. These nerve cells are connected to each other or forming myelination emotional structure and intelligence. Myelination formed will continue to reach 1000 trillion connections at the age of approximately three years, and will continue to evolve as we age. If the child is still under the age of six years and gained experience brain stimulation that builds the structure, the child can develop more optimal. If the formation of brain structure and function during development can take place and well maintained into adulthood, then the child will have a remarkable ability, because the connection of brain cells that occurs during the development of brain cell connections exceeded in adults.

The fact of the potential child's brain at an early age could also be from a variety of other scientifc reference numbers a lot, both the results of research and studies from various experts. It was almost the same as the result of a decision in early childhood Drakkar Congress stating that the preschool period is a golden age for the growth and development of children.Thus, the frst child of the family as the environment has the greatest opportunity to stimulate the child's potential in every aspect of ability, also the role of the parents are extremely vital to ensure the potential intelligence of children can develop holistic and optimal.

Each stimulation received during the preschool children will formed the intelligence circuit for further developments. By using materials and simple activities that can be found in my family and the surrounding environment, parents can stimulate the development of multiple intelligences of children optimally in accordance with its potential.

B. DISCUSSION

The perspective of public in Indonesia are generally still think that the child's intelligence as measured by the IQ test that are what determines the success of life in the future. So many parents are trying to get her to have an IQ as high as possible. But the intelligence of a high IQ is not the only determinant of one's success. Many people are successful in life but have a high IQ is not enough. For example some entrepreneurs, atctors, athletes, dancers, singers, musicians and a variety of other professions whose success is determined by factors other than IQ.

Intelligence is not only viewed as cognitive abilities, but also other related ability to solve problems in various fields of life. At the end of the 20th century emerged a theory that gives a new color in the form of intelligence. The theory states that intelligence is only viewed from the cognitive aspect is not much to contribute to the success of one's life, therefore it develops some form of intelligence that not only reveal the cognitive aspects, but also aspects of emotional, moral, social, and spiritual.

1. Multiple Intelligences

In 1983, Howard Gardner developed a theory known as multiple intelligence or multiple intelligences (Gardner, 2003; Armstrong, 2002). The theory states that every human being to develop the skills necessary to live. Gardner (2003) defines intelligence as the ability to solve problems that occur in real life and create a valuable product in the cultural environment and society. Roles performed in society will inevitably impact the person's ability to solve problems and create specific products. Gardner (2003) found there are eight forms of human intelligence. The eight forms of intelligence are: 1) linguistic, 2) logical-mathematical intelligence, 3) spatial intelligence, 4) bodily-kinesthetic intelligence, 5) musical intelligence, 6) interpersonal intelligence, 7) intrapersonal intelligence, and 8) naturalistic intelligence.

a. Linguistic Intelligence.

Linguistic intelligence is the ability to use words effectively, both orally and in writing. This intelligence includes the ability to manipulate the grammar or language structure, phonology or sounds of language, semantics or meaning of language, pragmatic dimensions or practical use of the language. The use of this language include the rhetoric (the use of language to influence others through a specific action), mnemonics/rote (the use of language to remember information), explanation (the use of language to inform), and metalanguage (a language for discussing the use of language itself). In everyday life linguistic intelligence is useful for speaking, listening, reading and writing.

b. Logical-Mathematical Intelligence

This intelligence involves processing skills with good numbers and or using logic or reasoning skills correctly. This intelligence includes sensitivity to logical patterns and relationships, statements in the proposition (causal relationship), logical functions and other abstractions. The process used in the mathematical-logical intelligence include: classification, deduction, generalization, calculation, and hypothesis testing.

c. Spatial Intelligence

This intelligence is the ability to perceive the visual-spatial world accurately. This intelligence includes sensitivity to color, line, shape, space, and relationships between these elements. This intelligence includes the ability to imagine, to present ideas visually or spatially orient themselves appropriately in a spatial matrix.

d. Bodily-Kinesthetic Intelligence

This intelligence is the skill to use the whole body to express ideas and feelings, and skills using hands to create or change a form. This intelligence includes specifc physical abilities, such as coordination, balance, skill, strength, fexibility, and speed as well as the ability to receive stimulation through the five senses.

e. Music Intelligence

This intelligence is the ability to handle musical forms, a way of perceiving, discriminate, transform, and express. This intelligence includes sensitivity to rhythm, pitch or melody patterns, and color tone or timbre of the song. Someone who has a high musical intelligence have good skills in singing, humming, whistling or voice-and small voice, playing a son, move their body to the rhythm or sing, and play musical instruments.

f. Interpersonal Intelligence

It is the ability to perceive and distinguish mood, the will, the motivation and feelings of others. This intelligence includes sensitivity to facial expressions, voice, and certain gestures. Individuals who have high ability in this intelligence can understand another person, often a leader among his friends, organize and communicate appropriately.

g. Intrapersonal Intelligence

An ability to understand themselves and act on that understanding. This intelligence includes the ability to understand the strengths and limitations of self, awareness of mood, desire, motivation, temperament, having a mind and self-disciplined ability, understand and self respect.

h. Natural Intelligence

An ability to recognize and categorize animals or plants in the neighborhood. This intelligence includes sensitivity to natural phenomena, such as weather, forms clouds and mountains.

2. Basic Stimulation for Multiple Intelligences

a. Necessity to develop Multiple Intelligences

There are three basic requirements for developing a child's multiple intelligences include: frst the requirement for physical/biological (especially for the growth of the brain, sensory and motoric systems), both emotional needs/fulfllment affection (emotional intelligence affects, inter and intrapersonal), and the The third meeting the needs of early stimulation/base (stimulate other intelligences holistically).

Needs physical/biological especially since good nutrition in the womb and then born into children and adolescents who grow up is important for brain development, prevention and treatment of diseases that can affect the development of intelligence, and physical skills to perform daily activities. Emotional needs/fulfllment affection especially by protecting, creates a feeling of security and comfort, attention and respect for the child, do not put the punishment with anger but give more examples with great affection. Stimulation of basic needs include continuous stimulation with a variety of ways to stimulate all the sensory and motor systems.

These three basic needs should be given simultaneously since the fetus in the womb because it will affect each other. If the requirement is not fulflled biophysical, undernutrition, often sick, it is not optimal brain development. When emotion and affection needs are not fulflled then the inter and intrapersonal intelligence is also low. When stimulation in day-to-day interactions are less variable then the development of intelligence is also less variable. But when all three basic

needs are met by the parents, then the child will develop his or her potential in a holistic and optimal. So that in the future life, the child will have great success and in accordance with its capability of actualizing the potential that has been developed in infancy until he was an adult.

b. Basic forms of stimulation through simple activities at home

Stimulation should be done every time there is a chance to interact with infants/toddlers. For example when bathing, changing diapers, breastfeeding, food feeding, holding,took a walk, playing, watching TV, in the car, before bed. Stimulation for infants 0-3 months by the way: seek a sense of comfort, safety and fun, hugging, holding, baby eyes, inviting smile, speak, sounding the various sounds or music alternately, hang brightly colored and moving objects (circles or squares blackandwhite), reads objects, to overthrow the baby to right-left, stomach-backs, stimulated to achieve and hold toys. Age 3-6 months coupled with playing, look at the baby 's face and caregivers in the mirror, stimulated to his stomach, back and forth on his back, and sat.

In infants aged 6-9 months coupled with calling his name, invited shaking hands, clapping, read fairy tales, stimulate sitting, standing holding trained. Age 9-12 months coupled with the repeated mention of “mama-papa”, brother, inserting toys into a container, drinking glass, roll the ball, trained to stand, walk by holding onto. Age 12-18 months coupled with doodling exercises using colored pencils, arrange cubes, blocks, pieces of simple images (puzzle) insert and remove small objects from the container, playing with dolls, spoons, plates, cups, teapots, broom, duster. Practice walking without holding, walking backward, climb stairs, kick a ball, take off pants, understand and carry out simple commands (where the ball, hold it, enter it, grab it), to name or indicate objects.

Age 18-24 months plus by asking, mentioning and showing the parts of the body (where the eye?, Nose?, Ears?, Mouth?, etc), asked to name a picture or animals and objects around the house, talking about daily activities (eating, drinking, bathing, playing, asking, etc), training drawing lines, washing hands, wearing trousers and shirt, playing throw ball, jumping. Age 2-3 years plus recognize and mention color, using adjectives (big-small, hot-cold, high-low, much-bit, etc), the names of friends, counting objects, wear clothes, brushing teeth, playing cards, dolls, cook dishes, drawing lines, circles, practice standing on one leg, toilet training.

After 3 years of age in addition to developing the abilities previous age, stimulation also directed to school readiness include: holding a pencil properly, write, recognize letters and numbers, simple math, understand simple commands (toilet training), and independence (left at school), share with friends, etc. Stimulation can be done at home (by caregivers and family) but can also be in preschool, kindergarten, or the like.

c. Atmosphere At Early Stimulation

Stimulation is done every opportunity to interact with the baby-toddler, every day, continuous, varied, adjusted for age developmental ability, performed by the family (especially the mother or surrogate mother). Stimulation should be done in an atmosphere of fun and excitement between caregiver and baby/toddler. Do not give stimulation to the rush, overbearing nanny, do not pay attention to the interest or desire of baby/toddler, or infant- toddler being sleepy, tired or wants to play something else. Caregivers are often angry, bored, annoyed, then it gives caregivers unwittingly negative emotional stimuli. Because in principle all speech, attitude and actions are a caregiver stimulation recorded, remembered and will be imitated or even baby-toddler strike fear.

d. Pattern of Good Parenting

Therefore, the interaction between caregiver and infant or toddler should be done in a democratic parenting(authoritative). That caregiver must be sensitive to infant cues, it means attention to interest, wishes or views of the child, not overbearing nanny, full of compassion, and excitement, creating a sense of security and comfort, give examples without force, pushing the courage to try to be creative, rewarding or credit for the success or good behavior, giving a correction is not a threat or punishment if the child can not do something or when making mistakes.

C. CONCLUSION

If we want children to have the development of multiple intelligences optimal stimulation should be performed since the baby every day on all sensory systems (vision, hearing, touching, smelling, tasting), with invited talk, play to stimulate feelings and thoughts, stimulates the coarse motion and smooth on the neck, body, legs, hands and fngers. How do stimulation should be tailored to the age and stage of growth and development of children. Stimulation is done every time there is a chance to interact with the infant/toddler through a variety of simple daily activities, such as bathing, changing diapers, breastfeeding, food feeding, holding, took a walk, playing, watching TV, in the car, before bed, or whenever and wherever when you can interact with your toddler.

Early stimulation should be performed in a pleasant atmosphere, the authoritative parenting (democratic). This means that a parent or caregiver must be sensitive to infant cues, attention to interests, wishes or views of the child, not overbearing nanny, full of compassion, and excitement, creating a sense of security and comfort, to give an example without forcing, pushing the courage to try to be creative, give a reward or praise for the success or good behavior, giving a correction is not a threat or punishment if the child can not do something or when making mistakes.

Encourage children to be interested observe and question about things in their environment, given the freedom and encouragement to develop fantasy, refect, think, try and realize ideas. Give praise to the results that have been achieved despite the slightest. Do not stop the curiosity of children, many do not threaten or punish, give a chance to try, as long as it does not harm himself or others.

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STUDENT CENTERED APPROACH
FOR EDUCATION ISLAMIC ELEMENTERY SCHOOL

Written by:
Khoirul Hadi & Atik Wartini
Student Islamic Faculty Of Law UIN Jogja and Early childhood Education UNY
Reank_bae@yahoo.com

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ABSTRACT

his study aims to mengagas implementation of student centered approach to learning Ibtidaiyyah Madrasah, in the method of learning is one of the important methods in this study so it is necessary draft scope for more. Ibtidaiyyah madrasa is one stage in which 9-year study based curriculum that has been disusus government, but sometimes due to the existing dualism in depag curriculum and national education in madrasa education makes little ambiguity in the direction of educational policy for students emnghasilkan berpertasi. student centered approach is an effort to offer the researcher based on student education, student berkeingin what talent and what students are interested in it dikembangnkang since aawal in madrassas tigkat ibtidaiyyah, so the pad next level students are expected to choose a career path that interests and talents since the early

Keywords: *student centered approach, madrasas Ibtidaiyyah. Learning.*

PRELIMINARY

Education is the guidance or help given by adults to the development of students to reach maturity in order to make students pro f cient melakssiswaan his own task and is not dependent on the help of others. Amarta Sen (Sudirman Tamin, 2009) states that "the measure of educational success is how far education can provide space and facilities for the wider development of personality and social freedom ". Education is also a conscious process to develop the potential of individuals that have thought and emotional intelligence, noble character and have the skills to be ready to live in society. Therefore, education is needed by the students from the womb to adulthood.

In accordance with the above educational purposes, ibtidaiyyah madrasa education in general has a goal to establish a quality Indonesian students, ie students who grow and develop in accordance with the level of development that has optimal readiness in entering basic education, adult future through life and help prepare students achieve learning readiness (academic) at the school. Ibtidai'yyah Madrasah education is one of the students Selah 9 -year compulsory education. Ibtidaiyyah Madrasah Education was held to develop a personalized, knowledge, and skills that underlie basic education, develop themselves fully in accordance with the principle of education as early as possible and for life, because Madrasah Ibtidaiyyah an early foundation in improving the ability of students to complete higher education, reduce the number of repeat grades and drop out rates.

Aspects of students' development into a major destination in Ibtidaiyyah Madrasah education. These aspects can be developed through learning activities. Aspects of students' abilities developed

include language, cognitive, physical - motor, art, social and emotional. Early childhood is the golden age (golden age), in which aspects of the student's ability is growing very rapidly. This is described in the standard Ibtidaiyyah Madrasah education.

Achievement level standards development contains rules about the growth and development of early childhood students from birth until the age of six years. Level of development achieved by students is the actualization of all aspects of the development potential that is expected to be achieved by students at each stage of its development optimally, not an achievement level academic skills. Describe the level of achievement of developmental growth and development are expected to be achieved by students at regular intervals. Development of students' achievement level of students early age, covering aspects of understanding religious values and moral, physical - motor, cognitive, language, and social - emotional.

In the world of teacher education plays a major role in producing a quality education, but the teachers are not the only source of knowledge. Another thing to consider in advance the teaching and learning process is curriculum, educational programs, resources, education, finance, management and leadership education. Various reasons are, describe the school education in Indonesia is still an education that focuses on teaching (instructor centered learning)

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" Aris Arlinah Imam Pongtuluran and Rahardjo (2011) in his article, student centered learning stated that the main concentration in the teaching and learning process is concentrated on aspects of teaching alone. Guidance and training is almost non-existent. National curriculum is too rigid and centralized. Too many subjects taught in schools, even small innovations can not be done. The teacher haunted by a national curriculum and syllabus for dilakssiswaan on time. Although it is possible to adapt the curriculum to the local context, the time allocated is not enough even for the national curriculum itself melakssiswaan ".

Statement of Aris Pongtuluran and Arlinah Imam Rahardjo describe about education in Indonesia today, especially in the learning process. Teacher guided that what is said in the national curriculum should be considered correct, without developing and adapting to local circumstances contextually.

The new method.

Akhmad Sudrajat (2008) suggests learning approach is the starting point or point of view of teachers towards the learning process, which refers to a view of the occurrence of a process that are still very common. In it embodies, inspire, strengthen, and underlying theoretical learning methods with a particular coverage. While the student-centered (student centered) is " the process of teaching and learning based on the needs and interests of students " (Oemar Hamalik, 2004: 201). Opinions above illustrates that the learning process should mempertimbangakan the needs and desires of students to learn. O'Neill, Geraldine and Tim McMahon (2005 : 2) concurs with Oemar Hamalik (2004 : 201) that "... student - centered learning as focusing on the students ' learning and what students do to Achieve this, rather than what the teacher does ". Opinions O'Neill describes the activities of student-centered learning. Students learn from what does not from what the teachers. Centered learning approach to student or a student learning system that shows the dominance of students during learning activities and teachers as facilitators, mentors and leaders. Student-centered learning can be concluded that in pelakssiswaan centered learning activities to students..

JJ Rousseau (Masitoh, et al, 2005: 36) states that " we do not emphasize the amount of knowledge that is expected to be held by a student, but should focus on what can be learned and what students want to know the students according to their interests ". Opinions JJ Rousseau explained that student centered learning is a process that all activities focused on students and student interests so that students who dominate the learning process. Yeni Rachmawati and Euis Kurniawati (2010: 43) argued that student-centered learning " involves students... students in the learning process from beginning to end in the form of active learning (active learning), which is putting students at the center of learning ". Yeni Rachmawati and Euis Kurniawati describes that in the learning process that uses SCA (student centered approach) is the determinant of the sustainability initiative of the student learning process. Students explore the environment and not monopolized teacher.

Student centered learning is a learning puts the learner at the center of the learning process. Models of student-centered learning (student centered learning) is different from teacher-centered learning (instructor centered learning) that emphasizes the transfer of knowledge from teacher to pupil relative passivity. The above explanation explains the form of learning that is reflected from start to finish which is a wrap or frame of the implementation of an approach, methods, and learning techniques are used.

Student centered approach (SCA) is an approach that is based on the view that teaching is considered as the process of arranging the environment in the hope that students learn. The concept of student centered approach is important is student learning. Teachers consciously put more attention on involvement, initiative, and social interaction of students. Learning activities that use student centered approach to appreciate the uniqueness of each individual of each student learners themselves, both in their interests, talents, opinions and ways and learning styles of each student. Learners or students prepared to be able to respect ourselves, others, the difference, to be part of a democratic society and a global perspective.

> " SCL puts students at the heart of the learning process, it is only proper recognition of this diversity that empowers students to Realise their full potential ; engaging with their teachers and embarking on the learning process in the manner that will be most beneficial to Them " (Attrad, A, et al. 2010). Opinions Attrad, A explained that in the process of using student centered learning approach, the student is the focal point of the learning process. Teachers start learning by providing the widest opportunity for students to construct knowledge through learning experience, explore, giving students the freedom to students to choose activities that suit the needs and interests of students.

The definition above is concluded that the approach is student centered approach or point of departure of a learning process. Student or students are at the center of learning so that students can learn to actively accordance with the interests and desires of the student learners. Students develop the skills students can communicate, a deep understanding of the topics, research and problem solving in the learning process. So the student centered approach can be applied in the learning process Ibtidaiyyah Madrasah.

Application of Student -centered approach.

The concept of student centered approach to learning based on student interest learners, and students as a learning center (child centered). Froebel (Doodington and Hilton, 2010: 16) asserts " only by way of extending and enriching instincts of students to involve themselves into the game active, a sympathetic adult educators can help students develop fully as living beings who act, feel,

and think". Opinions above explains that in the learning process through student centered approach (student-centered), teacher or educator should be sympathetic to the idea of the students and assist learners in expanding and enriching instincts of learners, so that learners can actively involve themselves into the game thus learners will be fully developed as a living being that can act, think, and feel.

Froebel further explained that in the early applied the concept of learner- centered learning (student centered learning), learners are expected to be active participants in the learning process, independent, responsible and initiative to recognize the learning needs of the students themselves, to find sources of information to be address the needs of learners, build and present knowledge of the learners based on the needs and resources discovered by learners. Learners can choose for themselves what will be learned in the learning process. The process of learning in the Madrasah ibtidaiyyah not be separated using various methods and learning strategies. Vienna Sanjaya (2010: 61) present one " strategy is a series of activities designed to achieve a specific activity, while the method is a method used to implement the strategy ". Vienna is a strategy that Sanjaya describes the design of the activities prepared by the teacher to achieve the goal of learning by using teaching methods which involve other elements that learners preferred. Learning the learner-centered approach to learning is one that seeks to develop all aspects of the development of learners optimally. Felder, Richard argues that " the implementation of student centered learning approach, students are required become active learners, where students solve problems, answer questions, formulate questions of their own, discuss, explain, debate or brainstorming, cooperative learning, inductive teaching ". Cooperative learning dilakssiswaan students or learners in groups, students work together to solve problems and projects under conditions that assure positive interdependence and individual accountability. Teaching inductive learning is done by providing challenges (questions or problems) on students and learning materials or themes in the context of addressing the challenges. Inductive method of inquiry -based learning cases include instruction, problem-based, project-based, discovery learning, and just-in -time teaching.

Translation of the above concluded that the student centered approach is one implementation of an active learning approach. Learning the learner-centered emphasis on individualization aspect of the learning experience of students, giving learners the opportunity to make a decision or choose activities that match their interests learners. Student centered approach can also be based on interest-based learning, where the interest is a desire spotan learners.

Endang Nugraheni (2007) states that " in a student-centered learning teacher acts as a facilitator who helps students access to all learning resources available ". In addition, the role of teachers in student-centered learning is the problem you are looking for interested students as a guide to facilitate students in learning that focuses on the things that dianggapkan by students significant and relevant to the contemporary view of the world.

Endang Nugraheni explained that the process of using student centered learning approach emphasizes the students to build and develop the student 's own knowledge, and participate actively engaged in learning, and are fully responsible for the learning process. Teachers only act as a facilitator in the learning resource. Student-centered learning can develop the potential of students through the issues to be studied in great demand by students in the learning process. Student-centered learning process provides the opportunity for students to express their thoughts and ideas of students about the issue or theme discussed. Endang Nugraheni further explained that the implementation of student centered learning approach

the teacher in charge of directing and encouraging independence and capacity of students to thrive in life. Student-centered learning should consider a few things that foster students 'perceptions through experience, believe that the problems that students expressed a serious problem to develop students' knowledge, encourage students to always express themselves, and reveals the problems of students who want to learn. Good learning is capable of learning activities to develop students' potential.

Teachers can conduct frequent and varied interactions with students, teachers communicate using emotions in a warm and loving so that students feel valued. Teachers provide opportunities for students in each learning activity to examine and perform activities independently. Opportunities presented by the teacher can give the student direct experience. It can encourage cognitive development of students. Implement student centered learning approach to encourage students to want to try learning activities. Teachers show interest in what is done and said to the students, as well as admired, so students will get their world.

The teacher in charge of helping to develop the potential of students, because the students as active learners. students were able to learn by active and build his own knowledge. Knowledge of the students come from personal interaction with ideas, objects and experiences with the physical, as well as the application of logical thinking to all students experience. Vygotsky's view of learning and teaching is about teachers and students can work and play together to build knowledge and understanding.

> " SCL approach means teachers need to help students to set goals that can be achieved, encouraging students to be able to assess the results of their own learning, helping them to work together in groups, and make sure that they know how to utilize all the available learning resources " (Endang Nugraheni, 2007).

Endang Nugraheni explained that the implementation of the SCL approach teachers help students to de f ne the role of learning objectives to be achieved, to motivate students to assess their own learning, helping students work in teams and ensure students to utilize the learning resources available to support student learning.

Translation of the above it can be concluded that the concept of student-centered learning is the teacher and students work together to discuss problems determine the topic that interests the student, other than that the teachers are also involved in activities that have been direncsiswaan by teachers and students. This is consistent with the characteristics of student-centered learning and teacher. The idea was initiated by student interest and learning activities. Teachers provide opportunities for students to select materials, decide on what will be done in accordance with the ideas and activities that have been direncsiswaan. Students express active ingredients with the senses, f nd cause and effect through direct experience with the object, transform and combine the ingredients during the learning process. At the end of the learning students also evaluate its own activities. In addition, students use the muscles because of the roughness of the learning process of students as active learners in activities. Implement student centered learning approach using active learning strategy, which makes the student as the center of all learning activities. Student-centered learning (student center) seeks to facilitate all aspects of student growth optimally with an emphasis on those aspects of learning that is oriented towards the development and individualization of learning experiences through activities direncsiswaan by students.

Learning that uses SCA is not determined by the tastes of teachers, but is determined by the student or students. Students or students learning of the topics to be learned and how to learn, not only teachers but also students who determines. Students have the opportunity to learn in accordance with his own style. Changing role of the teacher becomes a facilitator of learning resources, meaning more teachers act as adults who help to play while learning. Success criteria teaching process not measured the extent to which students have mastered the subject matter, but measured from the extent to which the student has made the process of learning and can improve aspects of student growth. Teachers no longer serves as a source of learning but serve as mentors and facilitators so that students are willing and able to learn. In the garden of learning Ksiswa - Ksiswa that use student centered learning model approach applied through the area. Diana Mutiah (2010: 129) suggests " learning model area there are three main pillars in melakssiswaan student centered learning approach, namely constructivism, in accordance with the development methodology, and progressive education ".

Diana Mutiah lays out the principles of constructivism is based on the research of Piaget that students actively interpret the experience already possessed by students into the physical and social world and to build new knowledge, intelligence and morality of the students themselves. Students construct their own knowledge of the ideas held by students. The learning process occurs when students are trying to understand the environment around the student. Constructivism principle this gives the widest possible opportunity for students to learn by the students themselves and the desire to fnd the answers you need. Each student will develop through stages that are common, but the student is an individual who is unique.

Katz (Bredekamp, 2000) stated " In a developmental approach to curriculum design... (decisions) about what should be learned and how it would be best learned depend on what we know of the learners developmental status and our understanding of the relationship between early experience and subsequent development ". Katz statement implies that the design of the curriculum or activities that should be learned by students, is highly dependent on the teacher's knowledge of the development of learners as well as an understanding of the linkage between early experience with the development of students. Research on human development shows that students experiencing growth and change are universal in the physical aspects of the development of motor, social, emotional, cognitive, and language (linguistic).

Each student has a pattern and timing of the development of unique, such as personality, types of learning, and a good family background and methodology of adult interactions with students must be in accordance with each individual student. Learning should be based on student ability and the emerging challenges the student interest and understanding. Student centered approach is nuanced approach to development. The learning process aims to facilitate all aspects of student growth by taking into account individual differences. Diana Mutiah further explain the main principles of learning that is student-centered approach is the third progressive education. Progressive education emphasizes that education is a lifelong process. Implementation of progressive education based on the principles of student growth and constructivism. Student-centered education can support the learning environment to enhance the skills and interests of students. Learning can occur between peers and small groups.

Application of student centered approach to learning must meet the criteria to support the learning process.

Characteristics of Student-centered approach Characteristics of learning with a learner-centered approach is a diverse learning activities using a

variety of strategies and methods interchangeably, so that during the learning process of students or students actively participating either individually or in groups. This learning method is also commonly known as a CBSA (active student learning). Using a student centered learning approach has the characteristics in its application.

Characteristics of student centered approach that is “student or students are at the center of the learning process, the teacher guides the student or students, and teachers to teach for deep understanding emphasis“ (Jacobsen, et al., 2009: 228). Jacobsen explained that the student or students are at the center of the learning process while the teacher encourages students to take responsibility for learning. Students determine their own topics or themes that students will learn. Students must take responsibility for the learning process. Students gain knowledge and experience of interaction with the media or learning resources in the learning process of students lakssiswaan. Students are expected to obtain direct feedback or learning experience of the learning process.

Jacobsen further explain the characteristics of the second student centered approach is the teacher guides the student or students in the learning process. The teacher makes students responsible for the learning process of students and teachers rencsiswaan only served as facilitators. Teachers can be a source of student learning if the student is completely confused. Characteristics of the third student centered approach to teaching teachers emphasize deep understanding. Involves a deep understanding of many processes that require thought (thought demanding processes) as explain and resolve the problem solving. Teachers provide opportunities for students to practice skills for trying to learn new content. At the early age of students acquiring the skills to think through some of the thinking process as proposed by Piaget. These include schema, assimilation, accommodation, organization and Equilibibration.

> “In line with Jacobsen, Masitoh, et al (2009 : 8.6) suggests that the characteristics of student-centered learning includes several things, the initiative grew out of student activity, students choose the ingredients and decide what will be done, students express materials in active with his senses, students discover causal through direct experience with the object, the students transform and combine the ingredients, and students use the muscle ballpark."

Masitoh, et al describes that in a student-centered learning all activities starting from the student and the student liking. The teacher gives the student the freedom to engage in activities that the student wants to do. Students prepare tools and materials appropriate to the activities that interest students in the learning process, although by manipulating the ingredients and prepare the appropriate tools and materials selected student activities. It can stimulate students to think about what the students want. Students use his senses to experiment with objects that are around the students, so that students can find the concept of cause and effect through the direct experience of the student. One activity that interests the student is able to transform and combine the ingredients, so that all aspects of a student’s ability to be optimally developed. In the process of learning at the school, students actively learn using the whole body, especially physical strength, so that students can explore as they wish.

Opinions can be concluded that in the process of using student centered learning approach, students are learning the subject. Students are not regarded as an object of study that can be regulated and limited by the willingness of teachers, but students as subjects in the study placed according to their interests, talents, and abilities of the students. Students are active learners who uses his whole body to learn. Students are given the freedom to choose and decide what will be done and what materials will be used. Students are free to express active ingredients with the senses through experiments with the object, so that students will gain useful experience to bolster his knowledge.

The role of learners in the learning process should be preferred because students are the subject of education. Therefore, the material what should be learned and how to learn it is not solely determined by the desire of teachers, but pay attention to every student differences.

The process of using a student centered learning approach can take place anywhere. Teaching process is the process of arranging the environment, students are not considered as individuals just as passive recipients of information, but is seen as an active individual who has the potential to grow. Students are individuals who have the potential and ability. Student-centered learning process can take place anywhere, in accordance with the characteristics of the student-oriented learning, the learning process can take place anywhere. Class is not the only place student learning. Students can take advantage of a variety of learning where appropriate and incorporate a variety of learning resources in accordance with the nature of the material kebutuhuhan and the students will learn, for example, students will learn about all kinds of fowers, the garden is a place of student learning.

Learning-oriented achievement goals rather than on outcomes. The purpose of learning is not mastery of subject matter, but the process to change the behavior of students in accordance with the objectives to be achieved. Aspects of the development of students is the primary goal at Madrasah Ibtidaiyyah. Therefore, mastery of the subject matter is not the end of the teaching process, but only as a destination for the formation of behavior and develop the capability of students as a teacher in the learning process of teaching to emphasize the students' understanding. Methods and strategies used by teachers in the process of student-centered learning is not only just a lecture, but use a variety of learning methods.

CONCLUSION

In this peper raises some kesipulan frst, based on siwa education is important, especially if it can be done at the level of madrasah Ibtidaiyyah, second, the existing curriculum at the school with educational dualism between depag and diknas make education policy direction does not deliver. And third, it seeks to establish gagasn center study started from the bottom level of the madrasa level ibtidaiyyah.

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IMPLANTING DISCIPLINE PROGRAM FOR CHILDREN AGES 4-6 YEARS BASED ON MULTIPLE INTELLIGENCE

Written by:
Murfiah Dewi Wulandari, S.Psi.,M.Psi.
PGSD FKIP
Universitas Muhamadiyah Surakarta
Murfiah.Wulandari@ums.ac.id

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ABSTRACT

Within the individual, a range of abilities or knowledge are evident and can help a person in enriching their lives and effectively respond to the environment. These are called multiple intelligences. The proposed discipline program can develop interpersonal intelligence, intrapersonal intelligence, kinesthetic intelligence and children aged 4-6 years. Children recognize the concept of right and wrong, self-control and be responsible to develop their intrapersonal intelligence. Good adjustment with the environment develops interpersonal intelligence. While the methods used in this program is a play which is believed to be able to develop children's kinesthetic intelligence.

This study aims to create a discipline program for children aged 4-6 years. The program is tested on students in kindergarten Anak Sholeh Colomadu, Karanganyar aged 4-6 years. The assessment of the program's discipline methods are check list method combined with the observation.

From the performance results of disciple imbeding program in children aged 4-6 years it can be seen that most of the children can follow a given program, besides the teachers had no difficulty in presenting the material because the material is easy to understand and implemented. Moreover, the tools are easly obtained. Therefore this program is suitable to discipline in children aged 4-6years.

Keywords: *program, discipline, kindergarten, multiple intelligences*

A. INTRODUCTION

Howard Gardner defines intelligence as a person having the ability to solve problems or ability to produce something valuable for the social and cultural environment. Within the individual, there are various abilities or knowledge that can help a person to enrich their lives and effectively respond to the environment. This is called multiple intelligences. According to Gardner, there are eight intelligences, namely linguistic intelligence, musical, visual spatial intelligence, interpersonal intelligence, intrapersonal intelligence, logical mathematical intelligence, kinesthetic intelligence, and natural intelligence. This discipline program can develop interpersonal intelligence, intrapersonal intelligence, kinesthetic intelligence and children aged 4-6 years. Children recognize the concept of right and wrong, self-control and be responsible to develop their intrapersonal intelligence. Good adjustment with the environment develops interpersonal intelligence. While the methods used in this program is a play which is believed to be able to develop children's kinesthetic intelligence.

Many people equate discipline with punishment. The penalties they provide usually in form of physical punishment (Pearce, 2000). According to Papalia (2003) corporal punishment, for example: hitting on the buttocks, slapping, pinching, hitting, kicking, twisted, stepped on. Punishment is sometimes necessary to correct behavior, rectifying mistakes, and establish noble character. However, in reality, parents or teachers in implementing the methods of punishment and less precise way so that there child is not getting better but worse as the child becomes more aggressive, the child has a physical or psychological suffering prolonged. Thus, for disciplining children parents or teachers as much as possible to avoid using a method of punishment.

To align the concept of discipline, according to Ramirez (2006) concept of positive discipline is learning, parents or teachers here use wisdom to teach values that shows how a child can determine his own choice well. In the study there is a process that runs over time and require repetition and maturation of consciousness.

To teach discipline in children, according to Papalia (2003) that teaching children about character, train how to control themselves, and teach about moral behavior. Members can discipline a child a sense of security by telling what should and should not do. Discipline helps children avoid feelings of guilt and shame as a result of wrong behavior. Discipline also increases the personal and social adjustment (Pearce, 2000).

According Gunarsa (2004) teaches the value of discipline early is intended to be more rooted in the child so that it will become a habit. This period is the right time to lay the foundations of the development of physical abilities, language, social, emotional, self-concept, self-discipline, self-reliance, artistic, moral and religious values (Padmonodewo, 2003).

From the above it can be concluded that the approach used discipline parents or teachers are still many who experience a shortage. The approach used can be effective only in the short term. Furthermore the approach does not consider the psychological and physical impact of the child in the long run. For that, it needs to look for a disciplined approach that sees discipline as a teaching and looking for a useful and practical tool to teach children proper behavior (Allen & Cheryl, 2005).

The purpose of this research is to develop a teaching module and the appropriate discipline in accordance with the characteristics of children aged 4-6 years and be easily understood and used by teachers.

The benefts of this research is to enrich the teaching programs in schools and help teach discipline in children aged 4-6 years with a concrete guide. In addition it is expected that children will gain discipline matter in accordance with its development stage.

B. RESEARCH METHODS

1. Population and Sample

The population in this study were male and female children A kindergarten and kindergarten students in Kindergarten Children Sholeh Colomadu Karanganyar aged 4-6 years. In this study does not use samples. Because in this study using population studies, using the whole population there is a kindergarten and kindergarten students B and has the same characteristics that children aged 4-6 years.

2. Data Collection Techniques

   a. Observation

      Observations conducted to gather information about the needs of children. Observations on the behavior of children will be able to assist in preparing lesson plans for the children

individually and in groups. In this study, observation was done by using anecdotal records.

b. Interview

Interviews were conducted in three parents of children aged 4-6 years who attended kindergarten. Interviews were conducted by using a guide that contains any material that is asked in all three subjects.

3. Happy Fun Program Disciple

The program consisted of 12 events with 12 different themes. This educational activity consists of activities that each activity includes a special-purpose, method, time, tools, and implementation procedures.

The following programming discipline:

a. Special purpose

The objective for each activity in the teaching activities related to four aspects of the concept of self-responsibility, self-control, and self-adjustment.

b. Method

The method used in teaching activities include playing, listening to stories, physical activity and so on.

c. Time

For the implementation of discipline programs conducted 12 meetings with each of the different meetings. The time spent on each activity is 20-30 minutes with a time of 20 minutes sufficient consideration for children aged 4-6 years (in Patnani Tillman & Hsu, 2005).

d. Tools

In practice, the teaching activities will use tools such as story books, cleaning tools (broom, duster, cloth, etc.), clay, old newspapers, cardboard boxes, and colored pencils.

The draft program of activities Discipline in Children Aged 4-6 Years

Material	Theme	Destination	Method
The concept of self-	Good and bad	Help children better understand the behavior and bad behavior, and the consequences of each behavior is done	story
	eating together	Train children to do good deeds before eating	play
	I could...	Introduce the child feeling satisfied and dissatisfied	play
Responsibility	Red hooded girl	Showed the child to do something as good as possible	story
	My teeth healthy	Coaching develops the attitude care of themselves	play

	Clean-yuk!	Train children to maintain hygiene	play
Self-control	Happy, sad, angry	Introduce the children a wide range of emotional expression	Playing and singing
	statue of music	Train children to release tension	play
	Throw and catch a ball	Train the child to control the release of tension	play
Adjustment	Traffc lights	Introduce children to the regulations	play
	Queued yuk!	Train children to patiently wait queue	play
	hide and seek	Train children to understand and obey the rules	play

4. Analysis techniques

To determine whether the activity discipline has reached the specifed targets, it needs an evaluation. Evaluate the success of the implementation of this discipline using performance assessment. Performance assessment is an assessment that measures students' skills and understanding directly by looking at the performance of students in real situations (Eggen & Kauchack, in Patnani, 2005). Evaluate the success of this discipline module is done by using a checklist method combined with systematic observations made by the teacher on each activity undertaken.

C. RESULTS AND DISCUSSION

Analysis of the implementation of the teaching of this module to determine the extent to which teacherscanpresentmaterialfromthedisciplineoftheprogrammodulesandtheextenttowhichchildren canfollowagivendisciplineprogram.Isdisciplineprogrammodulesisfeasibleornottobeusedorapplied. From interviews it can be concluded:

1. Teachers do not have trouble when delivering materials from the program module discipline.
2. According to the teaching material of program modules in accordance with the child's discipline kindergarten, children were delighted with the given game.

Analysis of children's performance when following may be addressed as follows:

1. The material I (theme implemented: Good and bad). Children pay attention when the teacher told me 79%, 67% answered the question; child pay attention when teachers explain 85%.
2. The material I (theme implemented: Eating together). Children who observe teachers 91%, 88% wash hands joined; seated at mealtime 83%; come to pray before eating 97%; come to pray after eating 91%; come clean dirt/food waste 86%.
3. The material I (theme implemented: I can...). Children who observe teachers 97%, 88% answered the question; follow show 100%.

4. Material II (which carried the theme: red hooded girl). Children pay attention when the teacher told me 78%, 69% answered the question; child pay attention when teachers explain 84%.
5. Material II (which carried the theme: My teeth are healthy). Children who observe teachers 97%, 91% answered the question; follow brushing teeth show 94%.
6. Material II (which carried the theme: Clean-yuk...). Children who observe teachers 91%; child do what is instructed teachers 94%; child perform duties in accordance with their respective duties to 80%.
7. Material III (a theme carried out: Happy, sad, angry). Children pay attention when the teacher shows the picture 100%; child pay attention when teachers explain 75%, 66% answered the question; join demonstrate facial expression 90%, 81% sing.
8. Material III (a theme carried out: Statue of music). Children who observe teachers 84%, following the demonstration of 87%.
9. Material III (a theme carried out: Throw and catch a ball). Children who observe teachers 93%; joined to make a ball of newsprint 90%; involved throwing the ball 81%, 84% come to catch the ball.
10. Material IV (which carried the theme: The traffic light). Children who observe teachers 100%; follow show 94%; during activities comply with regulations 91%.
11. Material IV (which carried the theme: Queued yuk...). Children who observe teachers 97%, 85% answered the question; follow show 88%; during activities comply with regulations 91%.
12. Material IV (which carried the theme: Hide and seek). Children who observe teachers 100%; follow show 100%, at the time of the activities comply with the rules 100%.

From the results of performance after a given child discipline program shows the average child can follow the given activity. Activities in the discipline program is packaged in the form of fun activities such as playing and singing. This is in accordance with that childhood play days, where educational activities in kindergarten are given through play while learning and learn while playing so that children can enjoy the fun and educational without coercion (Soetrisno, 2003).

From the observations and interviews with teachers, they have no difficulty in delivering discipline program materials to their students. Activity in the discipline matter is very simple, straightforward in its delivery, as well as the tools and materials used are easy to obtain.

This program runs for 12 sessions. Even so, it does not mean after 12 meetings, the program is considered complete. Because the program is to instill discipline in children, then this activity can be administered repeatedly intended to become a habit and can be rooted in children (Gunarsa, 2004).

This program effectiveness in children have not been tested, if after getting this program to increase child discipline. According to Hurlock (1999) discipline should not be evaluated based on the results of immediate and should not be evaluated by looking at the child's moral behavior. Although a child may be forced by the approved pattern of behavior of adults and children made perfect, but the long-term effects on a child's personality needs to be taken into account.

D. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions
   a. The results of program performance discipline in children aged 4-6 years showed most children can follow a given program, then the program should be permitted to discipline in children aged 4-6 years.

b. Observations and interviews with teachers, in presenting the material in this module is not having trouble because the material is easily understood and implemented as well as the tools used ntu ba easily obtained.

c. The discipline program are twelve twelve activities with different themes. Of the twelve given activity, activity with the theme of hide and seek most favored students. Next activities with the theme of traf f c lights placed second. Furthermore, the third order of activities with the theme I could. The fourth sequence of activities with the theme of healthy teeth. Fifth themed events queued yuk. Sixth joint activities with the theme of eating. Seventh sequence of activities with the theme clean-yuk. Eighth, throwing themed activities and catching the ball. Ninth statue of activities with the theme music. Tenth of activities with the theme of happy, sad, angry. eleventh sequence of activities with the theme of the red hooded girl. And the sequence of activities with the theme of twelve good and bad.

2. Recommendations

For the development of this program, then there are a couple of suggestions submitted to:

a. HeadMaster

The program can be included in the conditioning program to improve child good manners such as manners when eating, brushing your teeth. In addition the program can be put on other activities such as sports, for example, hide and seek activity, throwing and catching a ball.

b. Teachear

Teachers can use this program as a distraction when you're teaching, because the program is f exible.

c. Researcher

To future researchers can test the effectiveness of this program, by providing pre-test before implementing the program and then provide post-test after the subject received the program.

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IMPLEMENTING MULTIPLE INTELLEGENCES THEORY IN THE CLASSROOM

Written by:
Nurul Hidayati Rofiah
Ahmad Dahlan University
nurulhidayatirofiah@ymail.com

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ABSTRACT

Multiple Intellegences theory has stimulated teachers to find more ways to help all of student in the class. It is very important that the teacher take individual differences among the student very seriously. Everyone is born possessing the eight intelligences. Nevertheless, all students will come into the classroom with different sets of developed intelligences. This means that each child will have his own unique set of intellectual strengths and weaknesses. These sets determine how easy (or difficult) it is for a student to learn information when it is presented in a particular manner. This is commonly referred to as a learning style. Many learning styles can be found within one classroom. Therefore, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom. Nevertheless the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences.

Keyword: *Multiple intelegences, implementation, classroom*

INTRODUCTION

Traditional views of intelligence base human intellect on the results of paper and pencil tests and statistical analysis. If a test is reasonably challenging, some students score better and some worse. Those who perform better than most are said to have a higher amount of something called "intellect," as expressed in a number or "quotient" – hence the term Intelligence Quotient, or "IQ." Traditional views assume that intellect is an intrinsic quality, like height or hair color, something we can measure and that we will carry with us for the rest of our lives. Classroom teachers with a traditional view of intelligence believe some students perform tasks better than others due to different intellectual capacities that are fixed and unchangeable.

The substance of intelligence will probably always be debated. On a practical level, IQ is defined by the tests employed to measure it. Researchers suggest that intelligence has many components, resulting in one IQ that measures a singular intellect. In the early 1980′s, Dr. Howard Gardner, professor of Education at Harvard University, challenged the view that intelligence is a singular property. In an effort to understand the nature of intelligence, he proposed a theory that based intelligence not on the results of specific tests, but on the individual's ability to solve problems. In his book Frames of Mind, Gardner defines intelligence as "a psychobiological potential to solve problems or to fashion products that are valued in at least one cultural context."

Gardner's theory classifies human intellectual competencies in a totally new way, with more specific criteria than the traditional choice between "verbal" or "mathematical." He proposes that intelligence cannot be described as a fixed quantity, but rather can be trained and increased. Gardner further argues that each specific intelligence is independent from the others and can improve independently with use. Gardner's system of classification has already had a significant impact on how we think about the learning process, teaching, testing, and even the nature of thought itself.

Implementing Multiple Intellegences in the Classroom

Howard Gardner claims that all human beings have multiple intelligences. These multiple intelligences can be nurtured and strengthened, or ignored and weakened. He believes each individual has eight intelligences. Theory of multiple intelligences is considered an innovation in learning because it helps students develop all nine intelligences that, on the other hand, represent ways people understand the world around them, solve problems and learn. They are: verbal-linguistic, logical-mathematical, visual-spatial, bodily-kinaesthetic, musical/rhythmic, interpersonal, intrapersonal, and naturalist.

Although the theory was not originally designed for use in a classroom application, it has been widely embraced by educators and enjoyed numerous adaptations in a variety of educational settings Teachers have always known that students had different strengths and weaknesses in the classroom. Gardner's research was able to articulate that and provide direction as to how to improve a student's ability in any given intelligence. Teachers were encouraged to begin to think of lesson planning in terms of meeting the needs of a variety of the intelligences.

Everyone is born possessing the eight intelligences. Nevertheless, all students will come into the classroom with different sets of developed intelligences. This means that each child will have his own unique set of intellectual strengths and weaknesses. These sets determine how easy (or difficult) it is for a student to learn information when it is presented in a particular manner. This is commonly referred to as a learning style. Many learning styles can be found within one classroom. Therefore, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom. Nevertheless the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences. For example, the teacher can suggest that an especially musically intelligent child learn about the revolutionary war by making up a song about what happened.

To implement Gardner's theory in an educational setting, we can organize classroominto eight learning centers, each dedicated to one of the eight intelligences. The students spend approximately two-thirds of each school day moving through the centers – 15 to 20 minutes at each center. Curriculum is thematic, and the centers provide eight different ways for the students to learn the subject matter.

All students learn each day's lesson in eight ways. They build models, dance, make collaborative decisions, create songs, solve deductive reasoning problems, read, write, and illustrate all in one school day. Some more specific examples of activities at each center follow:

1. In the **Personal Work Center** (Intrapersonal Intelligence), students explore the present area of study through research, reflection, or individual projects.
2. In the **Working Together Center** (Interpersonal Intelligence), they develop cooperative learning skills as they solve problems, answer questions, create learning games, brainstorm ideas and discuss that day's topic collaboratively.

3. In the **Music Center** (Musical Intelligence), students compose and sing songs about the subject matter, make their own instruments, and learn in rhythmical ways.
4. In the **Art Center** (Spatial Intelligence), they explore a subject area using diverse art media, manipulables, puzzles, charts, and pictures.
5. In the **Building Center** (Kinesthetic Intelligence), they build models, dramatize events, and dance, all in ways that relate to the content of that day's subject matter.
6. In the **Reading Center** (Verbal/Linguistic Intelligence), students read, write, and learn in many traditional modes. They analyze and organize information in written form.
7. In the **Math & ScienceCenter** (Logical/Mathematical Intelligence), they work with math games, manipulatives, mathematical concepts, science experiments, deductive reasoning, and problem solving.
8. In the **Natural Center** (Naturalist Intellegences), ability to recognize and categorize plants, animals and other objects in nature.

When asked how educators should implement the theory of multiple intelligences, Gardner says, that it is very important that a teacher take individual differences among student very seriously. The bottom line is a deep interest in children and how their minds are different from one another, and in helping them use their minds well.

An awareness of multiple-intelligence theory has stimulated teachers to fnd more ways of helping all students in their classes. Some schools do this by adapting curriculum.Linda Campbell describes fve approaches to curriculum change:

1. **Lesson design.** Some schools focus on lesson design. This might involve team teaching ("teachers focusing on their own intelligence strengths"), using all or several of the intelligences in their lessons, or asking student opinions about the best way to teach and learn certain topics.
2. **Interdisciplinary units.** Secondary schools often include interdisciplinary units.
3. **Student projects.** Students can learn to "initiate and manage complex projects" when they are creating student projects.
4. **Assessments.** Assessments are devised which allow students to show what they have learned. Sometimes this takes the form of allowing each student to devise the way he or she will be assessed, while meeting the teacher's criteria for quality.
5. **Apprenticeships.** Apprenticeships can allow students to "gain mastery of a valued skill gradually, with effort and discipline over time." Gardner feels that apprenticeships "should take up about one-third of a student's schooling experience."

With an understanding of Gardner's theory of multiple intelligences, teachers, school administrators, and parents can better understand the learners in their midst. They can allow students to safely explore and learn in many ways, and they can help students direct their own learning. Adults can help students understand and appreciate their strengths, and identify real-world activities that will stimulate more learning.

Accepting multiple intelligences theory has several implications for teachers in terms of classroom instruction. The theory states that all eight intelligences are needed to productively function in society. Teachers, therefore, should think of all intelligences as equally important. This is in great contrast to traditional education systems which typically place a strong emphasis on the development and use of verbal and mathematical intelligences. Thus, the Theory of Multiple Intelligences implies that educators should recognize and teach to a broader range of talents and skills.

Another implication is that teachers should structure the presentation of material in a style which engages most or all of the intelligences. For example, when teaching about the revolutionary war, a teacher can show students battle maps, play revolutionary war songs, organize a role play of the signing of the Declaration of Independence, and have the students read a novel about life during that period. This kind of presentation not only excites students about learning, but it also allows a teacher to reinforce the same material in a variety of ways. By activating a wide assortment of intelligences, teaching in this manner can facilitate a deeper understanding of the subject material. With understanding of multiple intellegences, teacher can allow student to savely explore and learn in many ways and they can help student direct their own learning. Teacher can help students understand and appreciate their strength and identify the real activities.

The example of lesson plan using multiple intelligences perspective.

This example lesson plan for elementary school grade 1.

Five Senses (Body Parts)

Subject Area: Science

Concept: Students can name and describe various body parts

Materials: Body library books, poster paper, homework paper, dittos, felt body parts, playdoh, overhead (or opaque) projector, songs and fngerplays about bodies, paper

1. Linguistic Activities:
    a. Many books are available about our bodies in our school library. Students can look atbooks and discuss with others the different body parts and can make drawings whichthey can label.
    b. Name and describe at least ten body parts.
    c. Label a class poster.
    d. Homework Idea: Draw a picture of a body and get help labeling body parts. Present to class.
2. Logical-Mathematical Activities:
    a. Students can count and write the number of body parts on a picture of a body.
    b. They could also make up counting, addition or subtraction story problems with felt cutoutsof the different body parts on the felt board.
    c. Invent a new body part - what would it look like and be used for?
    d. Graph what we think is our most important body part (and explain why we think theyare the most important).
3. Kinesthetic Activities:
    a. Students can touch, name and describe various body parts.
    b. Students can make different body parts out of playdoh and have others guess what theymade.
    c. Play Simon Says naming various body parts.
4. Visual-Spatial Activities:
    a. Draw and label a body with various body parts.
    b. Students can create a life-size picture of a body (using an overhead or opaque projector),labeling the body parts.
    c. Students can make bodies out of playdoh and name body parts.
5. Musical Activity:

Students can sing songs or recite fnger plays about the different parts of the body.

6. Interpersonal Activities:
   a. Create a class poster as described under linguistic.
   b. All four suggested math activities apply here.
7. Intrapersonal Activities:
   Student can do an individual project by:
   a. drawing body parts and dictating what they are.
   b. completing a paper entitled "If I was a ___ [choose body part] then I would ___ [choose action]." drawing and dictating why various body parts are important
8. Assessment:
   a. Draw and label a body with various body parts. (V/S)
   b. Lead class in Simon Says. (K)
   c. Name and describe at least ten body parts. (Ling)

CONCLUSION

Howard Gardner's Theory of Multiple Intelligences honors and promotes the development of all seven avenues of intelligence in young children. This approach provides a framework to identify how children learn; to build on their strongest assets; to help them become more intelligent by exposing them to a variety of ways of learning; to better individualize for their interests and needs; and to use teaching strategies that make learning more eff cient, successful, and enjoyable for all children. We can foster meaningful learning experiences by using multiple teaching tools and strategies and by building positive, supportive relationships with children. Through environments that offer a variety of stimulating, hands-on materials that children individually select, and by creating learning centers that provide natural opportunities to move, be active, and fully engaged in either solo or small group experiences, we better serve and meet the needs of more children. Theory of Multiple Intelligences provides a theoretical foundation for recognizing the different abilities and talents of students. This theory acknowledges that while all students may not be verbally or mathematically gifted, children may have an expertise in other areas, such as music, spatial relations, or interpersonal knowledge. Approaching and assessing learning in this manner allows a wider range of students to successfully participate in classroom learning.

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THE APPLICATION OF MULTIPLE INTELLIGENCES-BASED TEACHING IN *SD* (ELEMENTERY SCHOOL) IMMERSION PONOROGO

Written by:
Ririen Wardiani
Lecturer at STKIP PGRI PONOROGO
ririen_wardiani@yahoo.com

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ABSTRACT

The paradigm of Multiple Intelligences (MI) approach can be applied in instructional practice in the classroom. This MI approach is found in *SD* (*Sekolah Dasar* or Elementary School) Immersion. Planning learning activities initiated through the execution of the MIR (Multiple Intelligences Research) that can be used for mapping the class and can be used as the basis for the selection of various strategies in making lesson plan. The Application MI approach also presents the practice of team teaching, inclusion school and strategies for outbound and feldtrip as thematic learning implementation. MI-based assessment is conducted in ipsative authentic assessment. Ipsative assessment is an assessment that emphasize on the development of the students themselves, do not aply the ranking.

Keywords: *Multiple Intelligences, MIR, lesson plan, ipsative authentic assessment*

I. INTRODUCTION

Education is a door to enter the gates of the progress of the quality of a nation's human resources. In the Act No. 20 of 2003 on National Education System, it is stated that education is a conscious and deliberate effort to create an atmosphere of learning and the learning process so that learners are actively developing their potential to have the spiritual strength of religious, self-control, personality, intelligence, noble character, as well as the necessary skills for themselves, society, nation and state.

The intelligence of learners is one of the aspects that should be fostered through education. This aspect is as important as other aspects that must be developed. One reason is because the nation's future is in the hands of smart kids. This is in line with mandated by the founders of the Republic as well as in Preamble of Constitution 1945 that has been formulated that one purpose of establishing a state and a nation is to educate the nation.

As stated by Semiawan (2008:10) every child is born with different abilities, talents, and interests. To provide an opportunity to a child to get acquisition to develop optimally according to their ability, aptitude, interest, respectively, it must be considered profciency level differences, such as differences in characteristics that become factors that influence children's learning achievement. This should have an impact on the diversity of services that facilitate the child's learning. In fact, learning in school is stuck on the pragmatic goal of success in exams.

This condition is also shown by the results of the PISA study internationally through the Programme for International Student Assessment, which measures proficiency of children aged 15 years in the fields of mathematics, science, and reading. Indonesia's position has almost become the least. Indonesia ranks 64 out of 65 countries to participate in the test (Reuters, December 5, 2013). In details, the average math score of 375 Indonesian children, the average reading score of 396, and an average score of 382 for science. In fact, the average score of the OECD are respectively 494, 496, and 501 (http://www.oecd.org/pisa/keyfindings/pisa-2012-results.htm).

To improve education, the various potentials and intelligence possessed child shall be explored, developed, and directed well by parents, schools, communities, government to create a superior generation that survive in a globalized world. This can be done by organizing the learning that respects the differences of intelligences of children.

According to Howard Gardner (2011), the learning process is closely related to the inclusion of all neural elements and the potential that exists in the natural life of the child. The process of learning is not simply a matter of learning, but rather concerns the best way for a person to receive and understand the information. Through the Multiple Intelligence-based learning, there is no gap of intelligence. The concept of Multiple Inteliegences (hereafter written MI) in his book *Frames of Mind: The Theory of Multiple Intelligences*, there are eight types of intelligence that each individual is linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. Studies on MI have been discussed by many experts, such as: Armstrong (2009), Jasmine (2012), Hoerr (2000), and Chatib (2010). Furthermore Armstrong (2009) states that the intelligence become the modalities for each student optimalize their competences and make them champions, because basically every child is intelligent. The significance is how to approach implementing the MI approach in the classrooms in application.

The following article is to report the results of the implementation of learning by using MI as a rationale in preparing lesson plans, implementation, and assessment of the success of the implementation of learning in SD Immersion (National Immersion Primary School). Methodologically, this study applies a descriptive qualitative method to answer the problem formulation: (1) how is the preparation of lesson plans that based on MI? (2) how the implementation of MI-based learning? And (3) how to evaluate the success of MI-based learning? The collection of data obtained using interview and observation techniques. Data were analyzed using qualitative descriptive analysis step inductive and deductive.

II. METHODS

The method used is descriptive method be qualitative. The reason the researcher uses descriptive qualitative method is grounded on the purpose of research to describe the application of learning-based MI. Description of the application of learning based on activities ranging from planning, implementation, and assessment is based on MI. The study was conducted in SD Immersion which is a Labschool at STKIP PGRI Ponorogo. The location of this school is located on campus. SD Immersion is founded in 2007. The number of each class of groups in the level 2, so that there is a 12 overall class grade. Overall the students numbered 253 students. Through the implementation of learning with this MI approach, Immersion elementary school awarded its first graduates could be the best graduates at Ponorogo in the school year 2012/2013. Data collection techniques using the technique in the school year 2012/2013. The technique of collecting data using interviews and observations. Interview technique is used to determine how the application of MI-based learning by the classroom teachers, subject teachers and principals. Observation is used

to collect data about how the learning process and the implementation of MI-based assessment is conducted. The technique begins with the analysis of the data records that are classified activities in planning, implementation, and assessment. Based on the classification of data is reduced and described in inductive and deductive.

III. RESULTS AND DISCUSSION

Applying MI-based approach at SD Immersion Ponorogo begins with an analysis of the results of the MIR. MIR is also used as starting point of making lesson plans. Implementation of Multiple Intelligences Research (MIR) involve 3 peoples that is: interviewer, analysts, and reporters. Interviewer are selected and trained. The the most important requirements for interviewer is communication skills. Analyst is a certified psychologist. SD Immersion hire analyst from NEXT EDU Surabaya. Reporter is the person who reports the results of the MIR to parents. Reporters are consultants and principals. Through the MIR reporting, it is expected similar paradigm among parents and teachers about learning, learning styles and strategies on approach to children.

The use of MIR for academic interest is to be used for class divisions (mapping) in accordance with the tendency of intelligence and learning styles, teachers can serve as guidelines for selecting teaching strategies in the lesson plan. It also can be used to choose a major in college, it can be used as a data history of each intelligence students in subsequent research.

MIR results can also be used by teachers and parents to determine what the right approach to improve and develop their intelligence is. The results are recorded in the psychological MIR chart with value range 0-5 with default values at 2.5. Those who have more than 2.5 means they have a tendency intelligence above average. The MIR Report (result) presents 8 intelligences possessed by students but only four prominent intelligences that gets a detailed description of learning styles, creative activities and games or suggested to be developed. This is because the 4 most prominent intelligences are what is the rationale for developing an open brain so that the information obtained can be remembered in the long-term memory. The detailed results of the MIR in matrix are shown in the following table:

Tabel 1
The result of MIR grade 1 - 6 SD Immersion Ponorogo
2013/2014

No.	Class	Tendency of Intelligences
1	Venus	Kinesthetic, Musical, Linguistic
2	1 Mars	Spatial visual, Naturalist, Logic Mathematic, Intrapersonal
3	2 Saturnus	Linguistic, Musical, Kinesthetik
4	2 Neptunus	Spatial visual, Naturalis, Logis Mathematic, Intrapersonal
5	3 Kahuripan	Linguistik, Interpersonal, Kinesthetik, Naturalist
6	3 Tarumanegara	Logic Matematic Intrapersonal, Spasial visual,

7	4 Airlangga	Linguistic, Interpersonal, Kinesthetic
8	4 Gajahmada	Logis Matematis, Intrapersonal, Spasial Visual, Naturalis
9	5 Patimura	Linguistik, Interpersonal, Kinesthetic, Logis matematic
10	5 Diponegoro	Intrapersonal, Spatial Visual, Naturalis
11	6 Soekarno	Linguitic, Interpersonal, Kinestetik, Logic matematic
12	6 Hatta	Naturalist, Intrapersonal, Musical, Kinesthetik

Planning learning prepare in detail in the form of MI-based lesson plan. Every teacher should make a lesson plan in preparation for learning. Lesson plan is the frst cycle that must be done to produce a professional learning. Cycle Management Quality Control begins with the frst step of making lesson plans by teachers. The second is the consultation stage. Lesson plan created by the teacher is to be discusses with consultant sipervisor or feld of study. The third step is observation, supervisor or consultant directly observe the process of learning in the classroom or in other environments. The fourth step is the feedback, the teacher asked the consultant or supervisor to explain the observation of the learning process. There are discussion to resolve the problems that occur in the learning process. These activities is in accordance with standard operating procedures that have been agreed. This feedback provides input stages and records that need to be considered to determine the activity continued existence. There are points which translated special moment that should be written after the lesson plan is implemented in the feld. Special moment contains impressive things in the implementation of MI-based learning.

Based on interviews and direct observation on learning implementation in SD Immersion, Ponorogo, it can be described 4 important things in the implementation phase of MI was based learning (1) learning with a varied selection strategies based on the results of the MIR, (2) learning the concept of team teaching, (3) inclusion practice of learning, (4) strategy implementation feldtrip outbound and thematic learning. To understand more, look at the following explanation.

The implementation of this MI-based teaching is a fun learning because learning has been using a strategy that has been adapted to the intelligence of existing tendencies. As an illustration, in grade 1 there are two parallel classes namely class 1 Venus and Mars. The two classes divided by the tendency of different intelligences. This is a logical consequence on the selection strategy. Venus Class has Kinesthetic, musical, and Linguistics intelligence tendency. Mars Class has intelligences tendency on visual spatial intelligence, naturalist, mathematical, and intrapersonal. Venus classes can be chosen strategy oriented storytelling, singing, and motion. These activities have signifcant impact with their brain open. This will make it easier in learning. Learning strategies that can be used by teachers in the classroom Mars is, explaining the pictures, taking them out of the room, observing nature, counting and individual work. Such activities would make it easier to digest the Mars class or lesson information.

SD Immersion Ponorogo apply the concept of team learning. Each class is guided by at least two teachers. The implementation of team teaching uses 2 team teaching models. Lower

classes namely class 1, 2, and 3 using the concept of a full team teaching, i.e: two teachers teach together for all subjects, because the teacher serves as a class teacher. They teach all subjects, i.e.: Indonesian, Science, Social Studies, Civics, Java, and Math. For certain subjects such as Religion, Sports, English and ICT are taught by subject teachers. Full implementation of team teaching in the classroom require 2 teachers collaborate in teaching either in certain subject or other subjects. Collaboration in teaching can be complementary, it could be a split in the opening and closing is done by a teacher other teachers implement instructional core.

Team teaching for high-grade teaching (in grades 4, 5, and 6) are not conducted by class teachers but by subject teacher. Implementation of team teaching in high grade is by using the concept of semi-team-teaching in each class. There are some accompanying subject teachers who accompanies the teacher for each subject. The Function accompanying teachers are working together in a teaching with class teachers. Each acconpanying subject teachers collaborate and facilitate the role of what to do in teaching.

The impact of the admissions which do not apply test, SD Immersion is in the waay toward inclusion. Noted there are 8 students in schools that have category ABK (Children with Special Needs) that weighed specifcation itself. There are 4 categories namely ABK, (a) the learning disability (LD): Fadilla and Ivory (b) Autism: Rifki and Theo, Kanza, and Arul (c) Dispraxia/ social: Fahmi (d) Dyslexia/Social: Shifa. The eight students are provided with shadow teacher or teacher assistant. Eighth shadow teachers who accompany the students are among of them: Aris Nurhuda, S.Pd., Ayu Atika Krisnasari, Pikok Subroto, S.Pd., Sri Purwaningsih, Sugiharti Anggun, Indah Nurtias, Rina Wati, S.Pd., Aulia Kanzul Hidayah. Shadow special teacher or mentor teacher has received training in accordance with the conditions of children within. Inclusion Programme implemented in SD Immersion is given when students are encouraged to learn in the classroom with a lesson or sometimes given individually. Daily learning and test children's crew made a PPI (Individualized instructional Program) that each child has its own program. Communication with parents is very intense. This is supported by the class committee i.e.: a forum for communication between the school and parents.

Teaching activities is to support the diversity of intelligence by conducting outbound activities and feldtrip as thematic learning implementation. Each semester held kegaiatan outbound and feldtrip as activities that are thematically. This activity is to incorporate some of KD in some subjects. Outbound and feldtrip performed on all classes from grade 1 to grade 6. Some themes outbound and feldtrip has been done is the organizational structure in the Village Hunting Kertosari. This activity is the application of a social studies lesson, Indonesian and Javanese. IPS have Learnig KD recognize the organizational structure, in practice there is a lesson Indonesian use the word good question, and uses the Java language with the surrounding community. Hope this feldtrip outbound activities and students are able to apply the lessons learned in school to apply, observe these things directly.

MI-based assessment in elementary Immersion students with competency assessment includes cognitive, affective, and psychomotor. Students who have not completed the study and given the theme diremidi questions or activities in accordance with the indicators that have not been completed. Provision Assessment conducted an authenticity that is ipsatif Penialain. Assessment is an assessment ipsatif emphasis on the development of the students themselves. The ability of students today compared to the previous ability. Authentic assessment knows no rank. Assessment is carried out in the form of a portfolio, performance, observation of behavior, and the resulting product.

IV. CONCLUSION

Based on the results of research on the application of Multiple Intelligences-based Teaching in Immersion Elementary School Ponorogo, the writer concludes:

1. Preparation of MI-based instructional planning begins with the execution of the MIR (Multiple Intelligences Research) that can be used for mapping pararel class and can be used as the basis for the creation of lesson plan. The cycle begins manufacture of teacher lesson plan, consultation with supervisor, classroom observation and feedback by supervisor.
2. The implementation of MI-based learning found learning with a varied selection strategies based on the results of the MIR, learning the concept of team teaching, learning practices of inclusion, and outbound strategies and thematic feldtrip learning implementation.
3. The implementation of MI-based assessment of learning is done by looking at student's competencies include cognitive, affective, and psychomotor. Students who have not completed the study and given the theme remidial questions or activities in accordance with the indicators that have not been completed. Conducted an assessment that is ipsative authentic evaluation. Assessment is an assessment ipsative emphasis on the development of the students themselves, do not know the ranking.

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OPTIMIZING MULTIPLE INTELLIGENCE THROUGH THEMATIC LEARNING IN EARLY GRADE STUDENTS OF ELEMENTARY SCHOOL

Written by:
Amaliyah Ulfah[1], M. Tolkhah Adityas[2]
[1]Lecturer of PGSD at Ahmad Dahlan University Yogyakarta
[2] Lecturer of PBI at Ahmad Dahlan University Yogyakarta
Email: [1]misshomeciul@gmail.com
[2]aditboma@gmail.com

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ABSTRACT

Elementary school education is part of the national education system that has a very important role in improving human resources. Education in primary school aims at equipping learners' knowledge, skills, attitudes of and optimizing their intelligence to optimally develop. Elementary school, especially in early grades is one of the most important periods for a child due in the golden age during which children's potentials are growing very fast. However, the implementation of the previous curricula tends to focus merely on cognitive aspects. This intends to build a high IQ generation, even though IQ does not necessarily guarantee success in the future life. Therefore, learning in primary schools should not only develop IQ, but also EQ and SQ. Thematic learning is one of the integrated learning models using the theme as a unifying means for linking multiple subjects. Thematic learning is student-centered learning whose development should pay attention to the students' characteristics, potential, and interests. The theme used should be actual, close to the children, and linked with everyday life so that it can optimize the entire intelligence and provide meaningful experiences to the students.

Keywords: *elementary students, thematic, multiple intelligence*

INTRODUCTION

Elementary school education is a part of the national education system that has an important role in improving human resources. The provision of Education in primary schools is intended to provide basic skills to the students in the form of knowledge, skills, and attitudes that will benefit themselves according to their level of development (Suharjo, 2006: 1). Besides, education in elementary school also aims to develop the whole children intelligence in order to develop optimally.

Gage and Berlier (1988) in Fajar explains intelligence is one's ability to solve problems that typically uses abstraction and general knowledge gained from informal interaction of the environment. Students' intelligence is very different; therefore, it needs to be developed. However, the current study is considered to be a shift towards the concept of meaning that is more likely to emphasize on teaching Intelligence Quotient (IQ). Masnur Muslich (2011: 17) also describes the current education is too much spare on the aspects of knowledge, and is less able to develop values,

attitudes, and character.

A student is often considered successful and intelligent if his/her IQ test is high and has good grades. In fact, a lot of examples around us that people who have a high IQ does not necessarily succeed in work, while those who have moderate IQ are even more successful in life. Seto Mulyadi (2002) also revealed that it is wrong if the only measurement of a person's ability is assessed from intelligence of logic and language; It should be judged on other aspects of intelligence.

This education system exactly needs to be fxed. Education should not only look at a person's intelligence based on IQ or grades, but using multiple intelligent as a basis to assess the ability. Basically, no student is stupid; every student has the potential and uniqueness.

The concept of multiple intelligence was frst introduced by Howard Garner in 1983. Howard Garner in 2006 in his book Multiple Intelligent explains that a person's intelligence is not enough to be measured by the ability of IQ alone to determine a person's success in life. Garner suggests 8 types of intelligence to measure a person's intelligence, they are mathematical logic, linguistic, musical, visual-spatial, kinesthetic, interpersonal, intrapersonal, and naturalist.

The optimization of multiple intelligent in elementary school can be done with creative and innovative learning like thematic. Thematic learning is a learning approach that has been mandated in the curriculum of *KTSP* and 2013, especially in the early grades of primary school students. Primary school children undergo a very important period in life because a child's brain develops very rapidly in this period. Thematic learning can optimally develop students' potential and meet their needs. Children will learn a variety of felds of study in one theme that highlights aspects of its activities not only in knowledge, but also in the ability in the other aspects, so that learning will be more meaningful.

DISCUSSION

Multiple Intelligence

Howard Garner explains 8 types of intelligence that can be used to measure a person's intelligence; they are mathematical logic, linguistic, musical, visual-spatial, kinesthetic, interpersonal, intrapersonal, and naturalist. Furthermore, Armstrong (2002) in his book adds one more intelligence called existentialist intelligence. Each intelligence has a specifcation and is explained as follows:

1. Linguistic intelligence

   Linguistic intelligence is the ability to use words effectively, either to infuence or to manipulate. In everyday life linguistic is useful for talking, listening, reading, and writing. The job that prioritizes intelligence are teachers, orators, movie stars, TV presenters, lawyers, authors, etc.

2. Logical-Mathematical Intelligence

   Logical-mathematical intelligence involves skill or profciency in numbers, logic and common sense. In everyday life this intelligence is used analyze fnancial statements, understand the calculation of the national debt, or ingestion of a research report. Jobs requiring intelligence are tax accountants, programmers, mathematicians, scientists, etc.

3. Spatial intelligence

   Spatial intelligence involves a person's ability to visualize images inside (imagination) or create it in the form of two- or three -dimensions. The examples of this intelligence in everyday life include decorating the house, garden designing, drawing or painting, art work, etc. The job that prioritizes spatial intelligence includes architects, sculptors, inventors, designers, etc.

4. Kinesthetic Intelligence

   Kinesthetic intelligence is the intelligence of the entire body and also the intelligence of the hand. In the everyday life we are in need of this intelligence on for example: opening a bottle cap, installing the lights in the house, repairing cars, sports, dancing, etc. The type of job that requires intelligence includes athletes, dancers, actors, tailors, surgeons, etc.

5. Musical Intelligence

   Musical intelligence involves the ability to sing a song, remember the melody of music, have a sense of rhythm, or just enjoy the music. In everyday life, we benefit from this intelligence in many ways, for example: when we sing, play musical instruments, enjoying music on TV/radio, etc. Jobs requiring intelligence include singer, pianist, disc jockey (DJ), sound technician, piano repairperson, etc.

6. Interpersonal Intelligence

   Interpersonal intelligence involves the ability to understand and work with others. In everyday life, whether for personal, family, and work, this intelligence is considered absolutely necessary - and is often referred to as the "more important" than the other intelligence to be successful in life. Interpersonal intelligence involves many things, for example: the ability to empathize, the ability to manipulate, the ability to "read people", the ability to make friends, and so on. Jobs relating to other people and in need of this intelligence include a public figure, leader, teacher, counselor, etc.

7. Intrapersonal Intelligence

   Intrapersonal intelligence is the intelligence possessed by a person to understand his/herself, the intelligence to know "who I am" to know "what my strengths and weaknesses are". Jobs requiring this intrapersonal intelligence include: entrepreneurs, counselors, therapists, etc.

8. Naturalist Intelligence

   Naturalist intelligence involves the ability to recognize the natural forms around us. In daily life we need the intelligence for gardening, camping, or doing ecological projects. The jobs requiring naturalist intelligence include biologists, veterinarians, etc.

9. Existentialist intelligence

   Existential intelligence is one's ability to answer the deepest problems of human existence and whereabouts. The characteristics of this intelligence are those who always questions everything about nature and the role of self-existence in nature. The jobs that require this type of intelligence are philosopher and theologian.

Table 1. Examples of people with certain intelligence and their expertise

No	Type of intellligence	Person	Expertise
1	Linguistic Intelligence	Chairil Awal	Poet
2	Logical-Mathematical Intelligence	B J Habibie	Mathematician
3	Spatial intelligence	Ki Joko Pekik Ivan Gunawan	Painter Designer
4	Kinesthetic Intelligence	Evan Dimas	Football player

5	Musical Intelligence	Erwin Gutawa	Composer
6	Interpersonal Intelligence	Ali Alatas	Minister of Foreign Affairs
7	Intrapersonal Intelligence	Mario Teguh	Motivator
8	Naturalist Intelligence	Charles Darwin	Biologist
9	Existentialist Intelligence	Sokrates, Plato	Philosopher

Based on Table 1, it can be proved that the intelligence of each individual is different, so are the children. Each child has a variety of intelligence. There are children who are fuent, smart at drawing, quickly calculate, good at sports, and so on. Therefore, teachers should implement appropriate learning in accordance with the interests and talents of the students in order to optimally develop their potentials.

Thematic Learning in Elementary Class Early

Elementary school students ranging from 6 - 12 years as Laura E. Berk (2007: 289) defnes this age as "school years". This is because since it is the beginning of children formal schooling. The period of primary school are also often referred to as the intellectual or the school harmony. During this school harmony, children are more easily trained.

The tasks of the primary school children development include: (1) mastering the physical skills necessary for games and physical activities, (2) foster healthy living, (3) learning to get along and work in groups, (4) learning social roles according to gender, (5) learning to read, write, and count to be able to participate in the community, (6) acquiring a required number of concepts to think effectively, (7) develop a conscience, morals, and values, (8) achieving personal independence (Desmita 2009: 34-35).

According to Mahmud (2010: 349 - 350) elementary school period is divided into two early classes (6 - 9 years) and advanced class period (9-12/13). Early graders of primary schools have different characteristics with older age children. They prefer to play, move, enjoy working in groups, and doing something directly. Therefore, teachers should develop learning containing elements of game, have students to move, working or studying in groups, as well as providing an opportunity to be directly involved in learning (Desmita, 2009: 35, Sudarwan Danim, 2010: 60).

In addition, early grade students of primary school need holistic comprehension, which means they can not understand something in isolation. Therefore, an integrated learning approach is needed. This is in accordance with the mandate of the 2013 curriculum, that the teaching model for early grade students of elementary school (Class I, II, III), namely is thematic learning. The term can be interpreted as an integrated learning model that uses a theme to tie some subjects to provide a meaningful experience for students (Trianto, 2011: 147).

The characteristics of thematic learning according to Ministry of Education (2006: 6) are as follow:

1. Experience and learning activities are very relevant to the developmental level and needs of primary school students.
2. Selected activities in the implementation of thematic learning start from the the students interests and needs.

3. Learning activities will be more meaningful and memorable for the students so that they can last longer.
4. Helping to develop students' thinking skills.
5. Presenting pragmatic learning activities according to students' encountered problems in the environment.
6. Developing social skills such as cooperation, tolerance, and responsive to the opinions of others.

Thematic learning also has some advantages for students, they are: 1) to focus on the learning process rather than the learning result, 2) to eliminate the false boundaries in interdepartmental curriculum and provide an integrative learning approach, 3) to provide a student-centered curriculum that is associated with interests, needs, and intelligence, 4) to stimulate the discovery and independent investigation inside and outside the classroom, and 5) to help students build relationships between concepts and ideas to increase appreciation and understanding (Trianto, 2011: 160 - 161).

Optimizing Multiple Intelligence through Thematic Learning in Early Grade Students of Elementary School

Optimization of multiple intelligence in elementary school can be performed on all subjects with creative and innovative learning as thematic. Thematic learning model is essentially an integrated learning model that integrates basic principles such as learning to use an actual theme that is close to the students and is involved in everyday life. The theme of learning is used as a means of unifying the different material of some subjects. The materials are combined in a single theme presented by taking into account student characteristics such as interests, talents, intelligence, and the students prerequisite so that every child has the opportunity to succeed.

In order multiple intelligence can be best applied in thematic learning, there are at least three principals to notice, they are (modified Trianto, 2011: 168-171).

1. Planning Phase
   a. Determining the types of subjects that are combined
      The initial step of thematic lesson plans that teachers must know is identifying the characteristics of the various subjects and then integrating closely related subjects like language with social and civics or math with science.
   b. Choosing a material, competence standards, and basic competence
      At this stage the teacher should be able to find a competence standard - competence standards between overlapping or interrelated subjects to be comprehensively presented.
   c. Determining intelligence to develop
      The next step is determining the intelligences to develop in learning. This is important so that teachers can design appropriate learning in accordance with the interests and talent of the students.
   d. Making up the theme web
      In determining the theme a teacher should pay attention to several principles, such as the proximity to students' life, the theme chosen should be of simple theme to a more complex one, interesting for students, and in accordance with the conditions, interests, and talents of students.
   e. Formulating indicators of learning outcomes
      Each indicator formulated should be include four components is: Audience, Behavior, Condition, Degree.
   f. Preparing a syllabus and lesson plan
      This step is an overview of the thematic learning activities that will be implemented. In

preparing the syllabi and lesson plans, teachers should implement a variety of methods or strategies of active learning, creative, innovative, fun, and easy to understand by the students.

2. Implementation phase

   The three principles that must be taken into consideration in the implementation of thematic learning are a) the teacher should not dominate the learning activities, but acts as a mentor and facilitator, b) the teacher clearly explains the responsibilities for both individuals and groups in any given task, and c) the teacher should be able to accommodate the students' ideas that sometimes are not in the lesson plan.

3. Stage Assessment and Evaluation

   The assessment in thematic learning should be done continuously and thoroughly in both the process and the learning outcomes obtained by the students. This is very important because it can be used as a basis to determine the progress of potential learners as well as teachers' re f ection for the success or failure of learning.

The following examples are net themes of thematic learning in class II with the theme of "My Family" in accordance with the competence standard of 2013 curriculum.

Figure 1. Example of Nets - Theme Nets in Thematic Learning

Figure 1 shows that multiple intelligence can be optimized through thematic learning that is tailored to the competence standard. The optimization of multiple intelligence in thematic learning can not be separated from the role of the teacher as a planner and instructor. A teacher should be really able to design and implement thematic learning in fun, interesting, and meaningful way.

CONCLUSION

Early grade students of elementary school are children at an early age. This period is a short but it is very important for a child's life, therefore all potential and intelligence of children at this age need to be optimally cultivated. There are many models of learning that can be applied to early graders of elementary school. However, the most important of all is that the developed learning model should consider the characteristics, interests, and talents of the students.

Thematic learning is one of the models that can be used to optimize multiple intelligence of early grades students of elementary school. This is because thematic learning is a student-centered learning whose application considers the characteristics, potentials, and interests of the students. Moreover, thematic learning is also conducted in an integrated way, using the theme as a unifying tool. The themes use actual, close to the student's life, interesting, and adjustable to the students' conditions. Therefore, it can optimize the entire intelligence and provide meaningful experiences to the students.

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THE BASIC MOTIVATION IN FORMING BEHAVIOR

Written by:
Moch. Fatkhuronji

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ABSTRACT

Speaking of motivation will not be separated from the activities of human life, because the motivation is an integral part of organisms that drive to do something. Man is not the inanimate objects that move only when there is power from the outside who pushed him, but being that has power-power in itself to move (Djaali, 2008: 101). The learning motivation is meant as the special conditions that may affect the individual to learn. Motivation is an important variable, especially during the learning process that can help encourage students learning volition (Winataputra, 2008: 15). Motivation can be sourced from within yourself based on needs, encouragement and awareness on the learning objectives. Motivation can also grow thanks to stimulus and pressure or pressure from outside, e.g. with gifts, rewards, punishment and granting other expectations, (Hamalik, 2009: 36)

A. INTRODUCTION

Motivation is a concept that describes the forces that exist within the employee starting and driving behavior. (Gibson) Is the desire to seek or strive mightily to achieve the objectives of the Organization are conditioned or determined by the ability of business/an attempt to satisfy individual needs something. (Stephen p. Robinson, 2001). Muhibbin Shah (2002) defnes motivation is the internal state of an organism (either human or animal that pushed him to do something in the next).

From these two limitations or defnition is essentially have in common the sense though there is a difference of redaksional. Motivation is generally related to the effort to fulfll all the objectives so that the focus of the discussion on the purpose of organizational narrowed down so that it can refect our attention on work related behavior. Within the boundaries of such gained three defnitions/key elements, namely: business goals, organization, and needs. In the management of the Organization a manager should consider a different motivation for a group of people, who in many ways is not predictable in advance. This diversity leads to differences in behavior, in this case a few things related to the individual needs of the starting point and the destination.

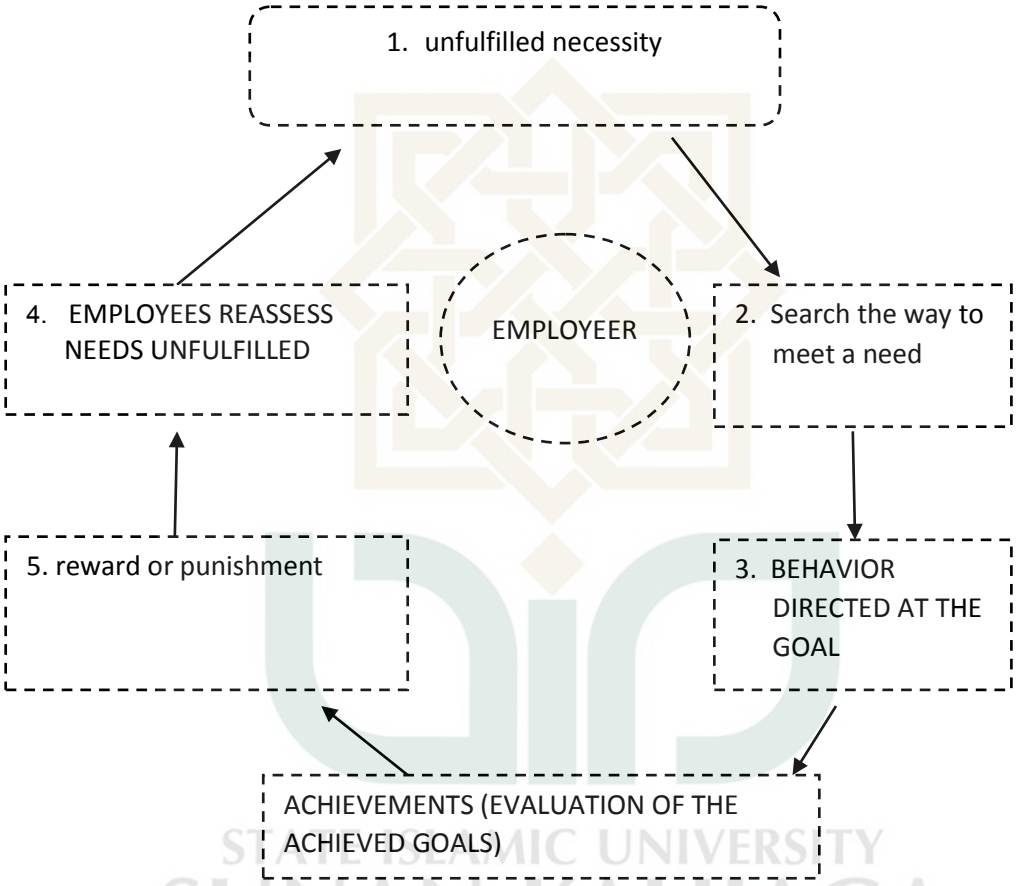
Necessity: lack is felt somebody is at any given time. Goal is an outcome you're looking for employees who are seen as the force that draws people to behave in the achievement of the desired objectives so as to reduce the need for which has not been fulflled. On the process of motivation, people will try to meet a variety of needs, unmet needs lead people will fnd a way to reduce tension caused by its shortcomings. Therefore people and then selecting an action, then there was the behavior that lead to the achievement of the objectives. After some time, the managers assess the behavior. Research results may set the granting of rewards or punishment, those results are assessed by the individual concerned and needs have not been met reviewed so that will in turn drive the process and pattern of rotation.

Robinson (2001) divide theory motivation can were brought in two categories:

1. theory of Satisfaction (Content Theory), and the theory of process (Process Theory).
2. decision theory focus on factors within the individual moves, directing, supporting, and stop the behavior. They are trying to determine the specific needs that motivate people.

The theory of the process of elaborating and analyze how that behavior is driven, directed, supported and stopped

THE PROCESS OF EARLY PATTERNS OF MOTIVATION



The second of those categories had relevance for managers who make their deals with the work process of motivating his employees.

B. CONTENT THEORY

1. Theory Maslow Hierarchy Of Needs

Maslow's motivation theory, stating that human needs are clustered in a hierarchy. The lowest level is the need of the most physiological and high level is the embodiment of needs/ self-actualization. In the Hipotesisnya States that every human being there is that hierarchy of five needs are:

a. Physiological Needs, to be able to survive: the need for food, drink, air, shelter, and the needs of the breed; to meet these basic needs do not require exercise.
b. The needs of life assurance: the needs of get the food, clothing and housing that fulfill the needs
c. Social needs, the need for which has friends, good relationship, and the need for social contact
d. Need for self-esteem: the need for a good self image; need to get respect, and appreciation of

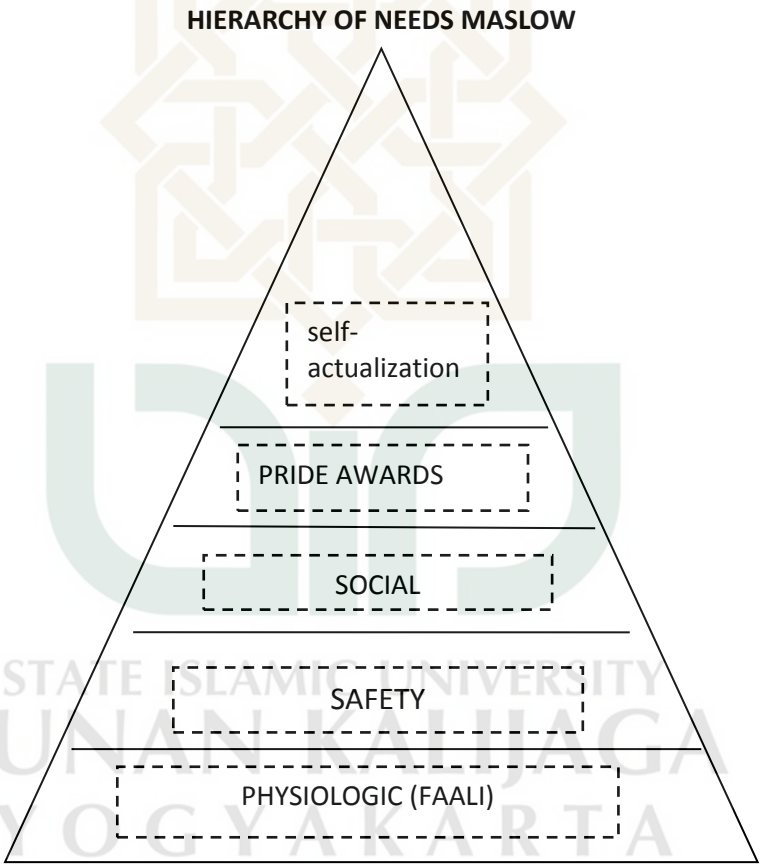
others. All of which came in a de f cit arises because of the needs-a de f ciency in myself and need ful f llment

e. Need for self-actualization or needs satisfaction in being able to develop its potential to achieve something. Ful f llment of needs self-actualization is driving the efforts of self development, through innovation, doing new things, or are looking for new challenges (Haris Mujiman, 2011: 161-162)

Maslow's theory assumes that:

1. that the person will satisfy the needs of the more trees before driving
2. behavior to meet the needs of higher.
3. that the person has a desire to evolve to advance

Theory of Needs Maslow described as follows:



Maslow separate f fth human need it as: needs high order was a necessity: full internally namely covering, needs social, needs awards, and needs of actual self. Needs order low: is stands f iled externally namely covering the need for safety, and needs of physical/faali.

Theory X and Theory Y: presented by Douglas Mc Gregor, where theory X assumes that the employee did not like the work, lazy, don't like responsibility, and should be forced to be overachievers. While Theory Y assumes that employees like the work, creative, trying to be responsible, and able to run self brie f ng.

The theory of two factors: advanced by Frederick Herzberg, where there are intrinsic factors related to job satisfaction (achievement, recognition, responsibility, advancement, growth) and extrinsic factors related to job dissatisfaction (policies and direction of the company, interpersonal

relations, penyeliaan, and working conditions). It is said that there are factors such as hygiene policies and corporate administration, salary and penyeliaan, if suffcient in work, caress the workers. If not adequate, then the people will be unfulfled

2. **Erg Theory**: by Clayton Alderfer from Yale University that Maslow's theory of needs reworking. He argues that there are three groups:
   a. Existence: includes details of which by Maslow is considered our physiological and security needs.
   b. Connectedness, is the passion we have for keeping important interpersonal relationships. Include here the desire and social status.
   c. Growth, namely an intrinsic desire for personal development, including intrinsic components of self-actualization on the theory of Maslow's needs

In addition to replacing the five needs with three, it also exposes the ERG theory that (1) more than one need can operate continuously, and (2) if the satisfaction of a need-more-high level is stuck, then the desire to meet the needs of the present lower increases. Here the third category can operate simultaneously with different levels. This theory is consistent with individual differences among people. Variables such as education, family background, and cultural environment can change the importance of the need for each individual user

3. **Mcclelland's Theory Of Needs**: advanced by david McClelland and his friends, this theory focuses on the three demands, namely:
   a. Need for achievement: encouragement for superior, high achieving, and strive for success. Nobel high achievement has the desire to accomplish things better. They don't like the victory by coincidence, but rather a challenge to solve a problem and accept personal responsibility for success or failure
   b. Necessity of power: the need to make others to behave in a way which is not going to do if it is not forced to. Individuals with nPow (need for power) enjoys to burdened, grappling to be able to influence others, like placed in competitive situations, status-oriented, and tend to be more attentive to the prestige and influence of others rather than an effective performance
   c. A need for affliation: craving for interpersonal relations are friendly and familiar, for the preferred and accepted by others. Individuals with high affliation motives fought hard for friendship, loved the situation of the cooperative, and highly wanted a relationship that involves a degree of understanding that turning high timbale

To know which one is dominant on the individual, some methods such as proyektif, a test questionnaire with pictures can be effective. It should be noted that the need for high achievers did not necessarily mean it can be a good manager, especially in large organizations. While the need for affliation is closely associated with managerial success. The best Manager in the power needs of high and low in the needs of affliates

4. **Cognitive Evaluation Theory**

This theory suggests that the introduction of extrinsic rewards, such as wages, to the efforts of previous work are intrinsically has given the reward because of the pleasure associated with the content of the work itself, it will tend to reduce the overall level of motivation. In other words, if extrinsic reward is given to a person to perform a task, the intrinsic interest it caused pengganjaran of the task itself plummets. However, this theory has been called into question among the compensation specialist over the years that if wages or other extrinsic ganjatan must

be an effective motivator, the rewards that it should be made dependent on the performance of an individual. In addition, this theory is also under attack in terms of the methodology used therein and in the interpretation of the fndings. This theory may be relevant to the work of the organization that is among them, that the work is not tremendous.

5. The Theory of Determination

Specifc objectives will be diffcult to deliver higher performance. This is proven true, the existence of a specifc hard goals will yield higher performance when it is well received. Goal specifcity in itself will act as the internal ransangan. But also, it is logical to assume that the purpose of easy will be greater chances for acceptance. But once an employee receive a hard task, he will produce a high level of effort until the task was accomplished, lowered, or abandoned. There are several factors that infuence the relationship goal-performance, feedback, goal commitment, self suffcient, kefektifan and national culture

6. The Theory Of Strengthening

That is the opposite of the goal-setting theory, which States that behavior is a function of its consequences. This theory ignores the internal state of an individual and focus solely on what happens to a person when he took an action. Because this theory ignore what the preceding behavior, this theory is not a theory of motivation. But he gave a powerful analysis of what that control behavior. We cannot ignore the fact that reinforcement has extensive followers as a motivational tool. However, in a pure form, this theory ignores the feelings, attitudes, expectations, and other cognitive variables known to affect behavior. There is no doubt that the strengthening infuence on behavior

7. The Theory Of Justice

That the individual input and output compare their work with other people's input/output and then responding to eliminate any inequities. Role played justice in motivation will trigger the individual to correct the spelling. To that end, there are four benchmarking reference that can be used for employee/individual:

a. In the self: experience of an employee in a different position within the organization today.
b. Outside of the self: the experience of an employee in a position/situation outside the Organization at this time.
c. In others: individual or group of individuals in the Organization's employees.
d. Excluding others: individual or group of individuals outside the Organization's employees

The selected reference point where an employee will be infuenced by the information held about employees of reference-reference or by the attraction of reference it, so there is a convergence on the four variable softeners: gender, period of employment, the level in the Organization, and the level of education/professionalism. Based on this theory, when the employee perceives an injustice they can be predicted to pick up one of the six following options:

a. Change their input (e.g. do not spend a lot of effort).
b. Change their output.
c. Distortion of perception about yourself.
d. Distortion of perception of others.
e. Choose a different reference.
f. Left the feld

In particular, the theory of Justice uphold the four propositions relating to unfair wage:

a. Payment according to time, employees are rewarded too high a yield higher than employees who are paid fairly.
b. The existence of payments according to the quantity of production, employees are rewarded for higher yield fewer units, but with higher quality than employees who are paid fairly
c. With the payroll according to time, the less rewarded employees generate output with less quality or worse
d. With the payroll according to the quantity of production, less rewarded employees who generate a large number of units with fair

In conclusion, the theory of Justice shows that, for most employees, the motivation was strongly influenced by the relative as well as absolute rewards

8. **The Theory Of Hope**: developed by victor vroom, that though many criticized, a lot of evidence research that supports it. This theory argues that an employee motivated to run high levels of an effort if he believes the efforts are sending you to an appraisement a good performance; good judgment will encourage ganjaran-ganjaran organisasional as a bonus, a raise or promotion; and chastisement that will satisfy the purpose of private individuals.

Therefore, this theory focuses on three relations:

a. Relationship effort-performance: the probability that are perceived by the individual who produced a number of specific efforts that will drive performance
b. Performance-reward Relationship: the degree the extent to which the individual believes that performing at a certain level will encourage the achievement of a desired output
c. The relationship rewards-personal goal: degree the extent to which organizational rewards meet the goals or personal needs of the individual and the potential appeal of such rewards for individuals

This theory of hope really helped us to explain why a lot of workers not motivated at their jobs and simply doing the minimum order to save themselves. However, this theory tends to are idealistic because little individuals who apprehends strong correlation between a high performance and the reward of their work. If the organization of individuals to performance, benar-benasr reward or repay instead of seniority, according to criteria such as an effort, the level of skills, and hard work, then the validity of this theory may be greater

C. Conclusion

A simple discussion of this there are a few things that can be summed up as follows:

1. motivation is a concept that describes the forces that exist within the employee starting and driving behavior. (Gibson) Is the desire to seek or strive mightily to achieve the objectives of the Organization are conditioned or determined by the ability of business/an attempt to satisfy individual needs. Humans are not inanimate objects that move only when there is power from the outside who pushed him, but being that has power-power in itself to move, therefore the motivation as the catalyst to move one's personal.
2. Motivation in General related to the effort to fulfill all the objectives so that the focus of the discussion on the purpose of organizational narrowed down so that it can merepleksikan our attention on work related behavior. Within the boundaries of such gained three definitions/ key elements, namely: business goals, organization, and needs. In the management of the Organization a manager should consider a different motivation for a group of people, who in

many ways is not predictable in advance. This diversity leads to differences in behavior, in this case a few things related to the individual needs of the starting point and destination

3. The theory of Maslow's motivation, stating that human needs are arrayed in a hierarchy. The lowest level is the need of the most physiological and high level is the embodiment of needs/ self-actualization
4. The Erg Theory: by Clayton Alderfer from Yale University that Maslow's theory of needs reworking. He argues that there are three groups:
   a. Existence: includes details of which by Maslow is considered our physiological and security needs.
   b. Connectedness, is the passion we have for keeping important interpersonal relationships. Include here the desire and social status.
   c. growth, i.e. an intrinsic desire for personal development, including intrinsic components of the theory of self-actualization needs Maslow
5. McClelland's theory of needs: advanced by david McClelland and his friends, this theory focuses on three needs: the need for achievement, the need for power and need for affliation
6. Cognitive evaluation theory, that show of the introduction of extrinsic rewards-rewards, such as wages, to the efforts of previous work are intrinsically has given the reward because of the pleasure associated with the content of the work itself, it will tend to reduce the overall level of motivation
7. The theory of determination, specifc objectives will be difficult to deliver higher performance. This is proven true, the existence of a specifc hard goals will yield higher performance when it is well received. Goal specifcity in itself will act as the internal stimulation.
8. The theory of hope: developed by victor vroom, that though many criticized, a lot of evidence research that supports it. This theory argues that an employee motivated to run high levels of an effort if he believes the efforts are sending you to an appraisement a good performance; good judgment will encourage ganjaran-ganjaran organisasional as a bonus, a raise or promotion; and chastisement that will satisfy the purpose of individual personal.

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ALTERNATIVE OF LEARNING MODEL WITH SOCIAL LEARNING BANDURA

Written by:
Indrya Mulyaningsih
IAIN Syekh Nurjati Cirebon

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ABSTRACT

One of the critical success factors of learning is teaching accuracy in selecting appropriate learning model for learners. Bandura's Social Learning Bandura or modeling can be an alternative model of learning it. This model asks teachers to be able to be an example or model. In addition, teachers must be able to motivate learners to learn.

Keywords: *model, learning, Bandura, social learning*

INTRODUCTION

The government gives a very high attention to education. It can be found by continuing the renovation of the curriculum. Under existing regulations, the curriculum in Indonesia continues to change every five years. As for the latest or current curriculum is Kurikulum 2013 or 'Kurtilas'.

In education there is a learning process. Learning is an activity of not knowing to knowing, from not been able to be able to. Learning activity itself is divided into two, namely the formal and non-formal learning. Learning means formally organized with a clear curriculum while learning non-formal means of unstructured learning. As one example of a formal learning is learning in school while learning is informal learning at home.

Success in learning is determined by many factors. Not only factor students or learners, but also the factor of teachers or teaching and learning models are used. Good learning model is appropriate to the learning style of the learner (DePotter and Mike, 2013: 12-16). Multiple intelligences by Howard Gardner initiated very helpful teacher learning model in determining the appropriate learning style learners.

All this has been known for a variety of approaches to learning. One approach that is being developed is Contextual Teaching and Learning (CTL). Asmani (2013: 53) defines CTL as 'an educational process that aims to assist students in understanding the meaning of existing teaching materials, by linking lessons in the context of their daily lives in the context of personal, social, and cultural'. Ward (2013: 49) states that CTL contains seven principles, namely constructivism, inquiry, questioning, learning community, modeling, reflection, and assessment.

Albert Bandura specifically examines modeling or better known as Social Learning Bandura (SLB). This paper will implement the SLB as an alternative learning model.

The Meaning of Learning Model

Mulyatiningsih (2010: 1) stated that the learning model is "a term used to describe the organization of the learning process from beginning to end". The model serves as a guide for teachers to plan and implement learning. Therefore, learning methods to load the approach, methods, and techniques of learning.

Supriadie and Darmawan (2012: 9) states that "learning is a two-dimensional conception of teaching and learning". The principle should be oriented learners learn. According to Feuerstein approach (in Bellanca, 2011: 6) success in learning can be achieved through (a) changing the students to learn more effciently and (b) teaching to explore the potential of the learner.

Suryaman (2004: 66; Akbar, 2013: 49-50) suggests learning model as a conceptual framework that describes the steps. The measures systematically to manage learning. This is done in order to achieve the targets or learning goals. In addition, the learning model can also be used as a guide teachers in designing and implementing effective learning.

On learning there is a target or goal to be achieved. This achievement can be done by way of learning or learning models. Models of learning or the learning model must be adapted to the conditions of the learners. Joyce, Marsha, and Emily (2011: 1) states that the key to achieving the goal of learning is to use effective learning model oriented intelligence. Therefore, the learning model chosen should be able to train learners to become more reliable.

In addition described above, the learning model assigns must also consider the factor of teachers. Jacobsen, Paul, and Donald (2009: 3-4) suggests that the Interstate New Teacher Assessment and Support Consortium (INTASC) standards require that ten teachers should possess. The standard requires that teachers:

(1) understand the core concepts, research tools, and structures of the disciplines taught;

(2) understand how students learn and develop;

(3) understand how students have different approaches to learning;

(4) understand and use a variety of instructional strategies;

(5) use its understanding of the motivations of individuals and groups;

(6) uses his knowledge of the technique of verbal, nonverbal techniques, and techniques of effective media;

(7) to plan instruction based on knowledge of the subject matter;

(8) understand and use the strategies of formal and informal assessment;

(9) is a refective practitioner;

(10) developed a relationship with co-workers, parents, and representatives of parents.

Feez and Helen (2002: 2) argues that the learning model leads to operational procedures in order to achieve the learning objectives as set out in the syllabus. Therefore, the learning model should adapt to the conditions and goals of learners. Because the learning model is operational, then there are steps that must be followed. These step was interrelated.

Ismawati (2009: 97-98) suggests a few things to consider in choosing a model of teacher learning, which should:

(1) variable, (2) attract and stimulate students to learn, (3) promoting student mentally and physically in the study, can be either training, practice, or the questions, (4) learning activities leading toward the goal of teaching students, (5) develop student creativity, (6) increase levels of CBSA in learning, and (7) helping students' understanding of the teaching material

.In addition to selecting, teachers can also prepare or plan their own learning model. The things that need to be considered by Wahyu and Abdul (2012: 14), include: analytical ability, capability development, and measurement capabilities. Analytical capabilities in the form of an analysis of the conditions of learning. These conditions include: "(1) the ability to analyze competencies and characteristics of the learning material, (2) the ability to analyze problems and learning resources are available, and (3) the ability to analyze the characteristics of learners."

Development capabilities related to selecting, setting, and develop the most optimal learning strategies to achieve the desired results. Measurement capabilities include:

(1) basic skills in selecting, establishing, and developing the most appropriate measurement tools to measure mastery of competencies, and (2) knowledge of the classification of learning outcomes need to be measured, the indicators of each classification, and criteria for success rate (Wahyu and Abdul, 2012: 15).

Henard and Deborah (2012: 7) states "Quality teaching is the use of pedagogical techniques to produce learning outcomes for students". That is, the quality of learning is determined by a technique that leads to the steps in learning. The quality of learning itself includes several things, such as 1) the design and appropriate curriculum materials, 2) the diversity of teaching methods, 3) the use of feedback, and 4) an effective learning outcome assessment. Having regard to the fourth aspect, a college education is expected to be qualified.

Hughes and Hughes (2012: 465-466) mentions four learning principles, namely: 1) learning activities should be conducted in a manner that fosters a natural impetus to learn, 2) learning should be delivered as a whole and not separately by putting parts simple or easy; 3) customized learning model and the pace of learning is based on the mental qualities of each learner, as well as 4) the learner will apply the knowledge gained in a social environment. Therefore, teachers should also have tasks done in groups.

Based on the above it can be concluded that the learning model is a guideline that includes approaches, methods, and techniques learned in accordance with the needs of learners to achieve the learning objectives.

Social Learning Bandura

Bandura's Social Learning Theory, later known as Bandura modeling is actually a blend of cognitive factor by a factor of habit. In learning, there are six ways to do, namely 1) the trial-and-error experience, learning through trial and error, 2) perception of the object, learning is done by giving an opinion or estimate of an object, 3) observations of another's response to the object, can also be learned by studying other people's opinions or responses, 4) modeling, learning can also be done by creating or specify a model or example, 5) exhortation, learning can also be based on a variety of advice obtained, either directly or indirectly and 6) the instruction about the object, can also be learned through the various commands that are deliberately given by objects or things to be learned (Bandura, 1971: 5-7).

Bandura himself stated that there are four important things in learning by modeling, the attention (attention), retention (memory), the motor reproduction (production), and motivation (motivation). Attention related to the learner's interest in the material being studied. Retention associated with the learner's ability to store a variety of information or materials on learning. This storage can be in short-term memory and long term. The production is a form of imitation of the material or information learned. In other words, learners produce something of learning that has been done. Motivation is more on the strength of the learner wishes to perform impersonation. This theory can be described as follows.

Bandura (in Hill, 2010: 194-201) suggests that the strengthening of one's own experience can be done through imitation. Imitation is done not only on results, but also the process. As for the imitation stage, include (a) inhibition, (b) disinhibition, and (c) elicitation. Phase inhibition is observed activity of others. It is observed how the person does not make a response to a condition. How others who do not respond to the state will be practiced or followed by a learner. Example when there is someone who is upset. Learners will observe the reactions of people who are around people who are angry. The focus is aimed at the reactions of people who are not provoked by anger.

Disinhibition is the opposite phase of inhibition, in the form of observation to others. The focus on the way the others did not respond to a condition. If at some stage someone will come to inhibition did not, in fact at this stage of disinhibition someone would do that. Thus, this stage to learn or observe how a person does not react to a condition, but it will be done. Example when there is someone who is upset. Learners will observe the reactions of people around him. This time, learners will actually do the opposite of the studied reaction, which provoked the situation.

Elicitation phase means raises or taking a stance against the state. Although little resemblance between elicitation with disinhibition, but basically they are different. Disinhibition over the response is activated, and only require a specific trigger to run the desire or response. Elicitation is precisely the positive response to run activities. For example, a person begins to respond and some others also want to do the same thing although previously been told not to respond. Thus, elicitation refers to the response that would surely done while disinhibition refers to a response that is not necessarily going to be done.

Imitation is conducted leading to the observation. Hill (2010: 199-201) states that the core modeling Bandura is learning through observation or observation. Observers will "see what is done by the model, consider what the consequences for the model, given what they have learned, making a variety of conclusions, and at that time (or later) include it in behavior".

Implementation of Bandura Learning

Here are the implications of Bandura's theory according to Hill (2010: 195-207). First, there is a desire to learn learner materials submitted by the teacher. The desire to learn does not come automatically, but because there is a trigger factor. Trigger factors can come from anywhere, one teacher. Therefore, teachers must be able to motivate learners that wish to learn the material.

Second, the study did not produce any practical effect. That is, the material being studied today there is a new possibility will be unused or used in the future. Therefore, the learners must keep a fine material that has been obtained so that if at any time it takes can be found and used immediately.

Third, the learner has received a variety of information through their lessons. Observations should not simply allowed to settle or stored, but must be replicated or imitated. Therefore, the learner should be able to produce something like or based on what they have learned.

Fourth, learners and teachers must have a motivation in learning. Learners should have the motivation to imitate or emulate. Teachers must have the motivation to emulate or at least provide reinforcing factors that learners imitate. Therefore, both teachers and learners are expected to have a great motivation on learning itself.

Here are the implications of a cognitive approach to learning According to Makka (TT: 2). First, learning should focus on ways of thinking or mental processes of children. That is, learning not only results-oriented. Therefore, teachers must understand the processes used and controlled so that children arrive at the results. Teachers must be Able to develop learning experiences that Correspond to the stages of cognitive function.

Second, the role of student learning should be put in their own initiative and are actively involved in learning activities. In class, Piaget emphasizes that teaching knowledge so (ready to made knowledge) encouraged children determine their own knowledge through spontaneous interaction with the environment.

Third, learning should understand that there are individual differences in terms of development progress. This is consistent with Piaget's assumption that all students grow and pass through the same developmental sequence, but the growth was taking place at different speeds. Activities should be more focused on individual activities carried out within the group and not the classical activities. Moreover, learning should prioritize the role of students to interact with each other.

It also delivered DePorter and Mike (2013: 14) that "suggestion can certainly affect the outcome of a situation and learning". Therefore, learning should provide positive suggestions with students seated comfortably and increase the participation of individuals.

According Sarbiran, Putu, and Priyanto (TT: 1) learning is designed with a focus on the learner to exercise, if the ratio, though the favor, and spiritual cultivation. Learning should be conducted in an interactive, inspiring, fun, challenging, and motivating to learners. Learners are given the opportunity to participate actively so that enough time for initiative, creativity, and independence. Of course all of it tailored to their talents, interests, and physical and psychological development of the learner.

Implications of Bandura's theory according Denler, Christopher, and Mary (2013 : 8-9) as follows. First, the learner must be guided and given the information related to the knowledge, skills, and habits of good behavior or to be possessed. In this case the teacher should be an example. Teachers should involve all stakeholders in the learning. Second, teachers should help learners to achieve the learning outcomes expected. Teachers must be able to convince learners that what is learned today will be useful at a later date. Third, learning success will be achieved if the learners have confidence. In this case the teacher is obliged to ensure that learners already have enough knowledge. Fourth, teachers help learners to achieve the goal. Goal setting should be adjusted to the ability of learners. All this is done to avoid disappointment if goals are not achieved. A sense of disappointment will make lazy learners to learn more. Fifth, learning should be autonomous learners. In this case, the learner can measure the ability of them self, so also can determine the purpose and the goals. All that can be done with practice.

Implications of Bandura's theory according Cunia (2007) that learning should involve learners and teachers actively. Since this is more on self-learning, then teachers must ensure knowledge learners. Based on that knowledge, teachers can help learners determine the expectations and objectives. Teacher as a model should be able to be and give an example. Therefore, teachers should help learners to have self-confidence and achieve the goals that have been planned.

Based on the above, it can be concluded that the cognitive approach to learning by asking the teachers and learners to strengthen one another, good motivation, attention, retention, as well as producing. Therefore, the factor of teachers and learners is very important to note that during the learning takes place.

CONCLUSION

Based on the above it can be concluded that the SLB or Modeling Bandura can be an alternative as a learning model. In this learning model, teachers have an important role. Success or failure of learning highly dependent on the ability of teachers. Especially the ability to serve as a model or example. In addition, teachers must be able to be a motivator so eager learners.

DISCUSSION

Some things that need attention are as follows.

a. To Learner

Once the importance of the role of teacher, then the teacher should really have a reliable competence. Teachers must thoroughly understand the characteristics of learners. Teachers can be guided for example; role; models for learners.

b. To Policy Maker

Policy makers, especially related to learning should give attention to multiple intelligences. It would be better if the learner is placed in a class that has the same intelligence, or at least approached. This is to facilitate teachers in guiding. Moreover, in at least one class there are two teachers that learners receive guidance to the fullest.

c. To Parents

Learning success is not absolute in the hands of the school as the organizer. Parents also have contributed no less important. Therefore, parents should also understand the multiple intelligences. More speci f cally, parents should understand the dominant intelligence possessed by their children. This is an effort that learning in school can synergize with learning at home.

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THE MODEL OF IMPLEMENTATION OF EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) IN THE ISLAMIC ELEMENTARY SCHOOL

Written by:
ZAINAL ARIFIN
Faculty of Islamic Education and Teacher Training
State Islamic University Yogyakarta
e-mail: derizzaian@yahoo.co.id

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INTRODUCTION

In essence, man and nature is integrated, and in the rule of law or the laws of nature. The earth and the mountain, land, forest, and desert, river and lake, strait and ocean are just part of nature. When people do good for nature the means to do good to himself, and vice versa. [1] Environmental damage can be caused because there are naturally those that are due to human activities, such as: earthquake, food, storm, population growth is not balanced with the existing capacity on the islands (the residence), irregular movement of people, stupidity residents about the meaning of health, neglect factories, companies or industries to waste it generates, weakness or lack of understanding in the welfare of the citizens of each, taking out the trash, water, cigarette butts carelessly, motor vehicle exhaust fumes, silt erosion, discharges of radioactive material of NPP, chlorinated hydrocarbon seepage and fertilizers in agriculture and forestry. [2]

The problems are that concerns mankind postmodern now. The problems are how man can save the Earth from destruction caused by human as well as damage caused by natural factors. M. Imam Zamroni said, the pattern of human life on this earth also tend to use and exploit rather than conserve resources on the face of this earth. From year to year, Indonesia has always been lost forest 1.6 sd 3.5 million ha of forest, which then decrease the capacity of the soil water availability, as we are experiencing drought dry season, when the rainy season we suffered foods and landslides. Moreover, due to illegal logging Indonesia injured 20 trillion annually. The implication, various kinds of disasters that hit the nation in recent years more and more frequent. Such as landslides, foods, forest fres, destruction of coral reefs, earthquakes, and tsunamis. This phenomenon is a clear evidence that the pattern of human life on this earth more to exploit than on preserving existing resources. Which resulted in the depletion of natural resources available in this archipelago. [3] Therefore, it is necessary for everyone ecological awareness. Ecological consciousness built on universal values to always keep and preserve life for environmental sustainability.

In addition to the necessary awareness of ecology, sustainable development is also necessary,

1 Tim Perumus Fakultas Teknik UMJ Jakarta, *Al-Islam dan Iptek II,* (Jakarta: PT Grafndo Persada, 1998), p.138. Read QS Al-Qashah ayat 77.

2 *Ibid,* p. 144-145

3 M. Imam Zamroni on http://dikti.go.id/index.php?option=com_content &view=article &id=1846%3A pendidikan-berparadigma-pembangunan berkelanjutan& catid= 159%3Aartikel-kontributor&Itemid=160. [8 Mei 2012].

because the progress of a country go hand in hand with the progress of development to meet the livelihood of its citizens. If, for the sake of development of development in a country without based on ecological awareness, awareness of the sustainability of human life to come, there will be damage to the environment that may impact socially and economically. Therefore, the concept of sustainable development is necessary. According to Muhammad Ali,

Sustainable Development is a concept of national development of a country to fulfll the needs and to improve the welfare of citizens at this time but still pay attention to the needs of future generations.[4]

Now, what is the role of educational institutions to save the environment from damage caused by humans or by natural process? Educational institution in this regard is an important medium for engrafting of values in saving the environment. From this problem appears the concept of Education for Sustainable Development (ESD) as a solution. As Retno S. Sudibyo said:

> Education (formal, non-formal and informal) has been chosen because it is a powerful instrument and effective communication, providing information, awareness, learning, and be able to mobilize people/communities, and move the nation toward a future life that grows more sustainable (more sustain ably developed) is born of Education for Sustainable Development. [5]

According to opinion of Retno S. Sudibyo above, education have a big role as a medium of socialization discourse ESD for the community. This article will discuss the concept of ESD and the model of implementation of ESD in Islamic schools at intracurriculer and extracurricular activities.

DISCUSSION

1. The Concept of ESD

The concept of ESD has three important terms that need to be outlined: Education, Sustainable Development, and Education for Sustainable Development (ESD):

First, the concept of education. In the Laws of National Education System (UU Sisdiknas) 2003 has formulated the concept of education, ie:

Education is a conscious and deliberate effort to create a milieu of learning and the learning process so that student are actively developing their potential to have a spiritual strength, self-control, personality, intelligence, character, and skills for themselves, society, nation and state.

The concept of education in the laws of National Education System (UU Sisdiknas) above, want to build Indonesian has a number of characteristics, include three elements, (1) intelligence, which includes intellectual, emotional, and spiritual, (2) moral values, and (3) personal characteristics, which includes a healthy, skill, creative, independent, democratic, and responsibility. [6]

Second, the concept of sustainable development. The term sustainable was originally used in the context of nature protection and world biosphere in the 1980 as stated in World Nature Protection program for Conservation of Nature and the World Wide Fund for Nature (WWF). The purpose of this protection is to use of existing biological systems does not change its essential characteristics. The implementation of this concept is expanded to concept of sustainable development which

4 Muhammad Ali, *Pendidikan untuk Pembangunan Nasional,* (Bandung: PT Imperial Bhakti Utama, 2009), p. 79
5 Retno S. Sudibyo, *Konsep EfSD Indonesia* dalam lppm.ugm.ac.idrepoEfSD-di-KNIU.pps.[8 mei 2012]
6 Muhammad Ali, *Pendidikan untuk Pembangunan Nasional,…*p. 63

includes economic, ecological, and social aspects, as stated in the Brundtland Report in 1987. [7] Thus, in the concept of sustainable development, a country responsible to fll current needs of citizens, responsible to fll needs of future generations.

Third, the concept of Education for Sustainable Development (ESD). According to Muhammad Ali,

> ESD includes a new vision of education that seeks to empower people of all ages take responsibility for creating a sustainable future. ESD is an integral part in achieving the three pillars of human development as proposed by Development Programme PBB (UNDP) and confrmed by KTT Dunia for Sustainable Development in Johannesburg 2002. The three pillars are economic growth, social development and environmental protection. [8]

The values in sustainable development through education to change behavior and lifestyle for positive transformation of society are: (1) Respect the values and human rights in this planet and a commitment to social and economic justice for all, (2) Respect for human rights and commitment to the next generation, (3) Respect and care for the community with a diversity (plurality) of life that includes protection and improvement of the ecosystem of this planet, (4) Respect for cultural diversity and a commitment to build local and global culture of tolerance, peace and non-violence. [9] These values as the spirit of implementation of ESD in educational institutions, such as pesantren, school, or madrassa.

2. The Concept of Islamic School

Islamic school in this context is school has Islamic values in their management and curriculum. In general, the model of Islamic School is organized by Islamic organizations such as Muhammadiyah, NU, Hidayatullah, al-Irsyad, and the network integrated Islamic school (JSIT), and others. [10]

The concept of Islamic school is different with school. Islamic schools put more religion matter than school as usually minimum of religion matter. Islamic schools as a critique of madrasa that failure to balance Islamic learning and general education for students.

Sutrisno said, from a historical perspective, Islamic schools were a further development of Dutch school system. A Dutch school system is being adopted for decades before Indonesia's independence, precisely was frst adopted by Muhammadiyah since the organization was founded in 1912. Muhammadiyah is not just taking over the Dutch school system, but also include Islamic studies as a compulsory subject in all schools under Muhammadiyah. Until now, the subject of Islam in Muhammadiyah coupled with Arabic Language, also known as the "Ismuba" (Islam, Muhammadiyah, and Bahasa Arab (Arabic Language). [11]

Fahmi Alaydroes, Manager of Network of Integrated Islamic School (JSIT) said, efforts to raise Islamic education was started in 1970 when Islamic education conference held in Makkah. Then, this conference was held in Jakarta in 1984. At that time, the institution of Islamic education

7 *Ibid,* p. 82-83

8 *Ibid,* p. 104

9 Pusat Penelitian dan Kebijakan Badan Penelitian dan Pengembangan Kementerian dan Pendidikan Nasional, *Model Pendidikan untuk Pembangunan Berkelanjutan (Education for Sustainable Development (ESD) melalui Kegiatan Intrakurikuler,* Jakarta: Pusat Penelitian dan Kebijakan, Balitbang Kemendiknas, 2010, p. 6

10 Zainal Arifn, *Pengembangan Manajemen Mutu Kurikulum Pendidikan Islam,* (Yogyakarta: Diva Press, 2012), p. 29

11 Sutrisno, *Pembaharuan dan Pengembangan Pendidikan Islam,* (ed.): Zainal Arifn (Yogyakarta: Fadilatama, 2011), p. 80.

in Indonesia is far behind with educational institutions or schools distinctively different religions. Some lagging indicators that are least successful Islamic school graduates enter college favorites and low result of Final Evaluation (EBTANAS), now National Examination (UN). The 100 best national private schools, were only 9 or 10 Islamic schools. Which dominate the other schools, such as Christian schools. Then, they initiated the concept of integrated Islamic school. In 1993 until 2003 many integrated Islamic schools are appeared. [12]

3. The Implementation of ESD in Islamic School (A Model)

Ministry of National Education Research and Development (Balitbang: 2008), has researched about ESD with some fndings are: (1) The principal and teachers are generally not understand about ESD, both concepts, objectives, policies, and programs. It is a logical consequence of the implementation of ESD to student, (2) There is no explicit policy about ESD in the school, (3) No reference implementation of ESD in the school especially for teachers. [13]

From the result of Balitbang's research above that the concept of ESD has not been known by education stakeholders. So, it's needed to research about impelementation of ESD in the school. On this article, I would like to summarize the results of research about implementation of ESD in the Islamic school, as Zainal Arifn and Lailatu Rohmah's research.

First, Zainal Arifn's research, "Development of Islamic Schools based on Education for Sustainable Development (ESD) by Extracurricular Activities (Study in Integrated Islamic Elementary School (SDIT) and Integrated Islamic Junior High School (SMPIT) Mantren Al-Ikhlas, Karangrejo, Magetan). [14] This research takes in SDIT-SMPIT Al-Ikhlas under Islamic Education Organization (LPI) Al-Ikhlas Magetan. Initially, These School knows about ESD from the activities organized by the KKN-PPM UGM, for examples: (1) biogas from feces of cow, (2) composting of rubbish/organic waste from home, etc., (3) organic and inorganic rubbish management, (4) cultivation of oyster mushrooms, catfsh cattle, planting crops, and so on. [15]

Integrated Islamic Elementary School (SDIT) and Integrated Islamic Junior High School (SMP IT) Al-Ikhlas has developed an extracurricular activities based on Education for Sustainable Development (ESD) in three main studies, namely socio-cultural, economic, and environmental. (1) An extracurricular based on socio-cultural, such as social events (slaughtering of sacrifcial animals in villages), a visits a patient to hospital, a visit to the profession of professional institutes, propagation of Islam eligious in mosques around the school, and out bound, (2) An extracurricular based on economic, such as business day, cooking project, and cook a variety of dishes as salted egg, tela-tela, spring rolls, sticks, etc and then sold to friends or the community, and 3) an extracurricular based on environmental such as planting, stocking of fsh seed into the rivers, and so on. [16]

The purpose of extracurricular based on socio-cultural is to prepare students to be able to socialize with people around the humanist approach and teach tolerance and respect for differences that occur in the communities. The introduction of socio-cultural society can also train the students

12 Fahmi Alaydroes on Hidayatullah, (Jakarta: Hidayatullah, 2011), p. 30-31

13 Pusat Penelitian Kebijakan Badan Penelitian dan Pengembangan Kementerian Pendidikan Nasional, *Model Pendidikan untuk Pembangunan Berkelanjutan (Education for Sustainable Development/ESD) melalui Kegiatan Intrakurikuler,* (Jakarta: Pusat Penelitian Kebijakan Balitbang Kemdiknas, 2010), p. 2

14 Zainal Arifn, *Pengembangan Sekolah Islam Berwawasan Education for Sustainable Development (ESD) Melalui Kegiatan Ekstrakurikuler (Studi di SD IT-SMP IT Al-Ikhlas Mantren, Karangrejo, Magetan)*, (Yogyakarta: Fakultas Tarbiyah dan Keguruan UIN Sunan Kalijaga, 2012)

15 *Ibid,* p. 48-53

16 Zainal Arifn, *Pengembangan Sekolah Islam Berwawasan Education for Sustainable Development (ESD) Melalui Kegiatan Ekstrakurikuler (Studi di SD IT-SMP IT Al-Ikhlas Mantren, Karangrejo, Magetan),*…p. iii

to be tolerant and respect the differences that occur in the community. This is important, because these days, the people of Indonesia easily do violence against others because of differences in race, religion or culture. [17]

The purpose of economic activity is to prepare students to be creative economic activities to enable them to live independently in the global competition, for example, trained about trade, business, or entrepreneurship. This is important, because the number of educated unemployed in Indonesia because of limited job opportunities, so that people who are not creative in developing the creative economy will be unemployed and a burden on the state. [18]

While the purpose of extracurricular based on environmental is to prepare students to be able to preserve the environment caused by the destruction, exploitation and exploration of the people who are not responsible. Or even damage to the environment resulting from not considering the development of ecological factors. This activity can also train the students to have a caring attitude to protecting the environment and take measures to avoid the development of extinction. [19]

Second, Lailatu Rohmah's research, "Development of soft skills-based Education for Sustainable Development (ESD) in International Integrated Islamic Elementary School Luqman Hakim Yogyakarta. [20] This research tries to describe the development of soft skills-based ESD in International Integrated Islamic Elementary School Luqman Hakim Yogyakarta. The reserach also wanted to describe any activity based ESD contains values that soft skills need to be taught to students.

The research results are as follows (1) The teacher in the International Integrated Islamic Elementary School Luqman Hakim said that all children are winners, all children rank 1, all children are smart, no ignorant, every child has unique potential, (2) International Integrated Islamic Elementary School Luqman Hakim has a concept of learning, "Project Based Learning" and "Problem Solving". This means that children are experiencing the process of finding and observing objects as a experience-based learning student; (3) Teachers with students having direct proximity, so students do not feel reluctant to ask, reprimand, and told the teacher, (4) Students are invited to plant up to harvest their crops and manufactured, and sold themselves to other students, which means that there are elements of the economy are emphasized here, as well as natural elements; (5) students grow their own vegetables, rice cultivation, planting vegetables, plant fruit trees, even no cooperation with the home industry around the school to utilize crop of students; and (6) Teachers appreciate each student's work as any form. [21]

From the results of research, it can be mapped several activities based ESD in International Integrated Islamic Elementry School Luqman Hakim. *First*, a socio-cultural activities (1) the humanist attitude of the teachers towards the potential of all students, because all the students are winners, smart, and has the potential intelligence, [22] (2) the closeness of the relationship of teachers with students, (3) the interaction with families during holidays, and (4) the award of teachers to each

17 *Ibid.,* p. 33

18 Zainal Arifn, *Pengembangan Sekolah Islam Berwawasan Education for Sustainable Development (ESD) Melalui Kegiatan Ekstrakurikuler (Studi di SD IT-SMP IT Al-Ikhlas Mantren, Karangrejo, Magetan)*,…p. 34

19 *Ibid,* p. 34

20 Lailatu Rohmah, dkk, *Pengembangan Softskill Berbasis Education for Sustainable Development (ESD) di SD IT Internasional Luqman Hakim Yogyakarta*, (Yogyakarta: Prodi Pendidikan Guru Madrasah Ibtidaiyah (PGMI) Fakultas Tarbiyah dan Keguruan UIN Sunan Kalijaga, 2012).

21 *Ibid,* p. 98-99

22 Dalam konsep Sekolahnya Manusia Munif Chatib, yang dinamakan sekolah unggul adalah sekolah yang memanusiakan manusia, dalam artian menghargai setiap potensi yang ada pada diri siswa. (Munif Chatib, *Sekolahnya Manusia: Sekolah Berbasis Multiple Intelligences di Indonesia,* (Bandung: Kaifa, 2010), cetakan ke VII, p.96

student work as any form. *Second,* an economic activity: Plant to harvest their crops, produced, and sold themselves to other students or even working with home industry around the school. *Third*, an environmental activities: (1) their own farming, growing rice, vegetable planting, and plant fruit trees, and so on. These activities as a form of preservation of the environment for the sustainable life for humans.

CONCLUSION

Discourse of Education for Sustainable Development (ESD) needs to be socialized into institution, either through intracurricular and extracurricular activities. Government as the country's leaders need to formulate learning activities based ESD to all students in educational institutions from elementary to college.

Islamic School as one of the educational institutions also have equal responsibility in introducing the discourse of ESD in every activity. Moreover, as a school-based religious values , Islamic schools teach students to establish a good relationship with God (vertical), harmonious relationships among human (horizontal), and an intimate relationship with the universe (diagonal). Establish a good relationship with God as the search for salvation in World-Hereafter, harmonious relations among humans as the pursuit of happiness in the World-Hereafter, and intimate relationship with the universe as an effort to reach safety at the World from all dangers and disasters. In the concept of ESD, vertical relationships, horizontal, and diagonal can be implemented in the activities of socio-cultural, economic, and environmental.

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CREATING POSITIVE LEARNING ENVIRONMENT IN ELEMENTARY SCHOOL/ISLAMIC ELEMENTARY SCHOOL BASED ON INTEGRATIVE-THEMATIC APPROACH IN INCLUSION CLASS

Written by:
Zidniyati, S.S., M.Pd.

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ABSTRACT

Learning environment becomes one of todays learning tools which has important role in reaching goals of learning program. The goals of national education in Indonesia is to create good generation who are smart and morally good. In this paper, *learning environment* includes *physical and non-physical learning environment*. The aim of this paper is to describe which learning environment is suitable for implementing the integrative-thematic approach in inclusion class in Elementary School/Islamic Elementary School. For this reason, there will be a discussion about the theories of learning, they are behaviourism, cognitivism, and constructivism. Each of these theories of learning has been responded in the creations of different learning environment.

Keywords*: learning environment, Elementary School/Islamic Elementary School, Integrative Thematic*

INTRODUCTION

Various attempts have been done by the Indonesian government due to help young people become smart and good. It has been realized that smart and good are different. The term of smart has something to do with intellect, while the term of good has something to do with moral. The basic education program in Indonesia is twelve years long learning program, six years in Elementary School (SD)/Islamic Elementary School (MI), three years in Secondary School, and the last three years in Senior High School. This program is for every child, including children with and without disabilities. In 2013 the Indonesian Ministry of Education and Culture started a pilot project of the implementation of 2013 curriculum in some elected schools. The 2013 curriculum is designed to provide the widest opportunity for students to develop attitudes, skills, and knowledge required in developing some competencies as mentioned in the Graduate Standard Competencies.

The competencies include students' capabilities to behave, to use knowledge and skills to do some tasks at school, community and environment in which the students interact. The Indonesian government intends to create the generation with those competencies. Generation in question is all children without exception, whether students with or without special needs. The generation in question is all children without exception, whether students with or without special needs. The Indonesian government has also stated that this generation should not arise as result of the selection of nature; it should be as result of the learning programs at every level of school education with a curriculum unit as the referring. One of the government's desire was manifested by implementing the method of delivery learning in the 2013 curriculum by way of (1) an integrative thematic for

the primary school level reached during the 6-year period learning, (2) Contextual Integrated for the Junior High School level reached during the 3-year period learning, and (3) Development of Specialisation for Senior High School level reached during the 3-year period learning.

Based on the description, there is one thing that needs to be formulated. That the way of learning at the primary school level is done through integrative thematic approach of learning, and that education is intended for all children, whether the students with or without special needs, so as to say that the learning environment in primary level in Indonesia should be created in such a way that all children can learn everything from school in an intact way and the learning culture must aiming at respecting each school community. The following is a discussion about the creation of positive learning environment with integrative thematic as the learning approach for an inclusive class.

Learning Environment

Learning environment refers to the variation of the physical arrangement of the class, context, and school culture in which students learn. As described in an article (2013:1) that since students may learn in a wide variety of settings, such as outside-of-school locations and outdoor environments, the term is often used as a more accurate or preferred alternative to classroom, which has more limited and traditional connotations—a room with rows of desks and a chalkboard, for example.

The term also encompasses the culture of a school or class—its presiding ethos and characteristics, including how individuals interact with and treat one another—as well as the ways in which teachers may organize an educational setting to facilitate learning—as an example, by conducting classes in relevant natural ecosystems, grouping desks in specific ways, decorating the walls with learning materials, or utilizing audio, visual, and digital technologies. And because the qualities and characteristics of a learning environment are determined by a wide variety of factors, school policies, governance structures, and other features may also be considered elements of a "learning environment."

Educators may also argue that learning environments have both a direct and indirect influence on student learning, including their engagement in what is being taught, their motivation to learn, and their sense of well-being, belonging, and personal safety. For example, learning environments filled with sunlight and stimulating educational materials would likely be considered more conducive to learning than drab spaces without windows or decoration, as would schools with fewer incidences of misbehavior, disorder, bullying, and illegal activity. How adults interact with students and how students interact with one another may also be considered aspects of a learning environment, and phrases such as "positive learning environment" or "negative learning environment" are commonly used in reference to the social and emotional dimensions of a school or class.

Integrative Thematic Approach of Learning

The implementation of the 2013 curriculum in primary school level in Indonesia is implemented using an integrative thematic approach. As stated by The Indonesian Ministry Of Education and Culture (2013:137) that the integrative thematic approach is a learning approach that integrates some competencies of some subjects into some binder themes.

The integration is done in two ways, which are the integration of attitudes, skills and knowledge in the learning process and the integration of the basic related concepts. The theme knits basic meaning of various concepts so that students do not learn the basic concepts partially. Learning, thus, gives full meaning to the learners as reflected in the variety of available themes.

In integrative thematic learning, the chosen theme is regard to nature and human life. In grade I, II, and III, both of which give substantial meaning to the subjects of Pancasila and Citizenship Education, Indonesian Language, Maths, Art-Culture and craft, as well as Physical Education, Sport and Health. This is where the basic competencies of Natural Sciences and Social Sciences organized into other subjects have an important role as a binder and developer of Basic Competence of other subjects. Psychologically, the primary students have not been able to think abstractly to understand content of subjects that are learned separately. The view of developmental psychology and Gestalt provides a solid foundation for the integration of basic competencies that are organized into thematic learning (The Indonesian Ministry of Education and Culture, 2013:137). From the perspective of transdisciplinarity then separating curriculum content rigorously does not provide benefts for the ability to think further.

Learning environment in Elementary School/Islamic Elementary School Today

It becomes increasingly important to discuss the creation of appropriate learning environment in relation to the implementation of the 2013 curriculum that used integrative thematic as a learning approach in Elementary School/Islamic Elementary School. Before discussing what the learning environment as appropriate one, the following is a portrait of the learning environment created in the elementary level schools in Indonesia. Events are used as an example the case in this paper are perceptible, but the real name of the actors is not mentioned.

Learning environment created in the majority of today in Elementary School/Islamic Elementary School in most regions in Indonesia still follow the conventional pattern although there are some schools that have seemed to respond to the implementation of the curriculum in a better response than conventional pattern. This is maybe because of different interpretations that arise from the schools and the parents over the implementation of the 2013 curriculum in Indonesia.

Todays Learning Environment in the Conventional Classroom

Learning environment that is created between the school and the students have an influence on the relationship that is created among the students. Peer relationship that arises can not be separated from the process of labeling students based on the acquisition of rank. Based on feld observations noted that a second grade elementary school student has been cheating because of her Mathematics score is lower than her classmate whose rank is one level below her. Having interviewed about what she was doing, the student replied:

"She is my rival, so she is my enemy. I acquired the frst rank and she acquired the second rank in the class. But yesterday I got 94 and she got 96 in math test scores. She made two wrong answers and I made four wrong answers. I corrected her answer sheet and I wrote that she made 9 wrong answers, because when I was going to write a number 2, I thought that number 2 can be changed into the number 9 with a slight change in writing."

Based on the carefully enough interviews, there are a lot of the information that is summarized from the case. There are certainly things that really are not expected to occur within a 2-grader Elementary School, which are dishonesty, hostility, and anxiety. The unexpected values seem to be having relation with student's self-esteem. Supposedly students who are proficient in academic also understand how to respond to his/her error when they made mistakes in answering questions and do not need to commit fraud that is used as a confrmation that one should always rank the highest score in the class.

The above case is an example of the unexpected relationship among peers that happen because there is a correlation with the pattern of ranking in the class. No doubt that teachers always

give a verbal message to the students to always be kind to their peers. Teachers also have certainly cite examples of actions that demonstrate good attitudes to their peers. But apparently, all such efforts are not enough for a student, even though the one that is considered smart (as in the ranks of the class), to apply it in their lives.

When a student got home, she/he often gets rave reviews from parents with greeting "Hi, how was your score? " Such greeting also gives a psychological effect which is not good for students. At school she/he becames one of the students who is confined in a learning environment that is saturated, when she/he got home she/he got the atmosphere reminded her/him of the boredom in school, then it will make the students more and more tired with this kind of routine. If such situation takes place in a long period of time, all day, for months, even years, then instead of producing a generation capable of using his knowledge in his life, even generations living under pressure that will be generated.

Learning environment created in response to learning theory

Learning environment is an atmosphere created for learning. Akinsanmi (2008:1) says "Learning environment are designed to suite or support particular learning theories-and there are many theories that explain the learning process." (2008:1). Akinsanmi also stated that researchers often base their theories on physiological, psychological and sociological changes that take place when learning occurs and often exclude the physical/material conditions that surround the learning process.

Learning is the acquisition of skills, knowledge, values, wisdom, and understanding. There are several learning theories that explain how the emergence of the learning process. This paper falls under three broad schools of thought—behaviorism, cognitivism and constructivism.

Behaviorisme

The end of the 19th and 20th centuries behaviorist experts stated that learning is closely related to the behavior. The brain of a new-born baby considerates as a blank slate– tabular rasa – who learns proper behavior and improper through positive and negative reinforcement (Squires and McDougall, 1994 in Ankinsanmi, 2008:1). B.F. Skinner (1904 – 1990) is one of the pioneers who contribute in the learning theory of behaviorism. The behaviorists believed that learning is evidenced by a change in the action through a process of exploration that shows individually on external stimuli that appears until the desired response. The expected response is reinforced with reward, while the unexpected response is not given the reinforcement. The theory of behaviorism is based on experiments conducted on animals. As Harzem (Akinsanmi, 2008: 1) said that this theory focus by looking at behavioral changes and not much see the considerations in the cognitive and affective learning process because it is not observable in that experiment.

Domjan (2005: 2) says "The change in behaviour that is used to identify learning can be either an increase or a decrease in a particular response." Example of learning outcomes is seen as an increase in response to a child who is learning to swim. Previously the child cannot swim, but after he learned to swim, the child learns to move his arm, his legs so that the child can swim. There appears to be additional coordination skills between hand and foot movements controlled by the child. Examples of learning in the form of a reduction in response is seen when a child learns not to do something, for example when there is a dentist who checks her teeth, the child must be quiet, not to make a move that could interfere with the doctor's examination.

Learning also may not always appear in plain, as what Domjan said that learning can be behaviorally silent. For example, a child can learn about all things related to driving by looking at the way of mature people drive. The child learns the function of accelerator, brake, and steering control. However, the child is not able to show the results of the study until the child is old enough to obtain a driver's license. For this reason, then Domjan (2005:5) states "learning involves a change in the potential for doing something." This is similar to that expressed by Lefranǫis (2000: 117) who stated "all relatively permanent changes in potential for behavior that result from experience but are not due to fatigue, maturation, drugs, injury, or disease."

The Response that appears on the learning theory of behaviorism is the perception that projects that the responsibility of a teacher is emphasized to transfer knowledge to students, and students are positioned as passive participant. Knowledge is transferred from the teacher to the students seem to be something that is objective, factual, and absolute.

Environmental Response

Learning environments that are designed based on this school of thought are lecture based, teacher-focused, and structured, and use a system of reward and punishment to promote learning. Physical learning environments (schools) created to support this learning theory were typically fenced in single buildings with several stories. "Classroom wings were laid out like the Henry Ford's assembly line: new learners (raw materials) were located at one end and moved through the classes until they emerged as graduates (finished products) at the other end "(Bennett and Le Compte, in Akinsanmi, 2008: 2). The class rooms were laid out in rows and columns and provided minimal room for fexibility. The teacher's desk was the main point of focus (besides the blackboard) and had a vantage point that made students' supervision easier.

Cognitivism

Another school of thought – Cognitivism, came to the forefront in the second half of the twentieth century when researchers found that behaviorism did not account for all types of learning (Gagne, 1984 in Akinsanmi, 2008: 2). Cognitivism rejects the behaviorist approach which excludes mental processes (e.g. thinking, memory, knowing and problem solving) in its explanation of how people learn, limiting learning to observable changes in behavior alone. Semple stated that (Akinsanmi, 2008:2) cognitivism focuses on the study of mental processes and uses it to explain learning. This view compares the mind to a 'black box' – one that needs to be opened and explored. The black box, like a computer, receives information, processes it and then produces an output that may be stored in the mind or exhibited in behavior. Knowledge can be viewed as schema, that is, symbolic mental constructions that are organized or processed in the mind. Learning occurs when there is a change in the learner's schemata. As such, the learner is an active participant in the learning process, and his/her actions are a result of thought.

Environmental Response:

Learning environments created around this paradigm encourage curiosity, provide inquiry oriented projects and present knowledge in staged scaffolding. Similar to behaviorism, cognitivism presents knowledge as absolute and objective. Schools built on the philosophy of cognitivism were typically laid out like campuses and were not often fenced in. They were usually single or two-story buildings connected by various walkways, which provided opportunities for the students to interact with the outdoors periodically, supporting the explorative approach of the learning theory.

The classroom buildings housed students according to their grades, usually with several classes of one grade occupying a floor or a building – a response to the enrolment explosion brought on by the baby-boomers. The classroom buildings were sequentially arranged and consisted of long corridors, flanked on both sides by classrooms. The internal layout of the classroom did not change much, however. The teacher's desk was still located at the head of the class and the students still sat in rows and faced the teaching wall.

Constructivism

Constructivism is the third broad category of learning theories. It rejects the behaviorist assumption that the mind is a blank slate and posits that learning is a process of constructing knowledge rather than acquiring it. Boyle (Akinsanmi, 2008: 3) stated that it takes into consideration the learner's social, cultural and contextual conditions and theorizes that the learner constructs knowledge through experience and in accordance with his/her level of cognitive development. In other words, learners interpret new information through their contextual experiences and build on their existing knowledge from the conclusions reached during the assimilation of and reflection on new knowledge. The mechanism by which learners internalize new knowledge was first articulated by Jean Piaget (1896-1980). Semple said that (Akinsanmi, 2008:3) this paradigm views learning as an active process of making meanings from experience and unlike cognitivism, it emphasizes the individual nature of learning. This theory puts the responsibility of learning with the learner and emphasizes the role social interaction and reflection plays in the learning process.

Environmental Response:

Learning environments designed based on this theory are student-centered, collaborative, cooperative, and experiential. Teachers in this setting serve as facilitators rather than instructors. One of the more recent learning theories that grew out of constructivism is the brain-based learning theory. Caine stated that (Akinsanmi, 2008:3) it is established on current neuroscience research findings about the physiology/functions of the brain and proposes that people learn better in a challenging, safe, comfortable, social and enriched environment.

Inclusive Class

The concept of class inclusion was initiated by education experts since the idea of education for all children was discussed. Inclusion classes are designed based on the phenomenon that children with special needs should also obtain treatment and education as that received by children without special needs (*education for all*). The concept of inclusion classroom learning refers to a class composed of children with special needs and children without special needs. This is done in order to create a more humane learning community, including the creation of expectations of mutual respect and self-esteem among the members of the class. Yvonne Becher and Zhang Li (2010: 13) stated "*inclusive education is only part of a wider understanding of inclusion".* Inclusion itself is seen:

> *"...as a process of addressing and responding to the diversity in the needs of all children, youth and adults through increasing participation, cultures, and communities, and reducing and eliminating exclusion within and from education. It involves changes and modifications in content, approaches, structures, and strategies, with a common vision that covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children."* (UNESCO, 2009 dalam Sheldon Shaeffer, 2010:6)

Based on these statements, the inclusion is a treatment process referred to and response to the diversity of needs of all children. It involves changes and modifcations in content, approaches, structures and strategies, with a common vision which covers all children and among certain age and a certainty that it is the responsibility of a sustainable system to educate all children. Therefore an inclusion class is certainly very necessary for children with special needs. One of the implications of aligning treatment and education for all children is the teacher must understand and be able to treat students with special needs (not including in the case of special needs children with severe levels of disability), especially for children with special needs is truly a member of the class feels inclusively comfort.

Who are Children with Special Needs?

Children with disabilities are classifed into eight categories by Santrock (2008:184), they are: *learning disability, mental retardation, sensory disorder, autism spectrum disorders, attention deficit hyperactive disorders, physical disorders, speech and language disorders, and emotional and behavioral disorders*. All children who have such disorders are included in the category of children with special needs.

The Expected learning environment

The ideal learning environment for inclusive program containing students with or without special needs or should provide facilities that can facilitate the learning process of all students. As teachers and schools gradually move to more inclusive programming, it is also necessary for them to pay close attention to the physical space and design of the inclusive class. In fact, the physical arrangement of a classroom environment will largely determine if and how inclusion will happen. Eredics (2013:1) said that creating an inclusive learning environment isn't just about changing attitudes, support systems and activities it is also about rearranging the physical space to accommodate the various needs that exceptional children have. Structuring the class highly expressed expectations of the school to the student learning outcomes. Thus the creation of classroom arrangement strongly reflects the way teachers organize learning to the student learning outcomes assessment.

There are some aspects that should be taken into consideration when assessing students. Freeman and Freeman (in Linse, 2008: 139) says "*When assessing students, it's important to remember that assessment should be measure of what students are able to do and what they know, rather than measures of what they are not able to do and do not know*." As Santrock (2008: 562) said that for children with special needs, the aspects that should be measured include important skills such as creativity, motivation, persistence, and social skills

The creation of learning environments aimed at inclusive classroom should consider several issues related to the condition of the needs of each student. Below are several suggestions teachers and schools can use to arrange the physical space of a classroom in order to facilitate inclusion based on Eredics' ideas (2013:2) :

1. The students' desks should be placed into groups (2-4 desks per group) so that all students have opportunities for cooperative learning, collaboration and discussion. As well, it is better to place the teacher's desk on the periphery of the classroom. Teachers in an inclusive class rarely sit down during their day and don't need their desk getting in the way.
2. It is better to provide centers. Centers appeal to various learning styles but they must also be accessible and open. As well, the materials and manipulatives at each center must be appropriate

and stored where all students can reach them. Placing books on a high shelf is limiting for a smaller student or one who is in a wheelchair.

3. It is suggested to provide meeting spot. Teachers should create one area of the classroom where the students can come together to have discussions, develop social skills and participate in large group activities. This space must have enough room for ALL the students to gather.
4. It is suggested to decorate the classroom in proper way. An inclusive classroom needs to be decorated in a way that does not create distraction and sensory overload. Too many bright colors, posters, clutter and furniture can easily distract the most focused child.
5. Safety or emergency preparedness is a must for inclusive class. Teachers need to ensure adequate space for all students to move safely around the room. Teachers also need to clear bulky items, stabilize furniture, tape down wires and cables, and place signs/symbols around the room that point out exit/entry ways in case of emergency.

Here are four basic principles that teachers should take into consideration when arranging a classroom based on Evertson, Emmer, and Worsham (Santrock, 2008: 496-497):

1. Reduce all the things that make congestion in heavy traffic areas. Distraction and disruption can often occur in high-traffic areas. These include group work areas, students' desk, teacher's desk, the pencil sharpener, bookshelves, computer stations, and storage location. Teachers should separate these areas from each other as much as possible and make sure they are easily accessible.
2. Make sure that teacher can easily see all students. An important management task is to carefully monitor students. To do this, teacher will need to be able to see all students at all times. Teacher has to make sure that there is a clear line of sight between teacher's desk, instructional locations, students' desks, and all students' work areas. Teacher needs to stand in different parts of the room to check for blind spot.
3. Teacher need to make often-used teaching materials and student supplies easily accessible. This minimizes preparation and clean up time, as well as slowdowns and breaks in activity flow.
4. Teacher need to make sure that students can easily observe whole-class presentations. Teacher need to establish where she/he and students will be located when whole-class presentations take place. For these activities, students should not have to move their chairs or stretch their necks. To find out how well the students can see from their locations, teacher need to sit in the students' seats in different parts of the room.

Teacher need to think about how she/he will organize the classroom's physical space, she/he should ask herself/himself what type of instructional activity students will mainly be engaged in (whole-class, small-group, individual assignments, and so on). Considering the physical arrangements will be best support for that type of activity. Below are various types of physical classroom arrangement based on Santrock's ideas (2008: 497-498):

1. *Auditorium style*. A classroom arrangement style in which students sit facing the teacher.
2. *Face-to-face-style*. A classroom arrangement style in which students sit facing each other.
3. *Off-set style*. A classroom arrangement in which small numbers of students (usually three or four) sit at tables but do not sit directly across from one another.
4. *Seminar style*. A classroom arrangement style in which large number of students (ten or more) sit in circular, square, or U-shaped arrangements.
5. *Cluster style*. A classroom arrangement style in which small number of students (usually four to eight) work in small, closely bunched groups.

Teacher also needs to consider the arrangement of non-physical learning environment. Students

need a positive environment for learning. Attitudes, teaching styles, and inclusive activities are also an important component of the inclusive class. Curriculum and delivery methods will also be considered to be highly acceptable to all children, whether whom with or without special needs. The assessment process for all students must be done in detail, involving assessment tools such as tests and non-test that are adjusted to each student's ability. Creating of physical and non-physical environment is aiming at reaching the learning goals of inclusion. This will impact on a sense of belonging, success, and self-esteem of all students of inclusive class.

Santrock (2008:500) stated that there are three aspects in creating a positive learning environment took into consideration, they are (1) general strategies, (2) creating, teaching, and maintaining rules and procedures, and (3) getting students to cooperate. The general strategies include:

1. *Authoritative classroom management style*. A management style that encourages students to be independent thinkers and doers but still provides effective monitoring. Authoritative teachers engaged students in considerable verbal give-and-take and show caring attitudes toward them. However they still set limits when necessary.
2. *Authoritarian classroom management style*. A management style that is restrictive and punitive, with the focus mainly on keeping order in the classroom rather than instruction or learning.
3. *Permissive classroom management.* A management style that allows students considerable autonomy but provides them with little support for developing learning skills or managing their behaviour.

To function smoothly, classrooms need clearly defined rules and procedures. Students need to know specifically how you want them to behave. Evertson, Emmer, and Worsham (Santrock, 2008: 501) said that rules focus on general or specific expectations about behaviour. An example of general rule is,"Respect other persons." An example of specific rule is, "Cell phones must always be turned off when you are in the classroom." Procedures, or routines, also communicate expectations about behaviour, but they usually are applied to a specific activity, and they are directed at accomplishing something rather than prohibiting some behaviour or defining a general standard. An example of procedure is a procedure of interrupting a whole-class discussion. Rules tend not to change because they address fundamental ways we deal with others, ourselves, and our work, such as having respect for others and their property, and keeping our hands and out feet to ourselves. On the other hand procedures may change because routine and activities in classrooms change.

Many effective classroom teachers clearly present their rules to students and give explanations and examples of them. Teachers who set reasonable rules, provide understandable rationales for them, and enforce them consistently usually find that majority of the class will abide by them.

There are three main strategies in getting students to cooperate. They are the developing of a positive relationship with students, the action of getting students to share and assume responsibility, and the rewarding appropriate behaviour.

CONCLUSION

Based on the discussion of the tree theories of learning (behaviorism, cognitivism, and constructivism) and the discussion about the arrangements of physical and nonphysical learning environment for inclusion class in Elementary School/Islamic Elementary School in which integrative thematic approach is used, it can be concluded that:

1. Physically, the choosing of the classroom arrangement style should be suitable for the activities in the class. The arrangements of other equipment needed for learning process in the class

should be easily accessible by all students and meet each students' need.

2. Non-physically, the general strategies, the creating, teaching, and maintaining rules and procedures, and the principle strategies of getting students to cooperate should be prepare carefully to meet the students' needs and development.

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INDONESIAN RELISTICS MATHEMATICS EDUCATION THROUGH MULTIPLE INTELEGENCE AT ELEMENTARY SCHOOL

Written by:
[1]Ida Nurmila Isandespha, [2]Dila Nurrohmah
[1]Ahmad Dahlan Universuty, [2]Sanata Dharma University
[1]idapgsd@uad.ac.id**, [2]dila_nurr@yahoo.co.id**

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ABSTRACT

Indonesian realistic mathematics education (IRME) through the characteristics could optimize students' multiple intelligences. The characteristics of IRME are: (1) use of contexts for phenomenologist exploration, (2) use of models for mathematical concept construction, (3) use students' creation and contributions, (4) student activity and interactivity in the learning process, (5) intertwining mathematics concepts, aspects, and units, and (6) use of typical characteristics of Indonesian nature and cultures. The eight intelligences identified by Howard Gardner are: (1) verbal/linguistic, (2) visual/spatial, (3) bodily/kinaesthetic, (4) intrapersonal, (5) logical/mathematical, (6) musical/rhythmic, (7) interpersonal, and (8) naturalist. All this time, verbal/linguistic and logical/mathematical mostly used and facilitated to assessed the success the students' in learning at elementary school. Also in mathematics learning, teacher usually just facilitated the students who have dominant in logical-mathematical intelligent. Indonesian realistic mathematics education that used contexts for phenomenologist exploration with Indonesian nature and cultures makes teacher could teach mathematics with learning activities that can facilitated students' multiple intelligences easily. Students' activity and interactivity in the learning process could facilitate students to develop their interpersonal and verbal/linguistic intelligences. Interpersonal intelligence develops through discussion and sharing the invention strategy among students during the learning process. Verbal/linguistic intelligence develops through students' activity when they write and present the result of mathematics problem.

Keywords: *Indonesian Realistic Mathematics Education, Multiple Intelligences*

A. INTRODUCTION

Mathematics is still a lesson that is not fun for most of students. In the classroom the teacher is often explained then gives examples of mathematics problem and followed by students' exercises. Learning like this just creates passive learner and only facilitates students with auditory learning style. Whereas students have different learning styles, they are visually, auditory and kinaesthetic. According to Gardner in different learning style can identified eight intelligences. The eight intelligences identified by Howard Gardner are: (1) verbal/linguistic, (2) visual/spatial, (3) bodily/kinaesthetic, (4) intrapersonal, (5) logical/mathematical, (6) musical/rhythmic, (7) interpersonal, and (8) naturalist.

Learning mathematics in elementary schools is just facilitating logical-mathematical

intelligence. Whereas students have different dominant intelligences and learning would be maximized if the teacher facilitates the students ' MI in the teaching of Mathematics. Mathematics teaching through MI is a great example of learning strategies. Through IRME, teacher could make learning math more fun and could facilitate different intelligence students in the class.

B. ANALYSIS

1. Indonesian Realistic Mathematics Education through Multiple Intelligences.

Mathematics in elementary school is just facilitates logical intelligence/Mathematical. It is not up to facilitate the other seven intelligences. The expected outcome of the current mathematics learning is much more comprehensive and deeper than just mechanical mastery. The very important of Mathematics teacher's responsibility is to encourage creativities by helping students discover the basic idea, the rules and principles of mathematics so that students find most interesting thing in the study of mathematics is mathematics itself (Mark, Hiatt & Neufeld, 1988: 11).

Indonesian Realistic Mathematics Education is a movement to improve the quality of mathematics education in schools. This movement found that the change should be done starting from the basic level i.e. Elementary School/Madrasah Ibtidaiyah which is the foundation of the formal education system, and then forwarded to a higher level. Indonesian Realistic Mathematics Education changed the paradigm of teaching and learning mathematics learning. Indonesian Realistic Mathematics Education adapted, not adopted, of Realistic Mathematics Education (RME) that have been developing in the Netherlands since 1971. Indonesian Realistic Mathematics Education is not the same as the RME though RME is the source of IRMI which adapted to Indonesian culture.

IRME learning approach should be started from the context, that is begins with the involvement of students in solving contextual problems. The real context, it means something that can be imagined by the students. Thus, in learning mathematics should be closed to the children's life and accordance to daily situation. Moreover, mathematical ideas should be emphasized in the daily activities of the children (Uzel, 2006: 1952). In the learning process using IRME approach teachers should role as facilitators for students in constructing mathematical ideas and concepts.

Learning mathematics with a realistic approach has distinguished characteristics to other approaches. The characteristics of IRME are (Sutarto, Zulkardi & Hoongland, 2010: 153):

a. Use of contexts for phenomenologist exploration: learning process starts with students' involvement in solving contextual problem
b. Use of models for mathematical concept construction: the use of a model for progressive mathematization: mathematics concept or idea reconstructed by students through mathematical models of vertical instrument, which is moving from informal procedure to formal form.
c. Use students' creation and contributions: students actively construct mathematical material to the facility based learning environment provided by the teacher.
d. Student activity and interactivity in the learning process: learning activities should be interactive, there are communication and negotiation between the students in the learning process.
e. Intertwining mathematics concepts, aspects, and units: learning a mathematics material which is related to various mathematical topics in an integrated way.
f. Use of typical characteristics of Indonesian nature and cultures: IRME is implemented according to the Indonesian students' development's characteristics and Indonesian culture.

In the study of mathematics, teachers should not only facilitate students who have intelligence logical-mathematics, but also facilitates students with other intelligences. There are eight

intelligences-identified by Howard Gardner. Each intelligence has its own characters. The characters of the eight intelligences identified by Howard Garner are (Hoerr, Boggeman & Wallach, 2010):

a. Interpersonal

Students who have interpersonal intelligence can enjoy friend and social activities. They always enjoys cooperative games, demonstrates empathy toward others, has lots of friends, is admired by peers, has leadership skill, enjoy and prefer at group problem solving, can mediate conflicts well, understand and recognized stereotypes and prejudices.

b. Intrapersonal

Interpersonal students are successful because they know their abilities, their options and understand themselves. Characteristics students with interpersonal intelligences are pursue personal interests, set realistic goals, identify and label feelings, sense their own strengths and weaknesses, daydream, are insightful and reflective, are intuitive, follow their instincts, are comfortable with themselves, express a sense of justice and fairness.

c. Bodily/kinaesthetic

Students with bodily/kinaesthetic intelligence process information through the sensations they feel in their bodies. They like move around, moving out, likes to figure out how things works, prefer to communicate information by demonstrating or modelling.

d. Verbal/Linguistic

Students who have verbal intelligence can learn by listening. Characteristics this intelligence are good at reading and writing, spells easily, enjoy word game, has well-developed auditory skills, easily incorporates descriptive language, easily remembers written and spoken information, good story teller, uses complex sentences structure, often enjoys the sounds and rhythms of language, love to debate.

e. Logical/mathematical

Logical/mathematical intelligence includes scientific ability and often called “critical thinking”. Characteristic of logical/mathematical intelligence are like to do things with data, shapes and pattern, is able to move from the concrete to the abstract easily, use information to solve a problem, enjoy computer game and puzzles, like to experiment in a logical way.

f. Musical/rhythmic

Students who have musical/rhythmic intelligence are sensitive to sound, environmental as well as musical. They enjoys singing and playing musical instruments, mimics beat and rhythm, notice background and environmental sound, sensitive to melody and tone, have a rich understanding of musical structure, rhythm, and notes.

g. Visual/Spatial

Students who have visual/spatial intelligence are tend to think in pictures and learn best from visual. They would be very interested while learning is presented through movies, pictures, videos, and demonstrations using models and props. They are good at reading maps, diagrams, solving mazes and think in three-dimensional term.

h. Naturalist

Students with this kind of intelligence focused on the ability to recognize and discriminate flora and fauna. They are interested learn by observation and discovery of natural phenomenon.

In reality, not all students have the dominant logical-mathematical intelligence. In the study of mathematics teachers not yet facilitate students with other intelligences so do not be surprised if

the mathematics becomes an unpleasant lesson. According to Gardner (Min & Othman, 2011) there are many ways to motivate children, depending on how they learn. Meaningful material could push pupils' natural curiosity about the world around them. It is suitable with characteristics of IRME. Through IRME teacher could facilitate students' MI in the class. The standard process of learning using IRME is starts learning process by presenting problems that is "real" for students that are according to the experience and knowledge of students.

When presenting problems for students, teachers can choose the context that facilitates the MI of the students. Through the intertwining principles of mathematics concepts, aspects, and units in every mathematics' learning, teacher will easier to organize the material. Teachers could integrate the same topic among some subjects in elementary school. Through this integration teachers would not only focus on the logical-Mathematic intelligence but teachers could also facilitate other intelligences while learning mathematics.

Teachers could develop students' linguistic and interpersonal intelligences through student activity and interactivity in the learning process. Students communicate and discuss their ideas, even up to negotiate and confrm each other. This process of course would develop students' ability to communicate and interact in their communities.

2. *Mathematics Activities Creating Multiple Intelligences.*

Through IRME teacher could facilitate different intelligences in the same class. Here is an example of learning using IRME approach which could facilitate MI in elementary school. The workfow of the Learning framework as follows (Domensia, 2008:38):

Purpose:

Develop numeracy skills of elementary school students in grade 2.

Procedure:

a. *Prior to learning, students are invited to dance while singing a traditional children song entitled " kupu kuwi tak encupe " the lyric is:*

   Kupu kuwi tak encupe

   Meng abure ngewohake

   Ngalor, ngidul, ngetan bali ngulon

   Mrono mrene mung sak paran-paran

   Mbok yo mencok tak encupe

   Mencok-mencok jegrok banjur mabur kleper.

b. Teacher tells about the life cycle of a butterfy and then discusses the pattern of spots on butterfy's wings.
c. Students are asked to make butterfy wings from papers and draw it. In this activity, students would use the experience from results of the discussion regarding the pattern of spots on butterfy wings.
d. Students make butterfy wings with a certain pattern of spots. Students set spots on butterfy wings that have been made, and then draw it.
e. Various kinds of spots arrangement that made by the students are discussed in class. Each student presents their idea.
f. Give the students a few pair of butterfy wings. Students are asked to fnd the right pairs and

give it numbers.

g. Students got the card number (1-10) and cards with a picture of butterfy with certain spots pattern. Teacher shows a number, and then the student shows a picture card with a butterfy which the spots pattern corresponding to the number. Then the teacher shows a picture card, children show the corresponding numbers.

Multiple Intelligences Extensions:

a. Kinaesthetic: *Prior to learning, students* dancing accompaniment by *"kupu kuwi tak encupe"* song.
b. Musical: Students sing *"kupu kuwi tak encupe""* song.
c. Linguistic: Students listen to a story about the life cycle of a butterfy. Students explain their ideas to the class.
d. This lesson also incorporates the Spatial Intelligence. Students draw butterfies, pressed spots pattern on butterfy picture. Students present the numbers in the picture of butterfy's spots pattern.
e. Logical-Mathematical: Students see patterns and relationships between the numbers and spots pattern of a butterfy.
f. Naturalist: Students together with the teacher discussing about the spots pattern on butterfy's wings.

C. CONCLUSION

Indonesian realistic mathematics education that used contexts for phenomenologist exploration with Indonesian nature and cultures makes teacher could teach mathematics with learning activities that can facilitated students' multiple intelligences easily. Students' activity and interactivity in the learning process could facilitate students to develop their interpersonal and verbal/linguistic intelligences. Interpersonal intelligence develops through discussion and sharing the invention strategy among students during the learning process. Verbal/linguistic intelligence develops through students' activity when they write and present the result of mathematics problem.

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BUILDING ISLAMIC-SCIENTIFIC INTEGRATION BASED LEARNING TOOLS FOR MI 5TH GRADER ON KEY SUBJECT "OW LIVING THINGS ADAPT" ORIENTED TO GUIDED DISCOVERY APPROACH

Written by:
Fitri Yuliawati
Teacher Education "Madrasah Ibtidaiyah", Faculty of Tarbiyah and Teacher's Training, Islamic State University Sunan Kalijaga Yogyakarta
E-mail: sainsasyik@yahoo.com

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ABSTRACT

Objectives of this research are (1) To know the characteristics of Islamic-Scientifc integration based learning tool for MI 5th grader on key subject "How Living Things Adapt" oriented to guided discovery approach; (2) to know if the learning tool that is built is suitable for teacher as a reference in teaching science.

This is an R&D research with 4-D model (four D model). It consists of 4 stages of developments: *Define*, *Design*, *Develop*, and *Disseminate*. One stage, Disseminate, is left undone since the results of this research are not spread to other schools (but the school in which the research took place), thus there were only three stages, having the *develop* at the fnal stage. The research used several instruments, namely observation form and questionaire. Descriptive analysis was employed to analyze the data. Kinds of data that were analyzed including appropriateness analysis, students response, learning outcomes and teaching performance.

Output of this research shows that (1) Science learning tool for MI 5th grader on key subject "How Living Things Adapt" is created with characteristics implying Islamic-Scientifc integration values which can be designed on syllabus, lesson plans, lesson materials, exercise and assessment forms, and using the approach of guided discovery; (2) Product of science learning tool for MI 5th grader on key subject "How Living Things Adapt" is avowed as suitable for application in science teaching with 'Good' quality based on reviewer assessment and got positive responses from the students.

Keywords: *Islamic-Science integration-based learning tools, guided discovery approach, research of development*

INTRODUCTION

Basically, the quality of science education refers to the quality of output of the educational process, that is the learners. Learners' quality is undeniably connected to mastery level aside of skill mastery and attitude. However, learners' quality has not achieve the level as expected. The lack of comprehension on subject materials can be caused by various complex factors. One of the reason is the way teacher deliver the materials. Teachers are commonly still using traditional

teaching method where they act as information providers (teacher-centered) while the students are not used to convey their ideas/opinions or develop their curiousities.

Through the guided discovery learning approach, students are allowed to have meaningful experiences as well as to find and to understand concepts entirely, based on their experiences which later will directly or indirectly improve their scientific characters. However, this approach is rarely or even never been implemented by the science teachers since the tools are not available.

Based on those premises, teachers should think of alternative solutions to improve students' learning outcomes. One of those solutions is by choosing a learning approach in a way that appropriate to the lesson material to be delivered. Among some developed learning approaches, the guided discovery approach is one of the options. The guided discovery approach helps the students to study and acquire the knowledge, also to build their own concepts uniquely since they found it by themselves. By the guided discovery, students gradually learn how to organize and manage investigations independently. There is a bigger chance of students to memorize when they found something independently while preaches of concepts will soon be forgotten.[1]

A. Formulation of the Problems

Based on those explanations, detailed questions are formulated below:

1. How is the characteristics of Islamic-Scientific integration based learning tools for MI 5th grader on key subject "How Living Things Adapt" oriented to the guided discovery approach?
2. Is Islamic-Scientific integration based learning tool for MI 5th grader on key subject "How Living Things Adapt" oriented to guided discovery approach suitable for teachers as reference in teaching science?

B. Objectives of Development

The objectives of this development study to be achieved are:

1. To know the characteristics of Islamic-Scientific integration based learning tool for MI 5th grader on key subject "How Living Things Adapt" oriented to guided discovery approach.
2. To know if the Islamic-Scientific integration based learning tool for MI 5th grader on key subject "How Living Things Adapt" oriented to guided discovery approach is suitable for teachers as reference in teaching science.

C. Advantages of the Development

This study offers some advantages including

1. Example of Islamic-Scientifs integration based-oriented to the guided discovery approach learning tool is available for teachers to manage learning-teaching activity of science at the MI, especially for the key subject "How Living Things Adapt". Hopefully, that will optimize the quality of learning outcomes in MI.
1. Being a guidance for teachers in planning and delivering learning activities with guided discovery approach.

DISCUSSIONS

A. The Learning of Science in *Madrasah Ibtidaiyah*

Before attending the primary school (SD/*Madrasah Ibtidaiyah*) and being formally taught of science, it is common that children have held basic ideas of science based on natural phenomenon

they seen in their daily life. Children have known what would happen when an object was pulled, hit or dropped. Moreover, children have the basic knowledge of the world and its suroundings, such as water, light, fre and shadows.

Taken from Paiget's growth theory, intelectual growth of primary school student is at concrete operational level, while their social development is at the phase of playing games. There are two basic strategies that are important in learning-teaching process of science: interaction with concrete objects and discussions with the guide. By those two basic strategies, student's learning cognitive will grow fast. When a learner attain the concept by themselves, the concept will last long since it was their own discovery.[1]

B. Learning Science with the Guided Discovery Approach

The idea of discovery learning arose from a will to give a pleasures to students in fnding something by themselves, like what scientists do. Abruscato said, "In science we have a name for learning that occurs when chidren, with our guidance, increase their cognitive, psychomotor, and affective development through direct experience. We call it discovery learning".[2] In science learning, when a learner is guided by teacher to improve the development of cognitive, affective and psychomotoric aspects through direct experience, it is called discovery learning.

Carin & Sund shared their opinion: kids need more information and guidance in learning, but as they grow up, the need of existence of the teacher will be less and less, and teachers will be needed as facilitator, source of information, supporter and guide.[3] When this is done properly, then science learning at the primary school will be able to facilitate the development of attitude, thinking, acting and scientist basic skills potencies of children.

Implementation of guided discovery approach in learning is divided into 3 cycles (Figure 2), known as exploration phase, conception invention, and discovery phase. At the phase of exploration, students have had the chance to do investigations.[4]

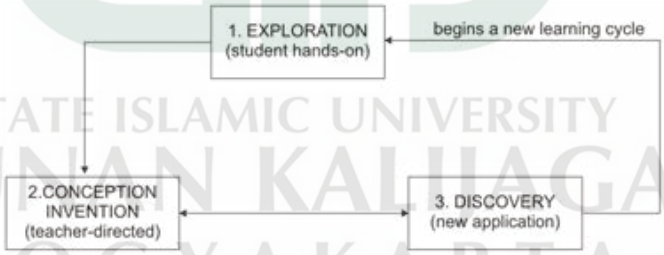

Figure 1. Learning plot by guided discovery

Carin stated, "Guided discovery teaching provides opportunities for greater involvement, giving students more chances to gain insights and better develop their self-concepts".[5] Learning with guided discovery provides more involvements, let the students to have more opportunities to gain insights and better develop their own conceptions.

Zuhdan Kun Prasetyo, et.al noted that there are two kinds of discovery learning, free discovery

1 Supriyadi, *Kurikulum sains dalam proses pembelajaran sains,* (Yogyakarta: Pustaka Tempelsari, 2007), p. 24.
2 Abruscato, Joseph, *Teaching children science: a discovery approach. Fourth edition*, (USA: Allyn and Bacon, 1996), p. 38.
3 Carin, A.A & Robert B. Sund, *Teaching science through,* p. 30.
4 Carin, A. A, *Teaching Science*, p. 117.
5 Ibid., p. 96.

and guided discovery. Indeed, guided discovery is seen more because students are more organized when guided by the teachers in trying to achieve their goals. Hands-on and minds-on are involved when making plans and preparing guided discovery activities.[6]

C. Learning Tool of Science for MI

The learning tool comes as a package consists of Syllabus, lesson plans (RPP), lesson materials (books), student's exercise form (*Lembar Kegiatan Siswa/LKS*), teaching media and assessment tools (cognitive, affective and psychomotoric). The developed learning tool is studied with study form which is adapted from BSNP format, by writing whether there is the discipline expected from each tools.

Syllabus is the teaching plan on a and/or some groups of particular teaching subjects/themes which cover the standard of competency, basic competency, key material/learning, learning activities, competency achievement indicator for assessment, the assessment, time allocation and resources for learning.[7]

Lesson plans (*Rencana Pelaksanaan Pembelajaran/RPP*) is some plan that describes the procedures and organization of learning to achieve one basic competency appointed in Contents Standard and has been explained in the syllabus. Lesson plans consists of these components: identity of lesson material, standard of competency, basic competency, competency achievement indicator, learning activity (introduction, point of discussion, closing), learning outcome assessment, and learning resources.

Lesson materials include science materials that hold values as resource of learning for the students. Exercise form (LKS) is the assignment form students have to work on, it is used as a tool to optimize students' outcomes and to improve students involvements in the learning process. Assessment tools including cognitive assessment in the form of assigments, affective assessment in the form of observation form of student behavior, and psychomotoric assessment by practicum observation form.

D. METHODS

The procedure or research plan used in this study is adapted from tool development 4-D model (four-D model). This model has for stages of development. First stage is to define, followed by stage of design, develop and a stage that has not been done, disseminate. Since the result of this study is not spread over other schools (but the school where this research took place), there are only three stages employed, with develop as the final stage.

1. Data Collection Instruments

This research used several instruments, namely observation form and questionaire.

a. Observation form

This study used lesson arrangement observation form. Instruments on this form were taken from the steps on lesson plan made by the observer.

b. Questionaire

Questionaire is used to attain data of appropriateness of developed learning tool seen from material aspect and media aspect. The questionaire is reserved for material experts, teaching media experts for sicence, science teachers at primary schools, and peer reviewers. This

6 Zuhdan Kun Prasetyo, dkk, *Kapita selekta pembelajaran fisika*. Jakarta: Universitas Terbuka(2001), p. 1.7.
7 Depdiknas, *Peraturan Menteri Pendidikan Nasional RI No. 41 Tahun 2007, tentang Standar Proses,* 2007.

instrument is arranged using Likert scale.

2. **Technique of data analysis**

Descriptive analysis was employed for data analysis. The data including appropriateness analysis, student's response, and teaching performance.

E. RESULTS AND DISCUSSION

The learning tool was developed with 4D development model, eventhough it was limited to three stages, which are define, design and develop. The disseminate stage was not done in this study. Here is the stages of that development in detail.

1. Define

Based on the analysis of curriculum and features of lesson materials, standard of competency and basic competency as development goal is chosen:

Standard of competency	Basic competency
3. To identify how living things adapt with the nature.	3.1 To identify adaptation of animals to the nature in order to survive. 3.2 To identify adaptation of plants with particular nature to survive.

Design

Here is the design of learning tool development:

a. Syllabus

b. Lesson material

The lesson material that was developed contained several features, including: Concept mapping, Learning Objectives, Advanced organiser, mini Science Dictionary, I am willing to try, Let's Find Out, I Recall, Science vocabulary, Figures and illustrations.

c. Exercise Form (LKS)

LKS is the guidance of student activities during the learning activity. It is made based on the guided discovery approach.

d. Assessment form

Assessment forms that were used including cognitive assessment (questions for examination on Adaptation Animals and Plants subject) and psychomotoric assessment form (practicum activity observation form)

2. Develop

Product design of learning tool is developed/created at the develop stage. After product 1 was done, peer reviewer is asked for opinion/advice. For this study, the peer reviewer was lecturer at *Prodi PGMI, Fakultas Tarbiyah dan Keguruan,* UIN Sunan Kalijaga Yogyakarta. Input and advice on product 1 became the material for product revision to be product 2. Material expert and lesson expert then was asked for opinion on product 2, it was the lecturer on subject of science and teaching and the lecturer on subject of educational technology. Input and advices on product 2 became materials for revision to be product 3. After the product was revised based on input

from material and educational expert, product 3 was then being assessed to reviewer, consisted of 4 science teachers from MI, namely MI Ma'arif Bego, MI Sultan Agung, MIN Yogyakarta I dan MI Darul Huda. The result of assessment and input for product 3 from reviewer was used to improve product 3. Minimal rating for learning tool product was the Good (B) category, whether on syllabus, lesson plan, lesson material, exercise form or assessment form. When the score was below B, then the product had to be reform and proposed one more time to reviewer. Learning tool product that was scored B was assumed as valid based on expert judgment.

Learning tool that had been avowed as valid by reviewer should be tested for practice. The test was done in small scale. The small scale test was done at MI Sultan Agung Yogyakarta with 5th grader as objects, 33 students in total.

Data from this study of learning tool development consist of product validation data and small scale test result data.

1. Product Validation Data

Product validation data including product validation data from expert judgment, reviewer and peer reviewer. Validation data is the rating and input on each components of learning tool, such as syllabus, lesson plans, lesson materials, exercise form and assessment form. The rating came in five-scaled scores. The conversion of five-scaled scores is shown on Appendix.

Data of assessment result and input on product from peer reviewer, material expert, educational expert and science teacher is described below.

Table 1. Recapitulation of assessments by peer reviewer (PR), material expert (ME), educational expert (EE), and science teacher (T) on learning tool

LEARNING TOOL		SUBJECT							Mean	Category
		ME	EE	T1	T2	T3	T4			
Σ TOTAL SCORE	SYLLABUS	30	21	29	29	26	25	21	25.86	A
	LESSON PLAN	75	60	74	73	70	69	51	67.43	A
	LESSON MATERIAL	144	132	142	142	125	115	128	132.57	A
	EXERCISE FORM	46	40	48	48	49	43	42	45.14	A
	ASSESSMENT FORM	60	49	58	58	60	52	43	54.29	A
SUM OF TOTAL SCORE									325.29	A

a. Data of assessment by MI science teacher

1) Syllabus

a) Globally it was good, but the time allocation need to be refined.

b) There were 5 indicators in 1st meeting, but in lesson plan there were 4 indicators for 1st meeting.

c) Time allocation did not fit with learning activity. For example, 2 hours of assignment for

3 kinds of activities, while those consume time.

d) Syllabus format need to be added with character score expeccted from the students.

e) Some assessment forms were not included in the syllabus.

2) Lesson plans

a) Write the material even if it was in a summary

b) Lesson scenario should be added, student with achievement should be rewarded/motivated

c) 2 hours of time allocation is too short

d) The score was greater than 64 in procedure of assessment of success.

e) Observation and performance had not been included.

f) Games was better learning strategi/method to attract students, since there were students who paid attention to the lesson lazily and there were too much students in a classroom.

3) Lesson materials

a) Examples of animals and plants should be more various and diversed from the textbook.

b) Domestic animals and plants would explore student's thinking skill more.

c) Some writings were cut

d) Write the summary of the lesson

e) No bibliography

4) Exercise form

No input

5) Assessment form

a) Evaluation test was attached/written after the bibliography in the lesson plan

b) There has no application of charts

c) Figures in daily examination were not placed properly

d) The order of questions was still ambiguous

e) There was no specification table for scoring

f) Essays on number 9 and 10 were better to be in process assessment.

2. Data of Small Scale Test Result

Data of learning activity on small scale test consist of data of learning performance, data of students response and data of student outcomes.

a. Learning performance

Based on observation result, learning execution using guided discovery approach was worth for score of 25. Based on the learning performance criteria, it is in the Good category. Based on readiness and teacher's comprehension about teaching with guided discovery approach, the teacher has done these things:

1) Study the concept or the theory students had learned

Before implementing learning activity in the classroom, the teacher had studied concepts of said materials. Teachers always have discussion with researcher first about lessons to be

delivered in teaching.

2) Studied the suroundings of school and home of students, then make selection and link it to the concept that will be discussed.

   The teacher used to bring about natural phenomenon around the students in teaching. For example, Sleman is a dry region where the trees fall off their leaves to decrease evaporation. The teacher link this phenomenon when talking about adaptation of plants.

3) Teaching by always motivate the students to link the subject they were learning to the knowledge/experiments they have had as well as what they had learnt from daily life.

4) Assess and cross-check the answers from students

   At every end of lesson, the teacher always asked about materials that students had learnt. Each answers of the students was being compared to find answers that are more appropriate. At the end of the lesson, the teacher guide their students to achieve the comprehension of concepts by asking activity which lead to a conclusion.

b. Students response

Students response during the lesson with learning tool can be known by questionaire given by the researcher at the end of the lesson. In summary, students responded positively toward learning tool that was being built. Beside the questionaire (filled with guidance by the teacher), students response was also revealed through interviews.

CONCLUSIONS

Based on the result, it can be concluded that

1. Science learning tool for MI 5th grader on key subject "How Living Things Adapt" which characteristic including the integration of Islamic-Scientific values is created, which can be designed on syllabus, lesson plans, lesson materials, exercise form and assessment form using guided discovery approach.
2. The product of science learning tool for MI 5th grader on key subject "How Living Things Adapt" is avowed as suitable for application in scientific teaching, based on the Good quality stated by reviewer and it is positively responded by the student.

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DUALISM AND INTEGRATION ISLAMIC EDUCATION AND GENERAL EDUCATION IN INDONESIA

(Historical Observation)

Written by:
Siti Johariyah

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ABSTRACT

Dualism and integration of Islamic education and general education is one of Islamic education problems in Indonesia that is very interesting to be discussed. The fact of the presence of two ministries; National Education Ministry and Religious Ministry, those are equal in charge of education in Indonesia become evidence of that. The presence of both ministries that is in charge surely cannot be separated from the context of the history of education policy implemented in Indonesia from The Dutch colonial era to the days after Indonesian independence. The government effort in facing the problems of dualism and integration of Islamic education has been done but the result is not satisfactory. Until now Islamic education still occupies a position that is not aligned with the general education. Those can be seen after enactment of curriculum in 2013for public schools, while the Islamic school recently will implement the curriculum in 2014.

Keywords: *dualism, integration, education policy*

A. INTRODUCTION

There is no doubt that the existence of Islamic education in Indonesia occupies very important position. This is because Islamic education has given a great contribution toward the life of Indonesian society, it is since before Indonesia's independence until after its independence.

Certainly, the implementation of Islamic education has been going on for so long is not detached from the dynamics of polemic and problem in any kind of situations and conditions which are faced by Indonesian nation. The curriculum problem of teachers, students, facilities and infrastructures, and any kind of basic problems such as the problem of educational policy which tends to discriminate the existence of Islamic education becomes the most interesting topic to discuss.

Dualism and integration of Islamic education and general education are one of problems of Islamic education in Indonesia which is so interesting to be talked. As the fact, there are two ministries. They are frstly the ministry of national education which manages educational institutions starting from kindergarten (TK), elementary school (SD), junior high school (SMP), senior high school (SMP), and college or university while the religious ministry manages educational institutions starting from Islamic kindergarten (RA), Islamic elementary school or madrasah (MI), Islamic junior high school (MTs), Islamic senior high school (MA), and Islamic college or university such as UIN, STAIN, PTAIS[1], those become the evidence of the dualism. Both organized educational institutions are endorsed of fcially and they are a part of the system of national education. Besides, in terms of realizing this dualistic education, Indonesian governments also have actualized some

1 See UU No. 20 Year 2003 about the System of National Education

steps such as some policies which try to integrate Islamic education and general education.

Based on the explanation above, the fact of dualism and integration of Islamic education and general education which have developed already in Indonesia will be easier to be understood if using historical approach and government policies within Islamic educational system. Therefore, this article discusses about what educational dualism is, how the history of turning up the educational dualism is, what kind of policies which have been worked out by Indonesian government in overcoming educational dualism, and what the effects are from government policies attaining the integration of Islamic education and general education.

B. DISCUSSION

1. The Definition of Dualism

There are two terminologies which are often used by experts to name the existence of Islamic education and general education in Indonesia namely dualism and dichotomy. Based on Indonesian Language Dictionary, dualism is two contradicting principles. In terminology, dualism can be defined as two principles or to concepts which are different and contradict each others[2]. Meanwhile, the terminology of dichotomy according to English Language is two subdivisions, or branched two parts[3]. While in the technical term, dichotomy can be defined as separation between science and religion which later develop as the other dichotomy phenomena such as dichotomy of theologian and intellectual, dichotomy in the Islamic educational field and dichotomy within Muslims (split personality)[4]. Some say that dichotomy is a separation strictly and clearly from one type into two types which are separated each others, where the one cannot be united to one another, and vice versa[5].

Besides the opinions above, there is also an opinion which makes similar with the term of dualism and dichotomy.mentioned. Both mean the separation between religious educations (Islam) from general education[6]. Therefore, dualism or dichotomy can be meant as the separation of educational system between Islamic education and general education, as regarded as separating Islamic religious lesson and general lesson, Islamic school called as *madrasah* and general school, each management has its own policies. This kind of opinion tends to discern toward the aspect of dualism.

Furthermore, if it is understood more accurately between dualism and dichotomy, there is a principle case that differ them. Dichotomy is sometimes related to content and material, while dualism is related to the management system. Emerging the dichotomic view toward sciences (religion and general) causes the existence of educational dualism.

Therefore, the existence of educational dichotomy is occurance of the separation between religious science and general science in school or Islamic school, while the existence of dualism is more emphasized at the management, for instance the educational management in Indonesia which is under control of two ministries, they are the Ministry of National Education and the Ministry of Religion. For operational technically, the Ministry of National Education authorizes educational institutions starting from TK, SD, SMP, SMA, even General Univeristy, meanwhile the Ministry

2 Departemen Pendidikan dan Kebudayaan*, Kamus Besar Bahasa Indonesia*, (Jakarta: Balai Pustaka,1989), cet. 2, Page. 214.
3 John M Echols dan Hassan Shadily, *Kamus Inggris-Indonesia,* (Jakarta: PT Gramedia Utama,1992), Page. 180.
4 Muslih Usa (ed.) *Pendidikan Islam di Indonesia Antara Cita dan Fakta*, (Yogyakarta: Tiara Wacana, 1991), Page.104.
5 Soegarda Poerbakawatja, *Ensiklopedi Pendidikan*, (Jakarta: Gunung Agung,1982), Page. 78.
6 Marwan Saridjo, *Bunga Rampai Pendidikan Agama Islam,* (Jakarta: Amissco, 1996), Page. 22.

of Religion authorizes educational institutions for RA, MI, MTs, MA, even Religious University.

2. The Dualism Root of Education in Indonesia.

As it has been explained in the preface, that the problem of dualism basically is the manifestation of perspective on dichotomic science, where there is a religious science on the other hand there is also a general science. The religious science is perceived as the destination of reaching the heaven, whereas the general science is perceived as the obstructions of reaching the heaven[7].

The problem of dualism and dichotomy of Islamic education and general education have been going on for so long and it has been ingrained thightly to Indonesian society. This case is because this problem has already happened since Dutch colonized this country until the independence of Indonesia.

In brief, after Dutch could solve some kinds of rebellions as what was done by Pangeran Diponegoro, Imam Bonjol, Tengku Cik Di Tiro, Pangeran Antasari, Sultan Hasanuddin, and etc, so the history of colonialization in Indonesia comes to the new era namely Dutch had dominated Indonesia. Thus, all authorities both in political, economy, socio – cultural, including education and religious life are under control of Dutch' authority[8].

As the country which wants to continue authorizing Indonesia, what makes the main focus of Dutch is how to show the sense of pleasure among Indonesian people toward the Dutch government. There are two kinds of perspectives. Firstly, it is connected to the cultural element and also related to a matter of how to develop Western culture in order Indonesia can accept this culture as its culture without overriding its own culture[9], it is called as association[10]. The second perspective is how to change Islamic religious population becoming Christian[11]. Both perspectives are more in contact to main purposes namely strengthening the Dutch position in Indonesia.

In 1891 M, the General Governor Van Der Capellen had a concept to build one kind of education which based on the pure indigenous regularly and it was adapted to people of village, then it is contacted to Islamic education which had existed before[12], by intention in order to develop evenly the ability of reading and writing among indigenous people, with the result that they can easily obey the laws of country[13]. In the next development, the suggestion of Islamic educational institutions can be wisely used on policies for fostering general education which is factly not realized because of the fact that Dutch government always chose another path than adapted its self toward Islamic education[14].

In 1865 M, a year after J.A. der Chijs takeholded as the inspector of the frst indigenous education, had ignored to adapt Islamic education with the reasons of the indigenous habituality was in poor quality so it could not be applied in indigenous school. As it is meant by poor habituality is mainly a method of reading Arabic text which is only memorized without knowing the meaning. In the same time, in Minahasa and Maluku, there were some schools which were built and managed

7 Azzumardi Azra, *Pendidikan Islam, Tradisi dan Modernitas Menuju Milenium Baru* (Jakarta: Logos, 1999), Page. ix

8 Zuhairini, dkk, *Sejarah Pendidikan Islam*, (Jakarta: Bumi Aksara, 2006), Page. 147- 148

9 Deliar Noer, *Gerakan Modern Islam di Indonesia* 1900-1942 (Jakarta: LP3S, 1980), Page. 26.

10 'Assosiasi' dalam tulisan Deliar Noer mengandung maksud untuk mengikat jajahan itu lebih erat pada penjajah dengan menyediakan bagi penduduk jajahan itu manfaat-manfaat yang terkandung dalam kebudayaan pihak penjajah dengan menghormati sepenuhnya kebudayaan asal (penduduk)

11 Op cit, Page. 27

12 Karel A. Steenbrink, *Pesantren Madrasah Sekolah pendidikan Islam dalam Kurun Modern*, (Jakarta: darma Aksara Perkasa,1986), Page. 2.

13 Op cit, Page. 148

14 Op cit, Page. 3.

by Protestant missionary or zending, but there were subsidies from governments whereas these schools were almost 100 percents centered on religious education[15].

After Van der Chijs travelled to Minahasa and Maluku in 1867 M, the inspection of Colonial Education were actively affliated to Christian education. Even Van der Chijs suggested about the correction and improvement of quality of general lessons in school, while religious lessons were decreased. In the next mission, the schools of Protestant missionaries or zending finally came to the system of general education of gubernemen. Technically, entering zending education into general education system was easier that entering the Islamic boarding school into general education system. These cases were caused by some school students who were commonly accustomed to Latin inscription. Similarly, Malay language which was foreign language for some students was easier compared with Arabic language also becoming one of the reasons. Besides, zending schools had been also taught some basics of arthimetic. Another factor which was also important was because government had interfered zending schools for long time[16].

Furthermore, as written by Zuhairini et al, as cited in the writing of HR.Mubangid, it is stated that in 1882 M, Dutch government established a specifc corporation which works at commissioning religious life and Islamic education which called as *Priesterraden*[17]. On the advice of this corporation in 1905 M, government announced a rule that people who give recitation must have permission frst.

In the year of 1888 M, the Colonial Cabinet refused to give subsidies toward Islamic shools with the reason that General Governors did not want to render the state finances for that schools, it was because Islamic schools finally just succcessed at developing one educational system which had not benefit. According to these considerations, finally there built a village school, an simple educational institution which opens the course in direction of realizing general education, in the same time, the suggestion for merging Islamic education was rejected[18]. Since then, Islamic education took its own path which was separated from gubernemen. Islamic education still holded on its own traditions, yet it kept welcoming to the traditional revolutions.

In the next period, namely around the beginning of century XX, there were some policies of Dutch in Indonesia which significantly influenced to Islamic education. At least there were two policies namely ethical politic (in 1901 M) and teacher ordinance/illegal school[19]. Ethical politic relates to colonizers' reward toward colonized people by building some low vocational schools. Teacher ordinance was issued on 28th of March 1923 which contained the teaching freedom limitation for private school teachers. In the year of 1932 M which was announced also the rule which contained the combat and close *madrassah* or Islamic school and schools who had not have permission or it gave a lesson which was detested by government called as Wilde School Ordonantie. The other policies were a rule called as religious neutral namely government did not take sides on one of religions so the school of government did not teach a religion[20].

To maximize the supervision system executed, so Indies and Dutch government established two department institutions, that were *Departemen van Onderwijst en Eerendinst* which worked for supervising religious lesson in general school, and *Departemen van Binnenlandsche Zaken* which worked for supervising religious education some Islamic educational institutions, Islamic boarding

15 *Ibid*, Page. 4.
16 *Ibid*, Page. 5.
17 Zuhairini, dkk. *Sejarah*…, Page. 149.
18 Karel A. Steenbrink, *Pesantren…*, Page. 7
19 Ramayulis, *Sejarah Pendidikan Islam,* (Jakarta: Kalam Mulia, 2002), Page.282.
20 Zuhairini, et all., *Sejarah*…, Page. 149-150

school or *madrassah* for instance[21]. From this case was started the system of dualism within education realized from the presence of educational institutions manged and funded by Dutch Colonial government and Islamic educational institutions that operated and funded by society became the clear evidence of the dualism.

Thus, it can be concluded that by the system of dualism, actually Dutch government could easily supervise and control strictly the educations conducted by indigenous people. Some rules which were announced by Dutch as explained above basically are obstructing the development and progression of Islam. In another words, Dutch Colonial government tried hard through some policies ignoring the role of Islam within public life. The effects of discriminative policies, Islamic education confronts some difficulties even isolated from the current modernization[22]. Eduaction which is created by Ducth Colonial government as a reward actually is not aimed to increase the intelligence and social life standart of society, yet it is more directed to maintain the social difference in order to make discordance for indigenous people. This is in line with the Dutch political system of *devide et impera* that is political provocation by dividing the big community into small groups, so there will be no any power for threatening and defeating Dutch.

After Dutch colonialization was defeated by Japan, the policies which were less benefit for Islamic education was still kept continuing. Although the colonialization of Japan gave more freedom than the colonialization of Dutch, but the educational world was generally neglected, it was because the students everyday were got to do move body, make the line march, work (romusha), sing and etc[23].

3. Dualism: Acessing Government Policy

As we had seen that when Ducth defeated, Indonesia returned to be under controlled by Japanese Colonialization, and when Japan also was expelled successfully from Indonesia, the dualism of educational system was still being kept until Indonesia declaring its independence. Even nowadays, the impact of dualistic educational system is still popular in Indonesia.

The state policy in educational feld is the formation of the politics of national education, it is also the product of political decision which is taken through the political process involving the element of legislative and executive. As the result of political process, certainly the result of educational policy is not detached from the perspective influence and the paradigm which is used by them involved within the determined process[24].

Policy and educational politic after Indonesia' independence do not contain the strict nuance monitoring, which tends to discriminate even emasculate Islamic education like as ocuured in Dutch colonial government. In term of post – independence comes to efforts of Indonesian government for recognizing Islamic education in spite of carried out slowly.

When Indonesia had proclaimed its independence on 17th of August in 1945, Islamic education was not included in the system of national education. The paradigm of dualism that was inherited by Dutch colonial government was constantly grown strongly on the realm of country education. Indonesian government inherited the dualistic educational system, namely frst is the educational system and instruction in secular general schools, and secondly, the educational system and Islamic instruction that grow and develop among Islamic community, both isolative – traditional fgure and

21 Husni Rahim, *Arah Baru Pendidikan Islam di Indonesia,* (Jakarta: Logos Wacana Ilmu, 2000), Page.. 55
22 H.A.R Tilaar, *Paradigma Baru Pendidikan Nasional*, (Jakarta: Rineka Cipta, 2000), hal. 169-170.
23 Ramayulis, *Sejarah*..., Page. 345
24 Nurhayati Djamas, *Dinamika Pendidikan Islam di Indonesia Pasca Kemerdekaan*, (Jakarta: Rajawali Pers, 2009), Page.165

synthesis figure[25].

The problem of educational dualism which is inherited by Dutch colonial government, operationally it brings effects which is the management of national education having no the clear basic standards. This is because the implementation of Indonesian government applies the design of Ducth colonialism[26]. As the fact, the ingrained education among Indonesian people who are mostly Muslim is Islamic education.

In the next journey, exactly in 1950, when the the first constitution of national education namely the constitutional of Republic Indonesia No 2 in 1950 contained about the basics of education and instruction in school constituted, Islamic school, and Islamic boarding school as the Islamic educational institution were not involved in the system of national education. Even there was a problem of Islamic education instructed in general schools.

Furthermore, in this step Islamic school had not been rendered yet as a part of the system of national education, but it was an educational institution under control of Religious Ministry[27]. In the case of curriculum, it became one of considerations in giving the confession toward Islamic shool because Islamic education commonly focused on its curriculum on *tafaqquh fiddin* which was concerned with Islamic science field[28].

Next, also in 1950 in Indonesia, there happened a historical accident in the educational field, namely when the president of Soekarno decided the establishment of Gadjah Mada University which was assigned to nationalist community. In the same time, it was also established State Islamic University (PTAIN) which was assigined to Muslim[29]s. From this case, it was viewed clearly that there happened a significant fertilization which was executed by government toward the continuity of the dualistic educational process in Indonesia. The existence of Gadjah Mada Universty which developed general sciences and State Islamic University which concerned with religious sciences became the clear problem which was formulated by government.

In the development, the polarization of two educational institutions established a polarization more comprehensively[30]. The far implication from the occurrence of polarization was (1) the general university seems to be owned by non Islamic community, (2) dualism and dichotomy is continually hold out, even it tends to be larger, and (3) general school and general university becomes the construction of Education and Cultural Ministry, while state Islamic university becomes the construction of Ministry of religion[31]. In such kind of this reality, this causes the drop of Islamic education into dichotomy or dualism between secular education and Islamic education. This also causes the trapping condition on the management of dualism, where the secular/general education under control of the management of the Ministry of national education and Islamic education under control of the Religious Ministry.

Confronting the dualism and dichotomy of education above, then in 24th of March 1975 government announced SKB three ministers[32]. By announcing this kind of SKB three minsters

25 Muhaimn, *Wacana Pengembangan Pendidikan Islam*, (Yogyakarta: Pustaka Pelajar: 2003), Page. 82

26 Ali Riyadi, *Politik Pendidikan Menggugat Birokrasi Pendidikan Nasional,* (Yogyakarta: Ar-Ruzz,2006), Page. 81

27 Husni Rahim, *Madrasah dalam Politik Pendidikan di Indonesia*, (Jakarta: Logos Wacana Ilmu, 2005), Page. 17.

28 Nurhayati Djamas, *Dinamika...*, Page. 183

29 Mahmud Arif, *Pendidikan Islam Tranformatif*, (Yogyakarta: LKIS: 2008), Page.204.

30 Marwan Saridjo, *Bunga Rampai...,* Page. 24-25.

31 *Ibid*., Page. 25.

32 Inti dari ketetapan SKB Tiga Menteri tersebut adalah (1) Agar madrasah umtuk semua jenjang dapat mempunyai nilai yang sama dengan ijazah sekolah umum yang setingkat, (2) Agar lulusan madrasah dapat melanjutkan ke sekolah umum setingkat dan lebih atas, (3) Agar siswa madrasah dapat berpindah ke sekolah umum yang setingkat.

caused the occurrence of the huge basic revolution on Islamic education/madrassah. By means of SKP (Surat Keputusan Bersama) as the joint decision of three ministers and the policies mentioned brought Islamic schools which were realized the curriculum of Religious Ministry treated equally with general schools on the same row. Some students also could move each others continually. SKP three ministers caused the occurrence of chaging the curriculum of *madrasah* which at the beginning 60 % religiosity and 40 & generally became 30 % religiosity and 70% generally[33]. Even though at the beginning of SKP three ministers got a reaction from society who perceived as the silting of religion in Islamic schools, but at the end it was welcomed positively by some educational experts, some teachers, religion teachers, society in common[34].

In 1984, it was announced that SKB two ministries between the Ministry of Education and Culture and Religious Ministry number 299/U/1984 and also No. 45 in 1984 about the standardization management of school curriculum and Islamic school curriculum. This SKB was inspired by MPR decision number II/TAP/MPR/1983 about the relevancy adjustment ofeducational system in line with the building need in some fields, it is realized through some improvements of curriculum as one of the implementation efforts of education in general school and Islamic school[35].

Yet as the result of SKB two ministers had not gratifed yet because the occurrence of curriculum dichotomic problem, namely general curriculum and religious curriculm that affected dichotomic graduates between two the executors of education. It was strongly worse if it was observed from the expertise skill, the dichotomization as though created already Islamic label and non – Islamic toward its educational graduates. In the further development, the policies which were announced by the government not just omitted dichotomy and dualism between Islamic education and general education. As the bad fact is the occurrence of discriminative treatment toward Islamic school graduates which are perceived they have not had yet an ability which is equal to general school graduates[36].

This discriminative treatment is certainly experienced by Islamic school graduates when they continue to the next university or to apply a job[37]. This fact becomes an issue even and a topic discussion continually among Islamic community that is feeling treated unfairly. The general school which based on the educational model of Dutch colonial nowadays becomes the dominion in this country that is the majority of the population is Muslim. Meanwhile Islamic education which is owned by Indonesian people becomes the second education in the rank.

4. Integration: the Solution on the Dualism of Education in Indonesia

In the further periods, Indonesian government tried to make serious efforts in solving the problem of dualistic and dichotomic education. Even yhough it had been actualized some steps by announcing some policies as what has been explained above, it seems the problem of dualism and dichotomy cannot be solved well, even to be fnished.

Actually, since after Indonesia' independence, the thoughts directed to the system of national education had been commenced, yet this kind of though got a challenge and ignorance from Islamic community. The ignorance is mainly caused by religious – psychological among Islamic community that is worried of integration policies can decrease its Islamic quality in the process of education

33 Ramayulis, *Sejarah...,* Page. 439

34 Merupakan hasil evaluasi yang dilakukan Departemen Agama RI yang dilakukan pada tahun 1979

35 Maslani, dalam *Media Pendidikan, Jurnal Kependidikan Keagamaan*, (Bandung: Fakultas Tarbiyah dan Keguruan UIN SGD Bandung, 2007), Vol. XXII, No. 2, Page. 301..

36 Ali Riyadi, *Politik Pendidikan Menggugat Birokrasi Pendidikan Nasional*, (Yogyakarta: Ar-Ruzz, 2006), hal. 83. Husni Rahim, *Madrasah...*, hal. 20.

37 Nurhayati Djamas, *Dinamika....*, Page. 188.

that can affect to secularism in social life[38].

Its phenomenon synthesizes two poles of education between Islamic school and general school walking slowly but for sure particularly after it had been determined by The National Constitution No 2 in 1989 about the System of National Education. The government steps which manages the realization of Islamic school and religious education is basically assigned to convergence and integration of dualism in educational system into one system of national education which becomes the realization center of all kinds and levels of education. This case can be seen at the article 11 verse (1) deciding that some kinds of education which are incolved in educational track stand on general education, vocational education, academic education and professional education. Whereas at the verse (6) explaining that religious education is an education that sets students up to actualize the rule in demanding mastery of certain knowledge in related teaching lesson[39].

However, the fact of ten years more since the Constitutions No. 2 in 1989 was announced, these constitutions proved could not afford yet to lift up the image of Islamic school as the alternative educational institution. Except some certain Islamic schools which have a great quality as the result of social construction. Government policies toward Islamic school as far are still positioned in the discriminative place. The implementation of Constitutions is still perceived very centralistic, not democratic, and the authority is too dominant. As well as the paradigms used by government all this time in organization of national education, including Islamic education, and its practice have caused some animalies, they are frstly the tendency to make state on Islamic schools that have been established through the initiative of society; secondly, the tendency toward the centralization of curriculum; thirdly, the tendency of uniformity within the Islamic shool itself.

In fact, what have been actualized by government cannot omit yet the management of dualistic and dichotomic paradigm which during this time covering national education. Dichotomy and dualism endorse two territorials confronted each others, between Religious Ministry as the authority of religious educational management and Education and Cultural Ministry as the management of general education. Though Islamic school which is managed by Religious Ministry as a part of the system of national education, but the realization of essential confession is not comparable yet to the substantial purpose of UUSPN. This case can be understood from the allocation of budget to the development and expantion of Islamic school quality is not proportional with the budget given toward some schools under authoritized by Education and Cultural Ministry. [40]Furthermore, in the Constitutions No. 2 in 1999 about the local government and the Constitutions number 25 in 1999 about the equality of fnance between the Central and Local Government create a paradigm friction from government system which is centralistic and directed to government system which is decentralistic. The Constitutions have cased a huge revolution, not only in the matter of government feld but also in the educational feld. The general education which is controlled by the Ministry of National Education (formerly Education and Cultural Ministry) also encounters decentralistic, meanwhile religious education which is controlled by Religious Ministry is not clear yet, whether it still stands the centre of coordination and monitoring, or it is decentralized under the supervision of

38 Nurhayati Djamas, *Dinamika....*, Page. 188.

39 *Ibid.,* Page. 187.
Fuad Jabali dan Jamhari, *IAIN dan Modernisasi Islam,* (Jakarta: Logos, 2002), Page. 127
Mastuhu, *Menata Ulang Pemikiran: Sistem Pendidikan Nasional Dalam Abad 21*, (Yogyakarta: Safria Insania Perss, 2003), Page. 23.

40 H.A.R. Tilaar, *Paradigma Baru...*, hal. 171-172.
Ali Riyadi, *Politik...,* hal. 84
Husni rahim, *Madrasah....,* hal. 1.
Ibid., hal 2.

authoritical coordination of local government. This case definitely brings a kind of problem within the existence of Islamic education.

In the Constitutions No. 22 in 1999 article 7 verse (1) stated that the local authority covers an authority within the whole fields of government, except the authority of international politic, security, judicature, monetary and fiscal, religion, and in the other fields. Meanwhile, in article 11 verse (1) stated that education and culture are one of the eleven fields which must be realized by regency and city area[41]. If its understood further, two verses above cause a question whether Islamic shool is involved in education or religion. Then, it turns up two opinions; firstly, an opinion which states that religious education and other educations that are managed by Religious Ministry is not dichotomized as meant by article 7 verse (1) from UU number 22 in 1999. It means an education controlled by Religious Ministry is categorized as a part of religious system, not a part of the system of national education. Secondly, an opinion which states that religious education and other educations that are managed by Religious Ministry are a part of the system of national education because it is outonomized so the educations in the area of Religious Ministry is also outonomized.

Further, Religious Ministry is confronted to two difficult choices, that are first making a development of Islamic shool centralistically namely it is directed to be controlled by Religious Ministry or transferring a development of Islamic school toward government as the logical consequence from the realization of local autonomy in educational field. In the further development, the existence of Constitutions number 20 in 2003 about the System of National Education essentially strengthening the position of Islamic religious education.

It can be seen from the curriculum of Islamic school which is stated at the Constitutions, where the religious lesson besides as an obligatory lesson, it is also positioned at the first list in the curriculum of the obligatory lesson in general school. This definitely shows that there is a great appreciation which is given to government toward Islamic religious system.

Hence, the Constitutions No 2 in 2003 described more in the government rules RI No. 19 in 2005 about the Standardization of National Education. In the article 1 verse (1) mentioned that the standardization of national education is the minimum characteristic of educational system in the whole area of the Unitary of Republic Indonesia. This is in line with and supported by the vision of UUD 1945 article 31 verse (1) which is stated that every citizen has a right to get education[42].

What have been actualized by the government of Republic Indonesia shows that there is a serious plan in integrating Islamic education and general education in this country. The matter of dichotomy and dualism between Islamic education and general education which have been working for so long begins to expose the new image as the result of integration efforts.

C. The Positive Effects of Integration Efforts

The efforts actualized by Indonesian government in order to eliminate the dualism of Islamic education and general education have been widely experienced by Muslims. Policy by policy which is decided by government gradually opens an access toward Islamic education to more exist in public.

After Indonesia proclaimed its independence, it looked apparently some revolutions which

41 Azzumardi Azra, *Paradigma Baru Pendidikan Nasional, Rekonstruksi dan Demokratisasi*, (Jakarta: Kompas, 2006), Page. 95.
Husni Rahim, *Madrasah*...,Page.2.
Ibid., Page. 2-3

42 Ramayulis, *Sejarah...,* hal.444.
UUD 1945 dan Amandemennya.

were quite prominent namely the perspective of government which not only contained the strict monitoring, that tended to discriminate even emasculate Islamic education as what had occurred in Dutch Colonial Government. It can be seen that in 3th of January 1946, government established Religious Ministry which worked on managing some questions related to religious life for all Indonesian people. Institutionally, Religious Ministry was assigned to obligation and responsible toward the development and expansion of religious education in those institutions[43].

As it has been described above, that the efforts actualized by government in order to integrate religious education (Islam) and general education have been started to realize after Indonesia' independence according to the Institution of Central Indonesian National Committee (BKNIP), that religious instructions ought to get the organized position, so it can get a good intention necessarily by not reducing an independence of groups following the selections, and more. Though it was realized when Mr. Suwandi becoming the minister of P and K by the formation of teaching researcher committee. The ranges of committee program concerned with religion are:

1. Religious lesson in all schools given on school regular time
2. All teacher got salary from government
3. At the SR, this education given starting from class IV
4. The education is implemented once in a week in certain time
5. All teacher are raised by Religious Ministry
6. All religious teachers have to be communicative in general education
7. Government provides some hand books of religious education
8. Organizing some trainings for religious teachers
9. The quality of Islamic school and Islamic boarding school are improved
10. Arabic language lesson is not needed

As the follow up of the teaching researcher committee's decision, it was officially announced about the religious lesson which was expressed the main Constitutions of Education No. 4 in 1950 and the Constitutions of Education No. 12 in 1945; the regulations of two ministers, between Religious Minister and Education and Cultural Minister; and expressed the Regulation of Two Ministers between Religious Ministry and Education and Cultural Ministry on 16th of July in 1951. Then, by expressing the decision of MPRS 1960 is the determined momentum for religious student because religious lesson becomes the obligatory lesson starting from elementary school to state university[44].

The inception of New Order post – movement G-30-S/PKI, Islamic religious education actually had a strong position. This was related thightly to the efforts of eradication of communists completely and also it was as the government's gratitude to Muslims who had saved the ideology of Pancasila and NKRI. To realize it, the general assembly of MPRS in 1966 XXVII/MPRS/1966, article 1 decided that religious education became the lesson in schools starting from elementary school to university. The decision of MPRS was then followed by the inception of collective

43 Ramayulis, *Sejarah...,* hal. 385-386.
Zuhairini dkk., *Sejarah...*, hal. 196.
Sugarda Poerbakawatja, *Pendidikan Dalam Alam Merdeka*, (Jakarta: Gunung Agung, 1970), hal. 38.

44 *Ibid*., hal 41.
Ramayulis, *Sejarah...*, hal. 387-389.
Ibid., hal. 390.
Karel A. Steenbrink, *Pesantren...*, hal. 94.

regulation of two ministries between Religious Ministry and Education and Cultural Ministry on 23th of Octover in 1967, where it was decided that frst class and second class of elementary school given two hours of religious lesson once in a week, third class given three hours in a week, fourt class given four hours in a week. Those things also prevailed for Junior High School SMP and senior high school SMA, whereas, university was given two hours in a week.

Furthermore, in term of improving the quality of religious education in general education, it was announced the decision of Religious Ministry number 68 on 31th of October 1974 which decided that the curriculum of Islamic religious education in SD, SMP, SMA, with the curriculum name 1975, it was followed up with the curriculum of general education with the curriculum in 1987.

In 1989, Indonesian nation had the Constitutions which managed the implementation of education nationally, namely the Constitutions No. 2 in 1989 about the system of national education. In the chapter IX article 39 verse 2 about the curriculum content. Its content is every kind, every major, and the obligatory level of education contained Pancasila education, religious education, and citizenship education. Thus, religious education became the obligatory lesson which was taught to every level of education starting from the elementary school and university which integrated into the school curriculum starting from kindergarten to university[45]. Its fact indicated the seriousness of government in positioning religious education (Islam) into the system of national education.

Furthermore, in the Constitutions of Republic Indonesia No. 20 in 2003 article 37 verse (1) explained that the basic educational curriculum and the advanced educational curriculum contained religious education. That verse explained that religious education is a part of basic and main curriculum of national education. Hence, the status of Islamic religious education has the good quality with the general education and it is also united in the System of National Education. In the article 38 and 38, the curriculum is developed by supporting the standardization of national education for creating the goals of national education; in the verifcation principle is appropriate with the unit of education and local potency of students.

D. CONCLUSION

The problem of dualism in education between Islamic education and general education is going on in Indonesia is the heritage of Dutch Colonial Government. This dualism seems to be serious executed by colonializerz in the expectation of the majority of Indonesian people whose religion is Islam is sphared from the current modernization. The effect is defnitely Muslims are continually marginalized and play a less role in public expression.

After Indonesia's independence, the problem of this dualism is not necessarily elmininated even though it is continually actualized to integrate both of them. The result apparently poupular after announced UUPN No.20 in 2003 about the System of National Education and it is completed by announcement of the Government Regulation No. 19 in 2005. Yet in fact, dualism is stikk keep occurring in Indonesia where in the exact year of 2003 government started to implement the curriculum 2013 namely "Integrative Tematic Curriculum" toward schools under controlled by the Ministry of National Education. Islamic schools under controlled by the Ministry of Religion is just begun to implement the curriculum 2013 in 2014.

45 Ramayulis, *Sejarah*..., hal. 390-391.
Ibid., hal. 391-392.
Ibid., hal. 393.

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UUD 1945 dan Amandemennya.

UU No. 20 Tahun 2003 tentang Sistem Pendidikan Nasional.

FAMILY EDUCATIONAL INSTITUTION IN THE FRAME OF ISLAMIC RELATION AND SCIENCE TECHNOLOGY

Written by:
Nadlifah
Doctoral Program of Master Degree of State Islamic University Sunan Kalijaga Yogyakarta
Email. *Lopolopalapa@yahoo.com*

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ABSTRACT

If we see from the chronological process of human revolution, family education is the early phase and basis for human education. It is also called as the natural education closed to every household. The early education phase and basis is extremely influenced and determined for the next education. For the life of nowadays household, it could not avoid the relation with Educational Science and Technology (IPTEK). This brought us to the humanity area and dehumanization in the same time. The effect of IPTEK has caused for the arrangement of family structure bringing on the alienation and the status of inconsistency in the family. However, we could not deny that Islam as the celestial religion based on Al-Qur'an given the sign what is the importance of Educational science and Technology for human life.

Keywords: *Family education, Islam, and Science Technology*

A. INTRODUCTION

Education in the wide meaning occupies extremely strategic role in the culture and social life. A society has a regularity that is bound by the value system of living in a culture owned by the community. Culture is a soul of society because it lives the society by its values. The values that have lived, live, and direct for its society life now and then. Culture is a power, a vital thing for the society because it is supported by dynamic individuals as the cultural actors. The actors are developed and guided by the education process. Not surprisingly, when education became a bone of contention in the arena of modern society, because educational institutions are the future foundation of the nation. Educational institutions become the arena of the struggle for influence community groups for the benefit of its group.

Education, society, and culture are the *single tripatri* where culture is essentially the foundation, the society provides the means, and the process of education is an activity to preserve and develop the values that bind people together in life.[1]

The term of *Tri Pusat Pendidikan* is used firstly by Ki Hajar Dewantara to mention education environment consisting of family, school and society.[2] Family environment is the informal educational environment run naturally between parents and children. School environment is the

1 Tilaar, *Pendidikan, Kebudayaan, dan Masyarakat Madani Indonesia Strategi Reformasi Pendidikan Nasional* (Bandung: Rosda Karya, 1999),hlm.vii.

2 Rohmat Mulyana, *Mengartikulasikan Pendidikan Nilai* (Bandung: Alfabeta, 2011),hlm.149.

formal educational environment intentionally created and institutionalized relationship in which the teacher and the student occurs. A society environment is a non-formal educational environment implementation involving the participation of the community at large.

Taking the family to the perspective of science development and technology or IPTEK, enables a useful cultural conversation. The talks are expected to explore a number of fundamental questions about the family as one of *culture unit* in the rapidity era of science and technology development is often addressed ambivalently.

On the other hand, most of us idealize the role of the family as a Centrum role maintained the integrity of human life when various institutions-call, -for instance, school institutions, peer relationships, government and politics, economics, art, religion- experiences a variety of lighting effects of the dislocations as the effect of the illumination of science and technology. Besides, we look for the family institution become brittle and often helpless to face the technological culture change. If we borrow the language of Erich from (he first published his book *The Sane Society* in 1955), the family bandwagon suffer "pain", especially in the mental connotations.

B. DISCUSSION

1. The Definition of Islam

Abuddin Nata quotes the argument from Maulana Muhammad Ali, in terms of the Islamic language is derived from The Arabic words which means *salima,* tranquil and peaceful. From the word *salima* further transformed into meaningful *aslama* surrender of entry in peace.[3] In line with above opinion, Yudian Wahyudi stated that etymologically, the word Islam is derived from

aslama- yuslimu- islam-salama or *salamah*, which is subject to the will of Allah SWT. In order to achieve greetings or *salam/salamah* (safety or peace) in the world and the hereafter, the process is called *Islam* and the perpetrators are called *Muslim.* Thus, Islam is a process not a destination. That is often forgotten in the Islamic understanding of this is to explain what the will of God that if followed will deliver the safety and peace of the world to the hereafter and vice versa.[4] Likewise Harun nasution, he defines Islam as round as spherical surrender to the will of God. With this surrender, that is to obey the commandment of the Lord and restrictions.[5]

As Yudian Wahyudi said, The God's wish is expressed in three ayah which are different but complited each other.

Firstly, verse of *Qur'aniyah*, it is the signs of Allah who stated in the Qur'an and hadith. Among the most important law here is *Tauhid* (Unity of God), *Akhlaq* (Morality), and justice (law paired with positive and negative or *maslahat* and *mafsadat*). The biggest function of morality "none of God unless Allah" is as the key when crossing from the world to the hereafter, it immediately created to be followed. Allah.[6]

Second, verse of *Kauniyah*, it is the signs of God in the universe (cosmos). Signs of Allah that is importance here is the law of God deposited on any natural object. Sunnatullah or the fate of God is a key role in determining the safety of the world. Thus, at the level of Islamic nature is balancing negative and positive potential and positive potential of each object. Islamic here can be stretched to the point maximizing positive potential and minimalizing negative potential of each subject.

3 Abuddin Nata, *Metodologi Studi Islam* (Jakarta: PT. Grafndo Persada, 2000), hlm.61- 62.
4 Yudian Wahyudi, *Islam dan Nasionalisme sebuah Pendekatan MaqashidSyari'ah* (Yogyakarta: UIN Sunan Kalijaga,2006),hlm.7.
5 Harun Nasution, *Islam Ditinjau Dari Berbagai Aspeknya* (Jakarta: UI- Press, 1985),Cet.ke lima,hlm.16.
6 Yudian Wahyudi,*Islam*..., hlm.7-8.

This natural law applies to anyone without knowing the limits of any human as race, religion, and social status. At the level of nature, that all religions are equal, because anyone who violates this equal laws must be punished by God instantly. Conversely, anyone who obeys ("subject" to this equal laws), surely be rewarded by God, the Salvation.

In thi case, Yudian Wahyudi gives an expample: If Jews, Christian, Moslem, Bhudist or Hindu across Pacifc Ocean and Vancouver (Canada) to Hongkong swimmingly (without any balancing stuffs), they must be put by God. They will sink and die because they have committed infdel and tyrannical (disavow and break the balance rule regulated himself or Ocean as like law density). conversely, if a communist (disobeying God) crossing this ocean through big ship even plane then they will save because they essentially are *moslem.* Essentially, they faith to the law's partnership as the biggest law which regulateing cosmos live that they achive safety (connected to the word "iman"). As *Islam, Iman,* it is the process aimed for safety which is in Indonesian language "keamanan". Safety, peace, or safety here is only on the level of cosmos or worldly. To across the hereafter needs a key: *Tauhid*.[7]

Thirdly, verse of *Insaniyah* (humanity), it is signs or laws of God regulating human life (cosmic). Again, the most important law here is the law's partnership. Islam and faith (so safe and secure) at this level is to balance the positive and negative, that creates a balance or social justice. Allah has delegated to human as refected to the hadis "the willingness of God depends on the willingness of human being". This law is strengthened by the principle of *mutual agreement.* Social error must be frstly solved between the former related parties. If the parties concerned not to forgive, Allah also did not want to forgive. So, the position of verse of *insaniyah* (humanity) is on the middle; more certain than verse of *Qur'aniyah* (vertical sins is easy to forgive by the God), but more fexible than compared with verse of *kauniyah* because social error can be forgiven but the natural false cannot often be forgiven. If, example, people swims from the Vancouver to Hongkong and dies, so she could not live anymore (the natural repent is rejected).[8]

Therefore, Islam is *Tauhid* (unity of God) integrated the God's wish in the holy Qur'an, world and human that save from teology disaster, cosmos, and cosmic. This is called *taqwa* peaked often called *ihsan* which is a process of awareness represented the God everywhere (at the level of theology, cosmos, and cosmic) and whenever. This is called as *Islam Kaffah*.[9]

2. The Definition of Science and Technology

At the moment the world is entering to the third millennium all the developed nations agreed stating that mastering science and technology (IPTEK) is a prerequisite to achieve prosperity in the arena of international relation.[10] Thus, science and technology is as an icon of progress of a nation. The more advanced the development of science and technology of a nation, and then the nation is more respected by other nations.

According to A. Baiquni, science is a community of human collective rationality, which is human knowledge community about the world gotten as the consensus for experts, solvers rationally about critical result analysis to the measuring data obtained from observations of the nature symptom.[11]

7 *Ibid*.hlm.8.
8 *Yudian Wahyudi*, Islam...,hlm.8-9.
9 *Ibid*. Hlm.9.
10 Zuhal, *Visi Iptek Memasuki Millenium III* (Jakarta: UI-Press, 2000),hlm.1
11 Ahmad Baiquni, *Al-Qur'an Ilmu Pengetahuan dan Teknologi* (Jakarta: Dana Bhakti Wakaf, 1955),hlm.58-59

In Wikipedia, science is taken from the Latin word *Scientia* which means knowledge. Sund and Trowbridge pattern that science is sum of knowledge and process. Whereas Kuslan Stone calls that science is sum of knowledge and ways for getting and using its knowledge. Science is a product and process that cannot be separated. "*Real Science is both product and Process, inseparably Joint*".[12]

Science as process is steps achieved by the scientists to observe in order to find the explanation about natural symptom. Those steps are formatting problems and hypothesis, planning experiment, collecting data, analyzing and finally summarizing. It clearly shows that the basic character from science is quantification which means natural symptom can be a quantity.[13]

At the glory of Moslem, natural science is understood as the behaviour science (science of nature characteristic) because it studies about nature, attitude, characteristics, and natural behaviour in certain conditions. At that time, the scientists who pursue this science is called as a philosopher but they are very different from The Greek philosopher, according to Sir James Jeans, "alcoholic themselves by speculating", so they did not achieve any progress in science.[14] Whereas Technology, according to A. Baiquni, is sum of human application knowledge about process of exploiting natural obtained from science application, in the economy productive.[15] Terminology is manufacture, and tool knowledege, machine, technic, trade, system, or organization methode to solve a problem or finish certain function. Technology can also infere to tool collection, machinery, and prosedure.[16]

Ki Supriyoko summerizes some expert arguments about technology as follows:

a. Technology is science application or science that produce the goods or service (*Cyril Stanley Smith*: 1970)
b. Technology is science application of natural science (*Brinkmann*: 1971)
c. Technology is a disciplined process using science, material, and human resource to achieve desired goal of human (*Maurice Adelman*: 1974)
d. Technology is applicating science and science application (*Melvin Kranzberg*: 1980)
e. Technology is something that can make it better and useful. Technology is means used by humman to control natural environment. Technology is practical application of theoritical subject, like science (*Michael Hacker and Robert Barden*: 1987).
f. Technology is great engine change (*Alvin Toffler*: 1991).[17]

At the end of 20th century, six new technologies namely *microelectronic, computer, telecomunication, artificial materials*, *robotic*, and *biotechnology*, interact synergistically to support the formation of community with the new economic system that is different from previous periods. Developments in the field of basic science that became the foundation for the six areas has created a variety of technological breakthroughts that led to the emergence of a new major industry in the field of computer, information, semiconductor, and biotechnology. For example, internet has been supporting the service industry and retail trade, mobile phones, and multimedia devices exist everywhere, plants, and animals of the result of agro-industry has been geneticxally engineeered; and even the economy is no longer national or regional, but it is global in nature due to the presence of information technology.[18]

12 http://id.wikipedia.org/wiki/ilmu alam (23 mei 2012).
13 *ibid*.
14 Ahmad Baiquni, *Al-Qur'andan Ilmu Pengetahuan Kealaman* (Jakarta: Dana Bhakti Prima Yasa, 1996),hlm.63.
15 *Ibid*.,hlm.60.
16 http://id.wikipedia.org/wiki/Ilmu alam.(23 Mei 2012)
17 Ki Supriyoko, *Pendidikan Nasional Sebagai Media Pengembangan IPTEK*, materi kuliah program pascasarjana UIN Sunan Kalijaga Yogyakarta, tahun 2007.
18 Zuhal, *Visi IPTEK*...,hlm.3.

3. Science and Technology in Al-Qur'an

Many verses in Al-Qur'an command moslem to deepen, review, research, the contain truth of Al-Qur'an. One of them is how Allah commands people to observe the secret of universe cited in Q.S. Al-Ghasiyyah (88): 17-20. In this verse, it is clearly shown that Al-Qur'an commands people to research, observe surrounding environment. For the research, the study definitely needed a scientific thought to look for the answer of human life problems. Explicitely, in that verse, Allah commands people to study and observe surrounding environtment by the progress of science and technology. Smarter of people in doing research, so it needs science and high technology to solve human life problems.

Al-qur'an also suggests people to explore science and technology which is stated in Q.S Al-Ankabut(29):20.

Explicitely, verse above commands people to explore science and technology by concerning to the God creation in this earth. The phenomena happened in the world defenitely have a wisdom. It needs to be deepen, researched and observed to develop science and technology for human life good in the world. Natural phenomenon usually called as verse of Karuniyah or natural law which is entrusted by Allah to the earth to be studied for human. As explained by Yudian Wahyudi, verse of Kauniyah, is signs of of God's greatness. The importance is the partnership law entrusted by Allah to every natural objects.[19]

Thus, the development of science and technology closely related to the development verses of Kauniya from Allah entrusted to the universe, or commonly known as natural law (sunnatullah). For example, the law of cause and effect, the law of density of objects, and so forth. The more people want to review researching the law of nature, then people will be able to develop the science and technology needs to be balanced with morality not to damage nature or use the power of nature to destroy most other human beings. God also has insinuated that actual human nature damage is caused by human dirty hands. This could be shown in QS. Al-Qur'an (2): 11-12

4. The diffenerce between Islamic and Western Human Resource

In the tradition of western scientific tradition, after the victory of empiricism and positivism, the West believe that science is only one source, that is *sense perception.* Only sensory perceptions are considered valid as the source of knowledge because knowledge is a ligitimate science so the source must be of a phisical nature. Westerners doubted the intellect and intuition, for them the source of intellectual intuition is halusination. Therefore, it should be abandoned. Unlike the western tradition, in Islam source of knowledge is not only one. Islam admits the senses as a source of knowledge for the phisical science. In addition to the sences, there are also other sources of knowledge, such as mind, heart, and some even add revelation as a source of knowledge.thus, there are three sources of legitimate knowledge in the scientific tradition of Islam. Allah has bestowed to us,the sense, it must be resourceful and among one and another are not replaceable. Sense may not be created, if not useless, as well as the heart and senses.[20]

Having different paradigm in determining source of knowledge between Islam an Western brought the effect to the different perception into the truth. The majority of Westerners more believe in the truth obtained by the senses through the scientific method to look for the truth. Truth must be phisical and can be sensed and proven scientifically. From this, it can be seen why many westerners ignored religion, because the truth of religion is abstract which could not be sensed

19 Yudian wahyudi, *Islam*...,hlm.7-8.

20 Mulyadi Kartanegara dalam Saefuddin dkk.," *One Islamic Sivilization*", *Menyalakan Kembali Lentera Peradaban Islam Yang Sempat Padam* (Semarang: UNISSULA Press, 2010),hlm.257.

because the source is revelation, for example, the presence of God, heaven, distruction, and angel are an abstract thing and can not be proven by scientifc method so that they rejected them.

Moslem esteem that source of knowledge is not only based on the senses but also thought, heart, and revelation. Even in experience, it is not only sense of experience admitted but intellectual also and intuition or often called *religious experience*.[21] From that argument, the truth of Islam is not only from the sense but it can be achieved from logic, heart, truth of revelation (Al-Qur'an and Hadith)

5. Family Education Institution

If wee see from the chronological human appearance, family education is the frst phase and basis for human education. It is also nature education linked to each household.[22]

Vembriarto, regards family as like a small social community generally consists of father, mother, and children.[23]

Fajri Gaffar views from the perspective of Islamic sociology that family is a small of social structure linked by the strong affection legally from the marriage institution. The components are father *(zauj),* mother *(zaujiyah),* son *(ibn),* and *daughter (binti).*[24]

Meanwhile, Hammudah 'Abd Al'ati states that family is a special structure of each member in family which is connected whether it is through siblings or marriage. Its relationship brings about the infuence of "*mutual expection"* based on the religion's precept which strengthen by the power of law and individually they have internal relationship.[25]

Observing the defnitions above, we can conclude how importance of family where becomes the frst and main environment for children. Creating a legal marriage based on Islamic value will achieve the aim of ideal marriage, which is *sakinah mawaddah wa rahmah*, as stated by God in surah Ar-Rum verse 21 as follows:

a. Social function; family gives the prestige and status to the members.
b. Educative function; family gives children and teen education.
c. Religious function; family give religious experiences to its members.
d. Affective function; family gives affection and births the generation.
e. Recreative function; family is a center of recreation for the members.[26]

Besides, Hasbullah states that function and the role of family education are: [27]

a. First experience for children phase

   In the circle of family, children can know who they really are. This should be based and understood on each family that child is birthed in family environment to grow and develop until the child break away from the bonds of family.

b. Grant children social life

   The atmosphere in the family flled with love and sympathy are reasonble, safe and peaceful of atmosphere, an atmosphere of mutual trust. Through family education, emotional life or the need for compassion can be fulflled or developed well, this is because a blood relationship

21 *Ibid*., hlm. 261.
22 Kamruni Buseri, *Pendidikan Keluarga dalam Islam* (Yogyakarta: CV. Bina Usaha, 1990),hlm.3.
23 Vembriarto, *Sosiologi Pendidikan* (Yogyakarta: Yayasan Pendidikan Paramadina, 1984),hlm. 36.
24 Fajri Gaffar,*Membangun Keluarga Muslim*(Yogyakarta: PLP2M,1987),hlm.269.
25 Hammudah 'Abd Al 'ati, *The Familiy Structure in Islam*, (trj), (Surabaya: Bina Ilmu, 1984),hlm. 29
26 Jalaluddin Rahmat, *Islam Alternatif* (Bandung: Mizan, 1988), hlm.121.
27 Hasbullah, *Dasar- dasar ilmu pendidikan* (Bandung: Rajawali, 1999),hlm.39- 43.

between educator and students because parents are only facing a few protege and those things based on love and pure affection.

c. Instill basic moral education

In the family, it is also a major planting moral grounds for children which is usually re f ected in the attitudes and behavior of parents as role models can be exempli f ed by child. In this relation, Ki Hajar Dewantara stated as quoted by Suwarno:

love affection, a sense of unity and other feelings and state of mind which is generally very beneficial for ongoing education, especially moral education, there exist in the family living in the nature of strong and pure, so others can not be the mutual of them.[28]

Usually a behavior, the way to act and speak will be followed by children. By those thought, it creats positive identi f cation symptom which is equating ourselves with people who are imitated. This is crucial in the context of the formation of personality.

d. The foundations of religious.

Family as the f rst and foremost educational institution, in addition to a very decisive in installing mooral grounds, but not least is a big role in the process of internalization and transport of religious values into the children's personalities.

Childhood is the best time to absorb the basic of life in religious, in this case of couse happens in the family. Children should participate accustomed to the mosque together, listen to religious sermons or lectures as this can convince the children's personality. Building family will be strong if all above functions work as it should. If the above functions are eliminated or ignored, theere will have a critic in the family.

When we look to the conteporary era, that it seems we ought to question is the development of cience and technology, with all the applications and implications, which will be followed by the by the more rapid changes in the sducation structure of the family? This question is important to be explored. Did not the mutual question of this being quite basic which is far away is about the structure? Would not theoritically the structural change accompanied by the patterns of interraction of social actors.

According to Smith and Preston quoted by Abdullah Fadjar, they said that when social life could still be categorized as the traditional and practicing agrarian culture, its life is symbolized by the wide family connection which is called *extended family.* The structure family is not only a couple of husbands, wifes and children of them but also a couple of grandfather and mother, brothers and sisters, uncle and aunt, and cousin. They live together in the same place, but live in the different place in geographically close.[29] Sometimes, wide family connection forms a village system and special kinship connection based on the cultures followed. The formulation based on this wide family connection not only occurs on the maintain of a permanent residence but also to the nomadism society as occured to the Escimo society.[30]

Interpersonal relationship in wide family relatifely staying to be a harmonic family. Controlling attitude is commited collectively by the supervision authority which geting confession and wide and full agreement so that feeling allienated is not almost occured by widely members. Similarly, the status of *inconsistency* can be prevented. Without alienation and inconsistency status in the family life –of course widely in society- paedagogically the atmosphere of family life is quite

28 Suwarno, *Pengantar Umum Pendidikan* (Jakarta: Aksara Baru, 1985), hlm.69
29 Abdullah Fadjar, *Al-Jami'ah*, No. 54 (Yogyakarta: IAIN Sunan Kalijaga, 1994),hlm.16.
30 *Ibid*.

conducive to form intect personalities. Interestingly, Brigs via Abdullah Fajar describes potret of depicting Eskimo family with the language: *Never in Anger*. Alienation and status of inconcistency is big potential for development of deviant behavior that leadas to harmul and agressive behavior.[31]

When the wave of civilization shifted from technology traditional, agrarian to industrial, structural change of family life arises. Most observers see that the revolution in technology and industry that certainly as a result of the development of science is a major cause of the emergence of nuclear family, *keluarga patih.* The emergence of industrial centers followed by a horizontal displacement motion (*physical mobility),* as seen in many parts of Indonesai today. With the transfer motion, the industrialization has reduced the number and closeness of contact between members of relatives. Industrialization is also followed by social mobility, so that changes in lifestyle and income reduce the sense of trust among members of kin. In the system of city life and any industrial needs and problems can be addressed immeiately by diverse organizations or service agencies. This situation helps kinship ties become increasingly loose. The industrial life often changes the value system that allows people to experience success and reach capability without regardless of kinship network.

The structure of nuclear family that marks the industrial society oriented to the mass production decribed by Alvin Toffer via Abdullah Fadjar as a family consisting of a husband-hunter of basic necessity life-, a wife-housekeeper, and a small number of children. This tendency is constantly changing. Future society will also be marked by the structure of the family without children. a family without chldren has become a "lifestyle" ("*Child-free" Life Style* or *Child- free culture*). In fact we will be able to see celibate lifestyle or the "*solos*" *people* who live alone outside the family.[32]

Generally, the presene of nuclear family in industrial society can be viewed as the big step in persons liberation from the nonds of tight wide network family. The emergence of nuclear family also fosters individualism and equal rights regardless of gender. It is therefore understandable that later appeared lifestyle where women wherewith wife's status as a public orientation, both in terms of employment or social activities. Not infrequently, for reasons of work, the husband and wife as well as a separate children's shelter.

The relationship of each personality certainly consisting of wide family is difficult to build. A strucure of small family is theorized to be able to providemore through care and optimum. But that does not mean life in industrial nuclear family is without problems. Isolated personal feeling possibly occurs in the nuclear family. Family life is fragmented so that we can can understand "survey" which reveals the truth of a number of women with "good" category having "another guy" as vice versa. No less interesting also notice about the children of primary school age in Hongkong to suicide because of mind set "lonely in a crowd" and "crowded loneliness" due to lack of affection from his parents. They are being fatherless prematurely. Some facts and analysis of this as a starting point can be assumed that the direction of the development of family education is partly determined by the structure of family live.

C. CONCLUSION

From the discussion above, we can conclude that:

1. Islamic thought has given the spirit strongly so that the fact that the passangers study carefully the science from source of verses of *Qouliyah*, *Kauniyah* and *Alamiah.*

31 *Ibid*.
32 *Ibid*.,hlm.17.

2. Educational Science and Technology can bring us to the humanity and dehumanity zone in the same relative time.
3. Ajaran Islam telah memberikan spirit yang sangat kuat agar umatnya senantiasa mempelajari ilmu pengetahuan yang bersumber dari ayat- ayat qouliyah, ayat- ayat kauniyah dan ayat- ayat alamiah.
4. The effect of presenting IPTEK also can cause on the family structure arrangement caused *alienation* and status *inkonsistensi* in the family.
5. Family institution has two critical points that is quite massive of amount of family in Indonesia where doe not have cultural preparation to face educational science and technology and to have economy preparation to achieve the role of "suplemental" in presenting human resource (HR)-Educational Science and Technology (IPTEK).

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HUMANIST-RELIGIOUS EDUCATION
(The Concept and the Implementation of the Humane Education in MIN 1 Yogyakarta on Science Learning)

Written by:
Moh. Agung Rokhimawan
The Lecturer of FITK State Islamic University (UIN) Sunan Kalijaga of Yogyakarta
E-mail: rokhimawan@yahoo.com **;** rokhimawan78@gmail.com

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ABSTRACT

Humanist-religious education should be suited human nature either in its arrangement, position and the disposition of its nature. The concept of humanist-religious education which is offered by MIN 1 Yogyakarta is a concept of education based on Pancasila, the 1945 Constitution of the Republic of Indonesia, and Islamic view. MIN chooses to use a 'lifelong education' pattern for its curriculum, and it also has implemented 'education for all', as well as it will use 'the core curriculum' in the 2014/2015 study term. MIN uses 'process skill' approach, constructivism and learning community in its learning process. Science learning in MI will be more humanist-religious if the teachers or the preceptors acknowledge, apply, and develop their teaching and learning process by using SETS (Science Environment Technology and Society) approach. It is because the vision of the science learning process with SETS will help the learners to be participants who are open minded, auspicious, having a good attitude or behavior and actions as well as they can develop themselves well. Thus, the educational services which are offered by Yogyakarta MIN 1 for the public can fulfll the basic educational necessity of society.
Keywords: *Education, Humanist, Religious Education, Science.*

A. INTRODUCTION

The humanistic education identifes a concept study and educational implementation based on the humanism value. According to Mas'ud, humanism is a rational and an empirical tradition which is initially derived from ancient Greece and Rome, then developed through European history. Humanism is the basic concept of the western approach to the knowledge, political theory, ethics, and law. Humanism Philosophy has some views of life which are centered on human necessities and interests. This category includes Christian humanism[1] and modern humanism[2] as its subcategory of this type. Here, modern humanism has two sources; they are secular and religion. Then, there are

1 Abdurrahman, Mas'ud, *Menggagas Format Pendidikan Nondikotomik : Humanisme Religius sebagai Paadigma Pendidikan Islam*, (Gama Media, Yogyakarta, 2002). Christian Humanism is the proponent of the human self-fulfllment philosophy in Christian principles. Further reading: Abdurrahman, Mas'ud *Menggagas Format* ..., page 129

2 Modern humanism or naturalistic humanism (natural) or scientifc humanism (science) or etic humanism or democratic humanism is a school of philosophy that denies all supernatural school and especially agrees above all the knowledge, democracy and the duty of human being. Further reading: Abdurrahman, Mas'ud *Menggagas Format* ..., page 130

more subcategories from those sources, namely secular humanism and religious humanism[3].

Secular humanism is one of the outgrowths of the 18th century thought, the enlightenment of rationalism, and freedom of thought of the 19th century. While, religious humanism emerged from ethical culture, Unitarianism, and universalism. However, even though they come from different thought, secular humanism and religious humanism share the same view point of the world and have the same basic principles. The disagreements between the two are only in the definition of religion and the practical philosophy, whereas from the philosophical point of view, they are same[4].

Furthermore, Mas'ud[5] said that religious humanist circles uses definition of religion merely functionally. The function of the religion is only to serve the personal necessity or the social cluster. Yet, the problem is religion is often trapped in formality aspect, so it is difficult to function it well. Whereas, secular humanism rebels against the religion because they regard religion cannot be expected to advocate the humanities issues, they even regard that religion often causes the humanity problems. In this context, religion is often trapped in the aspect of mere formalism.

Although there is a disagreement between secular humanism and religious humanism, actually according to Mas'ud[6], both of them can be reconciled in one the condition; that condition is that they are should not stuck in the mere religious formalism and more refer their thoughts to the religious values substances. Human being is actually a creature that has an intelligent. With that intelligent, they probably can find the truth. This is where the search context of humanitarian discourse of secular humanism lays. Furthermore, because of the quest of the truth by their intelligent is a probability and there is potential for getting lost, that is why God was making a guidance in form of religion. That is the context of humanism discourse of humanist-religious.

According to Prayitno, (via Peretson in Good & Bropy, 1986) education that full of love and affection is a humanist education that respect and at the same time acknowledge and uphold the human dignity of the learners. It is also the education which has the following characteristics: sincerity, awards to a student as a personal, and empathetic understanding toward the students[7].

From those backgrounds of study, the writer will analyze these following problems statements: (1) Is the humanist concept has been owned by MIN 1 Yogyakarta? (2) Is the humanist concept owned by MIN 1 Yogyakarta the same as SD Muhammadiyah Sapen's? (3) Is the humanist education which has been developed in Indonesia based on Pancasila philosophy? (4) How is the educational implementation of humanist education at MIN 1 Yogyakarta?

B. ANALYSIS

The Humanist concept on MIN 1 Yogyakarta

Humanist concept which is used in this context is the concept presented in Munif Chatib's book Sekolahnya Manusia. The concept which meant here is a concept: 'to build a school is essentially a human investment for the future national progresses.

State Islamic Elementary School (MIN) 1 of Yogyakarta is located in Magelang Street KM 4 Sinduadi village, Mlati District of Sleman regency of Yogyakarta province. Geographically it is located in the Sleman Regency area, but because of its first founder is PGA (Religious teacher education) of Yogyakarta, so the name of this school is MIN 1 Yogyakarta instead of MIN 1

3 Abdurrahman Mas'ud, *Menggagas Format...*, page 130
4 Abdurrahman Mas'ud, *Menggagas Format...*, page. 130-131
5 Abdurrahman Mas'ud, *Menggagas Format...*, page. 131-133
6 Abdurrahman Mas'ud, *Menggagas Format...*, page. 133-134
7 Priyanto, *Dasar Teori dan Praksis Pendidikan* (PT. Grasindo, Jakarta, 2009) page. 123

Sleman. It is built on 484 m2 land area. There are 7 period of leadership up to the present since MIN Yogyakarta 1 is established officially. MIN 1 Yogyakarta was established based on Pancasila, the 1945 Constitution of the Republic of Indonesia, and Islamic view which aims to:

1. Forming a Muslim who is noble, competent, confident, and responsible; establish and educate child wholly based on the Qur'an and Hadith.
2. Creating the harmonious human's life in its development both physically and spiritually.
3. Giving an education that suits to the needs of the community.
4. Instilling the strong-willing and dare to be responsible in children's personality.

Vision: *"superior in achievement, Islamic personality".* The indicators of the achievement of *superior in achievement* are: a) The academic and non-academic achievement increased, b) The talents, interests, potential and creativity of students develop c) Human beings who are skilled and intelligent are realized d) the student are qualified enough to get the competitive continuous study. While Indicators of *the Islamic personality* are as follows: a) The religious values, faith, and piety in students develop. b) The students are familiar to become an Islamic personal. c) The courtesy, well-mannered, and noble character grow and develop d) Familiarity of daily worship e) the students have a good relationship with school environment, families, and communities f) the student can maintain the cleanliness and keep the environment.

The missions of Yogyakarta MIN 1 are the elaboration of the visions:

1. Improving an academic achievement and non-academic
2. Developing a talent, enthusiasm, and creativity of students
3. Creating a skilled and intelligent human being
4. Competitive to enter qualified continuous study.
5. Developing the religious values, faith, and piety to Allah
6. Familiarize Islamic personality
7. Growing and developing courtesy, well-mannered, and noble character
8. Familiar of daily worship
9. A good friendship with the environment of the school, families, and communities
10. Maintaining cleanliness and keeping the environment.

Humanist education have been developed in Indonesian society based on Pancasila philosophy

The only guidance which can be categorized as the basic philosophy of education in Indonesia is Pancasila. Pancasila is recognized as developing Indonesian national philosophy from the ancient world to the present and is expected to be used until later period. Pancasila can be viewed as the philosophical foundation for the ideology and educational practice in Indonesia; it can be understood on the basic of the nature of Pancasila. The nature of Pancasila which supports the basic philosophy in education[8]:

1. Pancasila is recognized as a nation and as a base of State Philosophy.
2. Pancasila has been established as a national paradigm.
3. The essence of Pancasila both overall and principle-by-principle has given a clear formulation.
4. The essence of Pancasila is positioned as a universal thing.
5. The essence of Pancasila can include basic ideas of various philosophies..

8 Soegiona & samsul muis, *Filsafat Pendidikan dan Teori dan Praktek* (Rosdakarya, Bandung, 2012) page. 123

Pancasila as National Philosophy[9]

Pancasila was written to be the basis of the state. It can be seen from the history of stating the basic state formally in BPUPKI session held from May 29 to June 1, 1945. At June 1, 1945 meeting, Bung Karno as one of the main state proposer said that the basic state must be extracted from the Indonesian Mother Earth and frstly must be found for the philosophy of the nation. Bung Karno also said in his speech that he had explored the nation philosophy since 1918, when he was 17 years old.

Thus it is clear that the agreed *Pancasila* was used to be the basic philosophy of Indonesian nation state. It was rooting and growing in the life of the Indonesian nation since ancient times. *Pancasila* as the state philosophy can be accounted for three formal criteria terms of philosophy; they are ontology, epistemology, and axiology.

The ontology of *Pancasila* is described in *Pancasila* education module Unesa MPK TEAM (2008: 134); the each point of *Pancasila* has intrinsic element or essence. The frst precept is the ultimate recognition of the existence of God; the second is the precepts about both recognition and fair treatment of people and treat Indonesian as a civilized human being. The third is the precept of an acknowledgment that although Indonesia consists of many tribes, languages, customs, and consists of many islands, actually, is Indonesia is united. Fourthly, essentially the nation power is owned by its people, and democracy is an ideology based on wisdom and implemented by consensus. While, the fth precept is Indonesia essentially has a sense of justice; it means that each person has equal rights in all aspects of life, though not necessarily all must be the same. Justice in Pancasila means every citizen has the same right to get something proportionally.

Epistemology *Pancasila* is in the form of *Pancasila's* truth; it means that *Pancasila* has both an abstract truth and concrete truth. Abstract truth lies in the nature, essence or core of every precept and whole *Pancasila* precept as already discussed above in the terms of ontology. While, the concrete truth can be proved by the fact that *Pancasila* clearly has infuenced the life of the Indonesian nation since the ancient times. Moreover, *Pancasila's* truth is a universal truth.

The axiology of *Pancasila* is proven by the fact that *Pancasila* is the value or norm that can be applied to guide the normative life of the Indonesian nation. *Pancasila* is applied normatively in by meaning that *Pancasila* should be used as a control of the nation's behavior, instead of changed it according to the demands of the times. It is true that *Pancasila* is fexible; it means *Pancasila* is always suitable for many situations, but its fexibility is only in the implementation, and is not in the term of its essence.

Some education policies related to its philosophical view[10]

There have been many Indonesian government policies in the education area based on universal philosophical standpoint. The government policies are including:

1. Indonesia has chosen the lifelong education pattern because in its principle human is seen as living thing that grows and develops from birth to death. *Pancasila's* tenet views human does not only live for human's life in the world, but also for the hereafter life. Similarly, education is not only for children (the minors), but also for adults.
2. Indonesia has also implemented education for all. It is based on the view that education is a human right and it is appropriate with the *Pancasila*, especially, the forth precept.

a. In Indonesian national education system, there is a curriculum named the core

9 Soegiona & samsul muis, *Filsafat Pendidikan...,* page. 124
10 Soegiona & samsul muis, *Filsafat Pendidikan...,* page. 124

curriculum. This curriculum is similar to the essentialism education philosophy's tenet; it demands to lessen the nonessential educational material and prefer give deeper understanding for the main material only. However, Indonesian curriculum which is applied still offers too many nonessential materials. The curriculum which is applied in MIN 1 Yogyakarta is set in the subjects as follows: *Pancasila* and Civic Education, Mathematics, *Bahasa Indonesia*, Natural Sciences, Social Sciences, the Qur'an and *the Hadith, Fiqh, Aqidah*, History of Islamic Culture, Arabic, and Javanese.

Within a certain period, curriculum should be resurveyed. It means, this gives some rooms for Indonesian education to open their curriculum and adds the schools of progressivism educational philosophy which demands a non-eternal curriculum. However, the resurveying should not be done too often. Yet, it perhaps only needs to change the name of the curriculum, for example The Competency Based Curriculum (KBK), Education Unit Level Curriculum (KTSP), Local capacity Curriculum, and the most recent curricula are Curriculum 13[11].

1. The character education is oriented in proclamation spirit. It views the spirit of proclamation as the wise character value. This way, it is similar to the schools of perennialim philosophy's view which argues that an education should has a bottom line between the recent condition and the past condition in the equal quality.
2. The multicultural concept which is developed in Indonesia is also a global concept that appropriate with *Pancasila*, especially the third precept.
3. The meaningful educational concept is also developed based on the global philosophy concept and appropriate with the concept of the essence of *Pancasila* pragmatically.
4. The concept of Life Skill is also a global concept which can be adopted by Indonesian education and should be appropriate with the function of *Pancasila* as the development ideology.

Thus, by applying *Pancasila* as the basis of education rationally and empirically, Indonesian education had the philosophical basic that can be accounted for.

The implementation of the humanist education in MIN 1 Yogyakarta

In MIN 1 Yogyakarta, humanist education is implemented with many activities, they are for example:

1. The development activities in Religion feld are including: Religion Quiz Competition, The Flash *Pesantren*, break the *Ramadhan* fast together, the study of Quran Revelation, *Halal bi Halal* (social mix up between the madrassa or school students, teachers, and school employees), *Syawalan* (social mix up between the madrassa or school member and the student's parent or guardian), play the *Murrotal* or Quran *Murotal* mp3 (every morning and the end of school to facilitate the student to memorize the Quran's verses), reciting the short surah of Holy Quran, pray *Dhuha* and *Dzuhur* together in the Madrassa.
2. Human Resource Development in MIN 1 Yogyakarta are including: Soft skill training for the teachers and the staffs, Shake hand when meet each other every morning in the school along with doing such activities: Smile, Accost, Greeting, being polite, and being courteous; Sports and Gymnastics, Held the bazaar for basic needs, Student creative work Exhibition (the student's expression arena in the public), the coloring, drawing, and poster making Competition, the alms for orphans, Play the national anthems on mp3, August 17 Competition (Class Cleanliness Competition).
3. Extracurricular activities in MIN 1 Yogyakarta are including: Scout and computer courses. Those extracurricular are obliged for all students.

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The example of Learning Implementation in the Humanist Science learning process which the writer takes:

According to Driyarkara (1978) a human is a subject or a person who has the creativity, taste and intention. Human is also a subject who understands and be aware of her or his own existence, furthermore, human is a subject who can manages, regulates, controls herself or himself; she or he also has a thinking, a willing, a courage to develop their personal to be better and more perfect, a person who are seeking her or his identity[12]. In the process of development and refinement of her or his personality, human being only can establish, develop, and perfect herself or himself. A human cannot perfect another human being. Something that can be done is helping each other and creating the conditions and the opportunities that enable people to develop. Learning science will be more humanistic-religious if a teacher recognizes and locates or treat the students as subjects or individuals who have those human's characters. Then, their recognition is manifested in the learning process, i.e. gives an opportunity to the learners widely so that learners is being better or being more perfect. This means there should be a human humanizing, and there should be a process of education. Learners are required as a subject who has a role, can organize their activities, and is not as an object that everything is determined by the teacher. In this case the term learning is more appropriate than teaching[13].

Science Learning in MI will be more humanist-religious if the teachers or educators acknowledge, apply and develop their learning by using SETS approach (Science Environment Technology and Society) where SETS visionary science learning will help the participants being open in thought, potential, attitude or behavior and actions as well as to develop themselves well. If the educators implement the SETS approach correctly and consistently in their learning and teaching process, then how can SETS approach is considered to be human humanizing?

The future of human's life will be more filled with science and technology. Basically, in human's life, the elements of science, environment, technology and society are related to each other. It will be more develop when each man live in a society. As part of society in their evolution process, people should interact with nature as their habitat. Thus, they will know the natural phenomenon then later it is known as a science. They also capture the benefts to fulfll their humane ambitions in the form of technology to obtain facilities or benefts in the individual lives and communities live process. Therefore, it is strange that in science learning activities we only emphasize it on the understanding the concepts of science which is introduced without connect it with other elements in SETS. Because of that basis, SETS basis science learning is important to emphasize in the interconnection among SETS' elements. The main purpose of SETS education is how to make SETS can help people create a heavenly world, and it does not create 'hell' in all aspects of life. Besides, SETS also can help people to make a better life if there are equal rights for all human beings in the world regardless of race and wealth[14].

SETS approach has seven major components, they are: constructivism, inquiry, questioning, learning community, modeling, refection, and authentic assessment. SETS is expected to emerge student's motivation in learning because students can understand the benefts of science concepts, even they can understand the positive and negative impacts of the technology application on the environment and society.

12 Sumaji, dkk. *Pendidikan Sains...*. page. 167

13 Sumaji, dkk. *Pendidikan Sains...*. page. 167

14 Achmad Binadja, *Hakekat dan Tujuan Pendidikan SETS Dalam Konteks Kehidupan dan Pendidikan Yang Ada.* The paper is gotten in Education Workshop Seminar SETS, The cooperation between SEAMEO RECSAM and UNNES, December 14-15, 1999. page. 5

The characteristics of humanistic-religious science learning along with SETS approach

Science learning by SETS approach has traits or characteristics as follows:

1. It gives the desired chemistry learning concepts.
2. Learners are brought to a certain situation to see the technology which relates to the learning concept or uses the concept of science to the form of technology for society's necessity.
3. Students are encouraged to think more about the various possibility of the impact that might occur in the process of science transferring to the form of technology (both positive and negative impact).
4. Students are encouraged to explain the interconnection between the science elements with other elements in the SETS which affect the relationship between the various elements.
5. Learners are encouraged to consider the advantages and the disadvantages of using the chemical science concepts as is converted to the form of technology.
6. Learners are encouraged to find an alternative to eradicate the disadvantage caused by the science's role in forming the disadvantageous technologies on the environment and society (encourage them to find better technology forms).
7. In the context of constructivism, learners can be invited to talk about SETS related to the learned scientific concepts from various points of view and various starting point depends on the basic knowledge of the students.

The characteristics of SETS approach science learning needs to be displayed. It means the learned science concepts are not only introduced as a concept of pure science but also a concept which is associated with other elements of the SETS[15].

The problem is: how does science learning establish a humanistic-religious student?

Firstly, the educators should use media which can visualize the abstract science concepts in teaching the scientific concept; they can use some simple props. It is because props are needed to convey the abstract concepts of science on learning process; it also can act an important role as a tool to create an effective and enjoyable learning. Using of props stimulates children's imagination and gives the depth learning impression because all the five sense and all learners' ability should be stimulated, used and involved. Thus they do not only know, but also they can use and apply something they learned in the science concept[16].

Secondly, the Learners are taken to a certain situation to see the technology related to the learned concept or uses the concept of science to the form of technology for the benefit of society. The educator should help the learners to benefted science as a productive concept in the creation of technology, and minimize the negative impacts on the environment and society.

Thirdly, it is Dewey's famous scientific method, the refective method. The steps of Dewey's refective method are:

1. Learners have direct experience of their involvement in an activity they are interested in;
2. Based on that experience, students then have certain problems that can stimulate their mind;
3. Then, learners are encouraged to have or to find the necessary information to solve the problem;
4. After that, Learners develop a range of possibilities and tentative solutions to solve the problem,

15 Achmad Binadja, *Pembalajaran Biologi dan Evaluasinya Dalam Konteks SETS.* The paper of Education Workshop Seminar SETS; the cooperation among PGBS, Depdiknas, RECSAMAS, MGMP Biologi eks. Surakarta, March 31, 2002. Page. 5-6.

16 Arif Widiatmoko, *Pengembangan Perangkat Pembelajaran IPA Terpadu berkarakter Menggunakan Pendekatan Humanistik Berbantu Alat Peraga Murah,* (Indonesian Science Educatin Journal. Vol.2 No.1 April, 2013) Page.76-82.

and

5. Learners then examine the possibility by apply it to solve the problem. Thus Learners will find the validity or truth of his analysis by themselves[17].

Fourthly, learning community of the learners is encouraged to find alternative to eradicate the disadvantage caused by the science role in forming the technologies on the environment and society (encourage them to find better technology forms). It is for example, a farmer can easily fix his hoe, tractor, or plow; yet can he repair the tractor if there any damage in it. While, bring his tractor to the garage in the town spend too much time, energy and cost. In such kind of situation, it would have been better if the farmers have the ability to maintain and resolve some minor problems in using a product of technology. This example shows the relation between science and technology and its benefits for society. People who use technology products need to have an understanding of science that can be a provision to preserve the technology's product in order to always be able to function it optimally; even they can used the technology as a provision to overcome the minor difficulties. This will be achieved through the education of students in the school or through non-formal education for community members. The students who learnt these things in the school are expected to become members of society who capable to deal with science and technology as well as use it for the welfare of the community[18].

Fifthly, it is the essence of constructivism which is developed by J. Piaget by an experiment. It is an experiment to finding out the child's knowledge development, interviewing, and observing the activities and behavior of children. It is emphasizing the learners to widen their knowledge by reading, exploring, experimenting many things in the environment around them, etc[19]. Learners can be invited to talk about SETS related to the learned scientific concepts from various points of view and various starting point depends on the basic knowledge of the students.

Sixthly, it is inquiry which based on Eggen and Kauchak (1996) is a method that prepares students to conduct experiments on their own extensively in order to see what happened, makes them want to do something, makes them ask their questions, encourages them to find the answers by themselves, and connects their discovery to the other discovery, then comparing what they found with what the other learners found. In this case, the educator should act as a facilitator and inspiration, so that the generalizations which are discovered by students have reinforcement. The inspiration from the educators is needed to nurture and to develop the spirit and curiosity of the students on new thing.

Seventhly, questioning is one of the most prominent skills in science learning, and it is a key skill which have to be trained. Various discoveries which found by scientists always start from finding the problem and stating the problem in a good and correct the questions. Science learning should provide skills to the students to ask and find the qualified problem. Lastly, the authentic assessment by Magdeleine & Schmidt (2007) asserts that an authentic assessment seeks, collects, and synthesizes information about student's ability to understand and to apply the knowledge and skills in real situations[20]. Teachers can make learners dare to be creative through these ways: (a) giving a task that has not only one correct answer to a particular question (have many answers or even all answers are correct), (b) be more tolerable to an eccentric answer, (c) more emphasize on process of study rather than on the results. (d) Encourage the learners to try, to determine their less

17 Yususf hadi Miarso, *Teknologi yang berwajah Humanis,* (Penabur Education Journal. No.9/Year: 6th /December, 2007) Page. 50-58.

18 Anna Poedjiadi, *Sains Teknologi Masyarakat Model Pembelajaran Kontektual Bermuatan Nilai***,** (Rosda, Bandung, 2010). page. 95-96.

19 Anna Poedjiadi, *Sains Teknologi.....* page 70

20 TIM. Lapis PGMI, *Pembelajaran IPA 1, (Learning Assistance Program for islamic shool,* Jakarta, 2008) page. 17.

clear or incomplete information, and to have their own interpretation related to the knowledge or events they are observed. (e) Provide a balance method between structured thing and spontaneous or expressive thing.

The components in authentic assessment are as follows:

1. Authentic tasks: i.e. an assignment that asks students to show their authentic ability and skills.
2. Rubric: i.e. a tool to score which contains the lists of criteria for a task.
3. Descriptors: i.e. the explicit description of the student's level performance at each level of performance.

The next problem which arises is "does this humanistic science learning counted as religious or not?

Humanistic-Religious Science Learning

In a philosophical point of view, it is clear that the epistemology value of a scientific induction will be addressed differently based on the view of each person about the existence, the nature of a non-material world, and nature of our knowledge about the same thing. In this journal, the writer will only explain two views philosophical view; they are the realist view and the empiricist view.

Realist view is the only view that can be defended. Realism recognizes an existence of a non-material world and the capacity of our cognitive faculties as thing to know this reality, especially the intellectual capacity to achieve general insights about reality. It firstly comes from general principles, such as the principle of sufficient reason, natural causality and determinism principle which form the basis of scientific induction. It is not merely a habit of well-established thought, but it is a valid thing for an independent external world of our thinking. Secondly, this view is not only accepted as a proof of a kind of natural intrinsic as is said by the extreme realist, but it also can be established by convincing rational arguments. However, when justification for this epistemology is positioned beyond the scope of this study, we should refer to the ex professo realistic epistemology treatises.

Empiricist view: According to empiricism, intellectual knowledge is not essentially different from sensory knowledge, so the scientific knowledge does not mitigate beyond the sensory experience data. As a result a general knowledge abstractly or universal knowledge about the world of experience is impossibly exist. Therefore, the results of the so-called scientific induction should not be something else but a collection of particular sensory experience. This way, an inductive statement is solely common questions collectively, so there is no essential difference between the scientific induction with a perfect induction or induction of enhanced by an analogy[21].

The general rules of any scientific method should comply these demands: foothold point should be clear, correct, and definite; problems or issues should be made as simple as possible; coherence must be maintained; the last is hypothesis should be well-constructed[22].

C. Conclusion

From the discussion above, the writer concluded that the humanist-religious education in Indonesia should understand the concept of Pancasila, the 1945 Constitution of the Republic of Indonesia and Islam. Humanist-religious education should be adapted to the human's nature in the arrangement, the position and the disposition of its nature. The learning process uses 'skills process' approach, constructivism, and learning community. Science learning in MI will be more

21 Henry van Laer, *Filsafat Sain Bagian*.... page. 103-104
22 Henry van Laer, *Filsafat Sain Bagian*.... page. 60

humanist-religious if the teachers or the preceptors acknowledge, apply, and develop their teaching and learning process by using SETS (Science Environment Technology and Society) approach where the vision of the science learning process is SETS where SETS will help the learners to be participants who are open minded, auspicious, having a good attitude or behavior and actions as well as they can develop themselves well. Thus, the educational services which are offered by MIN 1 Yogyakarta for the public can ful fll the basic educational necessity of society.

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THE OPTIMIZING OF MULTIPLE INTELLIGENCES FOR INCREASING THE POTENTIAL TOWARDS HUMAN VIRTUOUS CHARACTER

Written by:
Fauzan
Asep Ediana Latip

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ABSTRACT

Multiple Intelligences which consist of verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic Intelligence, rhythmic Intelligence, interpersonal intelligence, intra personal intelligence and naturalistic intelligence can be optimized through the process of optimizing the role of environmental context, the role of previous knowledge, the role of cognitive process, the role of genitive, distributed intelligence factor and the role of scaffolding process. Actually, with the implementation of optimizing multiple intelligences factors, the virtuous character of a person will be realized as a nurturant effect. But besides that, there are strategies that can achieve the optimizing of multiple intelligences as instructional effect processes and also increasing human potential which be virtuous character through multiple processes inelegance approach, intelligence emotions management (Emotional Question), evocation process, inculcation process, moral reasoning process, value clari f cation, value analysis, moral awareness, commitment approach and the union approach.

Keywords: *Multiple Intelligences, Optimizing Factors and Human Potential Virtuous Character*

INTRODUCTION

The phenomenon of building achievement competencies synergy of hard skill and soft skill keep rolling in education. Hard skill is a skill which is acquired directly (instructional effect) in the educational process that is characterized by the attainment of knowledge, comprehension, analysis, application, synthesis and evaluation. Soft skill is a skill that is acquired indirectly (*nurturant* effect) that is characterized by the attainment of the ability to accept, respect, appreciate, and practice in daily life. This phenomenon emerges the educational discourse based on the efforts to build harmony between the knowledge, skills and attitudes including the development of multiple intelligences (Howard Gardner), the balance of Intelligence Quotient (IQ) and Emotional Question (EQ) (Daniel Goleman), character-based education (Dony Keosoema), the integration of religion and science (Amin Abdullah), integrative education (Abudin Nata), and others.

This phenomenon of course makes proud because by the balance synergy efforts in educating and developing skills between hard skills and soft skills of every individual is a step forward to encounter the educational problem that has been the prolonged homework as if never recede from the moral degradation which weakens the sacred joints of education as guardians of the virtuous character establishing from throughout history such as fghting among students, corruption, rape, school bullying, sexual abuse and so on.

Therefore, propaganda of building this balance should continue to be disseminated in order that there is a collective awareness that to be successful requires a balance between intelligence and virtuous character. This is believed by Goleman that in an individual, there is mind intelligence and emotional intelligence. Emotional intelligence (soft skill) has a greater role to lead a relief of life that will never experience a fat life successfully forever. Not only Goleman, but also Gardner's multiple intelligences describes the intelligences in various dimensions of life such as intrapersonal, interpersonal, verbal, spatial and others. Therefore, efforts to optimize multiple intelligence in the process of education become the competence that cannot be compromised because of course by the effort; it can increase the virtuous character learners in a nurturant manner.

In addition, the efforts increasing the potential to realize human virtuous character in this current condition has a very relevant and urgent momentum even it may has been on emergency level internalized in all aspects of activity, especially education because when observing the current condition of society seemed to be wobbly and unstable of moral stability, character, virtuous and manners eroded by globalization that hits the local wisdom that if it is left, it would lose its identity as the nations that are religious and virtuous. Therefore, It is interesting to be analyzed how to optimize multiple intelligence? How do optimizing of multiple intelligences role in increasing the potential toward human virtuous character?

DISCUSSION

A. Basic Concepts of Multiple Intelligences

1. The Definition of Multiple Intelligences

The term multiple intelligences means double or compound intelligences. Multiple intelligences seems to be popular when it was introduced by psychologist Howard Garndner (Desmita, 2009:167) that humans do not have the only one intelligence, but instead they have a lot of intelligences (Multiple Intelligences) which differ from each other. The belief like Gardner about multiple intelligences which is had by each individual is based on the wide Intelligence concept and including all aspects of human life such as intelligence concept developed by Santrock (2007: 317) that intelligence is thinking skill and the ability to adapt and learn from the experiences of daily life.

This concept can be understood that the experiences of daily life can be reconstructed by a person using its potential as a social, linguistic, interpersonal, intrapersonal and others. As an example of someone having multiple intelligences illustrated by Gardner (Ormrod, 2008: 212) is a person who is highly skilled in a feld, for example in making music composition but he/she rather has an average ability in other science felds. An opposite example is a person who has a brain injury sometimes he/she loses the ability that relates only one intelligence. A person may show the diffculties, especially in the feld of language, while the others may have diffculty in handling tasks that involve spatial reasoning.

In addition, Desmita (2009, 163) cites several other definitions of intelligence which describes the extent of the meaning contained in the intelligence implicitly supporting the concept of multiple intelligences are

> *Intelligence refers to a general ability to learn from experience; also refers to ability to reason abstractly, (Seifert and Haffnung, 1994).*
>
> *Intelligence is the capacity for goal directed and adaptive behavior; involves the abilities to profit from experience, solve problem, reason, and successfully meet challenges and achieve goals, (Myers, 1996).*
>
> *Intelligence is defined as the entire repertoire of acquired skills, knowledge, learning sets, and generalization tendencies considered intellectual in nature that are available at any one period in time (Cleary, et.al.1975).*
>
> *Intelligence is verbal ability, problem solving skills, and the ability to learn from and adapt to the experiences of everyday life (Santrock, 1998).*

By considering the various definitions of intelligence above looks clearer that the intelligence is not the only one that owned by a person but double or multiple intelligences, as their main ideas about intelligences above including a general ability (Seifer and Hafnung), adaptive behavior (Myers), Skills, Learning sets (Cleary), verbal ability (Santrock).

2. The Characteristics of Multiple Intelligences

Based on the intelligence concept above, it can be formulated the characteristics of multiple intelligences, but once again clarifying that the multiple intelligences is the different ability that is owned by a person, why is it different? According to Gardner, it is due to various intelligences have different manifestations in different cultures (Ormrod, 2008:212) therefore, that is right described by Santrock (Santrock, 2007: 317) that intelligence is thinking skill and the ability to adapt and learn from the experiences of daily life. Based on this explanation, intelligence plays a role in all contexts of a dynamic life so each individual must have an intelligence which is underlying the environment of his/her life. Hence, Gardner (Santrock, 2007: 323) recognizes that every individual has multiple intelligences. The characteristics of multiple intelligences lie in the possession of the following skills:

a. Having verbal-linguistic skill (verbal-linguistic Intelligence)
b. Having logical mathematical skill (logical-mathematical Intelligence)
c. Having visual-spatial skill (visual-spatial Intelligence)
d. Having kinesthetic-physical skill (bodily-kinesthetic Intelligence)
e. Having musical skill (rhythmic Intelligence)
f. Having interpersonal skill (Interpersonal Intelligence)
g. Having intra-personal skill (intra-personal Intelligence)
h. Having a natural skill (naturalistic Intelligence)

Different from multiple intelligences above, Sternberg (Santrock, 2007: 323) identifes multiple intelligences into three intelligences called intelligence *triarchi*; they are analytical skill, creative ability and practical ability. Analytical skill of learners is reflected in the ability to store information, transfer information, plan and make decisions and to translate those ideas into action. Creative ability is reflected in the ability to solve a new problem quickly and handle the routine

problems automatically. Practical ability is reflected by their ability in the association, and in resolving the problems and the ability to build the relationship well with everyone.

Another case Garnder and Sternberg, Thrustone (Desmita, 2009: 166) considers that multiple intelligences has the characteristics of the primary ability of intelligences consisting of:

a. The understanding about verbal (Verbal comprehension)
b. Fluency in using words (word fuency)
c. The ability of number (numerical abilities)
d. The ability of space (spatial factor)
e. The ability to remember (memory)
f. The Velocity of observations (perceptual speed)
g. Reasoning ability (reasoning)

In addition, Guilford (Jamaris, 2010:118) who is called a modern intelligence expert develops multiple cognitive abilities of a person which consist of three components of intelligence are:

a. Intelligence operation which includes cognitive ability, memory, divergent thinking, convergent thinking and evaluation.
b. The content of intelligence which includes fgural ability, symbolic, semantic, and behavior.
c. The product of intelligence which consists of the ability to do *unitikasi*, *keasifikasi*, relation, system, transformation and implication.

3. The Measurement of Multiple Intelligences

Can multiple intelligences be measured? How the measurement instrument is applied in the measurement of multiple intelligences? The product of intelligence can indeed be measured by reading the indicator of someone's action but when someone thinks there is no measurement tool that knows the contents of someone's mind as the adage the ocean can be measured but no one knows someone's mind. Of the intelligence indicators develops measurement tool that can determine a person's level of intelligence described by Jamaris (2010: 131) which quotes the intelligence measurement of Intelligence classifcation/IQ by Terman:

IQ Score	Classification
140 to over	Genius or near genius
120-140	Very superior
110-120	Superior
90-110	Normal or average intelligence
80-90	Dullness
70-80	Borderline defciency
Under 70	Defciency feeble-mindedness

In educational developing intelligence standards in the classifcation called mental retardation or get a mental disorder is:

IQ Scores	IQ Classification
50-69	Mild
35-49	Moderate
20-34	Severe
Under 20	Profound

Based on the measurement standard above, among experts who try to develop the measurement of intelligence are:

a. Binet-Simon Intelligence Scale

Binet-Simon Intelligence Scale focuses on measuring verbal intelligence by developing a formula IQ = $\frac{MA \times 100}{CA}$

Explanation MA = Mental Age/level of the child's ability

CA = Chronological Age/age of children

IQ = Intelligence Question

1) A child aged (CA) 10 years getting intelligence test scores as level with a child aged 10 years, so he/she has an IQ of 100 = normal
2) A child aged (CA) 10 years getting intelligence test scores as level with a child aged 8 years, so he/she has an IQ of 80 = subnormal
3) A child aged (CA) 10 years getting intelligence test scores as level with a child aged 12 years, so he has an IQ of 120 = above normal.

b. Stanford-Binet Intelligence Test

Stanford Binary Intellegence Test develops the measurement of Intelligence called the standard ages score of development Simon-Binet.

c. Wechsler Adult Intelgence Scale

Wechsler Adult Intelligence Scale (WAIS) is one of intelligence measurement of multiple intelligences because WAIS believes about multifaceted intelligence so developing test that is oriented on the ability of verbal and performance test. To process the score that is obtained from the test, it uses statistical technique that is factor analysis aims to analyze and determine the specific skills that are in two main sections of intelligence test which it is developed.

The WAIS-III consists of fourteen sub-tests to be completed within 60-75 minutes. The test is administered individually; each sub-test is given separately and moved from the easy test item to the difficult test item. The test content covers general knowledge, arithmetic vocabulary, completing the picture, arranging the beam, images and objects.

4. The Factors of Optimizing Multiple Intelligences

Multiple intelligence indicates that *Holistikalisasi* of the human ability to adapt in various living conditions, therefore, to support the optimizing multiple intelligence of course involving a variety of components that are closely related with the characteristics of multiple intelligences. However, among a number of factors that support the optimizing of multiple intelligences is interesting to observe Sternberg's opinion (Ormrod, 2008: 214) who developed multiple Intelligence by the concept of intelligence *triarchi* that to optimize multiple intelligence can be done by considering three main factors of optimizing intelligence are:

a. The factor of environmental context role

The role of environmental context in supporting the optimizing of multiple intelligences is someone's adaptive ability to adjust behavior to suit the environment, adjust the environment to suit someone's need and choose an environment that is conducive to success. What are environmental aspects that affect intelligence? This question is submitted by Santrrock (2007: 328) and the answer

is given by citing the results of psychologists study such as:

1) The results of Seifer's Study (2011) which concluded that there is a signi f cant correlation between socioeconomic status and intelligence of the way parents communicate with the children, support that is given by parents, the environment in which the family lived, and the school quality contributes to this correlation.
2) The Results of Hart and Risley's Study (1995), they found that parents with middle-income is more to communicate with their children who are still young compared to the rich parents. How often parents communicate with their children during their f rst three years correlated with the Stanford-Binet IQ scores at 3 years. The more often the parents communicate with their children, their IQ scores are higher.
3) The Results of Ceci and Gilstrap's Study, (2000), Christian, Bachman and Morrison, (2001) explained that the school affects the intelligence. The biggest in f uence has been found in children who do not get formal education in the long term, these children have decreased intelligence.

b. The factor of previous knowledge role

The role of previous knowledge can be optimizing multiple intelligences since intelligent behavior sometimes involves the ability to handle a new situation successfully. When a person is faced on a new task or problem, he/she should refer to the previous experience (prior knowledge) and consider the types of responses that are effective in handling a similar situation. Besides prior knowledge, the ability to generalize the previous experiences appropriately improves their ability to adapt quickly and overcome the new challenges.

c. The factor of cognitive processes role

There are a number of cognitive processes which are involved in intelligent behavior: interpreting new situations adaptively, separating the important information from the unimportant details, identifying the various possible problem-solving strategies, f nding the connection between the ideas that seem unrelated, using feedback effectively and so on. From a number of cognitive processes if each individual is accustomed to do or exercise the cognitive processes, it can support optimizing someone's multiple intelligences.

d. The Factor of Genetic Role

How strong is the in f uence of genetic/heredity in the optimizing of intelligence? Santrock (2007: 328) explains by quoting the opinion of Neiser et al, (1996) that the concept of heritability tries to sort out the in f uence of heredity and environment in a population. Heritability is a part of the variance in a population that is associated with genetic factor. Heritability index is calculated by using correlation techniques. So, the highest level of heritability is 1.00; correlation over 0.70 indicates a strong genetic in f uence. All committees, consisting of honorable researchers who compiled by *American Psychological Association* concluded that the late teens phase, the index of heritability intelligence is approximately 0.75, indicating a strong genetic in f uence.

e. The Factor of Distributed Intelligence

Distributed Intelligence is the term that is introduced by Ormrod (2008:216) who has a sense that something is done by someone with the minimum help or even no help at all from the others around them, however, a person has a greater tendency to think and act as intelligence if they obtain the help from the physical environment, culture or social.

Distributed Intelligence can be done in three ways: first, using physical objects such as calculator, computer to handle and manipulate a large amount of information. Second is presenting and thinking about the situations encountered with the use of various symbolic systems of their culture such as words, chart, diagram, mathematical equations. Third is working together with others to explore the ideas and solve the problems as adage the power of two or two heads are better than one head.

f. The Role of Scaffolding Process

The factor of optimizing multiple intelligences can be done with the process of scaffolding. Scaffolding process as described by Santrock (2007:265) is the change in the level of support. The definition refers to the original purpose of the use of the term scaffolding popularized by Vygotsky to describe the change in support during the learning session where the person who is more skilled changing the guidance appropriate to the child's ability level.

Why should learning support change (the scaffolding process)? Vygotsky explains as quoted by Santrock (2007: 264) that each person will have to be on the Zone of Proximal Development/ ZPD or undergo a series of difficult tasks or even too difficult to be controlled by children alone but it can be learned with the help and guidance of an adult or a trained children (scaffolding).

The process of scaffolding is originally only used to assist the development of language and mind but basically it can be used for optimizing of multiple intelligences by developing a dialogue technique, private speech and inner speech. This is logical because the characteristics of multiple intelligences are related to language and mind as reinforced by Vygostky (Santrock, 2007: 265) that all mental functions have external or social resource. Children should use the language to communicate with others before they focus into their own thoughts.

B. The Potential of Human Virtuous Character

1. The Characteristics of Human Virtuous Character

Education in Indonesia in the 21st century looks visibly open minded towards social change or social phenomenon that occurs. The social change which is being felt is widespread of the information, computing, communication and automation to the educational communities (Kemendikbud, Socialization Curriculum 2013 Slide). Therefore, the curriculum in 2013 is aimed to achieve the phenomenon by integrating scientific approach in the spirit of learning process exploiting the phenomenon of the 21st century society development by encouraging for finding out, not to be told.

However, the opposite phenomenon of social change is the decline of moral or national character or experiencing moral degradation of nation such as the rising of corruption, fighting among students, acts of violence in the school until the school becomes an unsafe and comfortable place. This condition actually motivates the moral getting the place again in the educational process and in this 2013 curriculum, character education gets the momentum.

But does human have the potential virtuous character? How to embed a virtuous character in students? The answer is that the manner is closely related to the moral values and character that comes from the religion or the national character which is agreed by a particular region while the goodness above the potential that is truly held by human and it is possible to be developed by the due the man has an *edukabilitas* dimension to accept external intervention in order to realize himself/ herself to be a virtuous character. As described by Koesoema (2010: 109) that the *edukabilitas* of human dimension globally refers to the environment of existential aspects, social and relational

which is owned by the subject that should be a major concern for the individuals or the groups that would help support them in developing themselves fully as far as the possibility is owned.

What kind of the character that is expected by the education process? The answer is as described in the National Education System Law No. 20 of 2003 that education aimed is a conscious and deliberate effort to realize an atmosphere of learning and the learning process in order to the students actively develop their potential to have the spiritual strength of religious, self-control, personality, intelligence, glorious character and the skill that is needed by themselves, society, nation and state. Based on the definition of the education, the characteristics of virtuous character are the students having a religious spiritual, self-control, personality, intelligence, virtuous character, and the skill that is needed by him/her, society, nation and state.

The characteristic of the virtuous character in the context of Indonesian is also described in the function and the purpose of national education in the National Education Law No. 20 of 2003 that the national education serves to develop the capability of forming nation character and civilization which is dignity in the context of the intellectual life of the nation, aimed at developing students' potentials in order to become a man of faith and fear of God Almighty, good moral, health, knowledgeable, skilled, creative, independent and become the democratic citizens and responsible.

The characteristic of the virtuous character is in rhythm with the value of education as described Koesoema (2010: 199) that in the discourse about the value of education, we often hear the term character education, virtuous character and moral. Character is derived from the Sanskrit word which has the sense of a manner and courtesy in the society. While the virtuous or moral character derived from the Arabic word primarily teaches how someone should relate to God, the creator as well as how someone should relate to fellow human beings.

Thus, it can be understood that the characteristic of character rooted in religious values, moral values, the values of character and citizenship values that can be internalized in the students or every individual through the process of developing human potential *edukabilitas*. Koesoema (2010: 205) classifes some character values that can be a part of person's character, they are the value of virtue, the value of beauty, the value of working, the value of loving the country (patriotism), the value of democracy, the value of unity, moral values and human values.

The characteristic of human virtuous character is rooted in the values of the nation character in the context of Indonesian-ness to refer to the four fundamental pillars of underlined–spirit of the principles of *Pancasila* (Mulyasa, 2012:b254) as follows:

a. The characters that come from the heart manner include: faith and fear, honest, trustworthy, fair, orderly, law-abiding, responsible, empathetic, willing to take risks, never give up, sacrifce, and patriotic spirit.
b. The characters that come from thought manner include: intelligent, critical, creative, innovative, curious, productive, science and technology oriented, and refective.
c. The characters that come from sports/kinesthetic include: clean, healthy, sportive, tough, reliable, resilient, friendly, cooperative, determinative, competitive, cheerful and persistent.
d. The characters that come from feeling and intention are: humanity, mutual respect, mutual cooperation, togetherness, friendly, respectful, tolerant, nationalist, caring, cosmopolitan (worldwide), prioritizing the public importance, patriotism, be proud in using language and Indonesian products, dynamic, hard working, and energetic working.

The characteristics of Human virtuous character that comes from religion is described by Khalid (2005: 32) that the man has the potential to have the characteristics of virtuous character

Ihsan, humble, honesty, trust, *wafa'*/keeping promises, *haya*/shame and mercy/compassion. Hambali (2009) adds that the characteristic of human virtuous character is about human fulfilling the characteristics of *Ulul albab* which really into science, separating the badness from the goodness, critical, being ready to convey the knowledge and fear of Allah only.

2. The role of Multiple Intelligences in Increasing the Potential of Human Virtuous Character

There is a popular adage that smart people are not certainly virtuous character, but the virtuous character requires intelligence. There are many ways to increase human potential into a virtuous character, including one of which is through multiple talent (multiple intelligences) approach as identified by Khan (2010: 18) about the strategies of character education that includes:

a. *Value clarification and moral development approach*
b. *Self esteem approach*
c. *Multiple talent approach (mind mapping, multiple intelligence, public speaking, effective thinking)*
d. *Creative approach*
e. *Pictorical riddle approach*
f. *Inquiry approach*
g. *Synetics approach*

Based on the strategies above seems clearly that there are multiple intelligences in relation to increase the potential of human virtuous character that multiple intelligence which is possessed by human is the first step to be a virtuous character. Like two sides of a coin that to be human virtuous character requires intelligence to understand the characteristics of the character as described by Muslich (2011: 133) that is necessary to establish a balance in developing the moral character of knowing (intelligence), moral feeling and moral action (character).

Multiple intelligence is the potential related to the hard skill while the character is soft skill. To realize the potential of a whole person requires the integration of hard skill and soft skill in the term moral psychology can be a part of Emotional intelligence (EQ) which is popularized by Daniel Goleman (Desmita, 2007: 170) IQ and EQ integration process in the contemporary view is described by Desmita (2007: 170) that the success of someone's life is not only determined by intellectual but also emotional intelligence. Goleman asserts the results of his research (1995) that every human being has two potential minds, namely the rational mind and the emotional mind. The rational mind is driven by intellectual ability or popularly known as IQ, whereas the emotional mind is driven by emotion.

Why does the character include EQ? Because emotional intelligence refers to the ability to recognize our own feelings, and the feelings of others, the ability to motivate ourselves, and the ability to manage the emotions well to ourselves in relationships with other people, all of these abilities are the characteristics of a virtuous character as previously described. Therefore, Goleman (Desmita, 2007: 170) identifes the emotion abilities of intelligence into five important abilities are: knowing one's emotions-self awareness, managing emotion, motivating oneself, recognizing emotions in other and handling relationships.

In addition, to demonstrate the role of multiple intelligences in increasing human potential towards virtuous character in education to develop educational process which is described by

Zubaedi (2011: 248) that there are eight approaches that can be used in the educational process involving the role of multiple intelligence for forming the characters namely: 1. Evocation; it means that the approach provides the opportunity and flexibility to the students to freely express the affective response to the stimulus that they are received, 2. Inculcation; it means that the approach is aimed to the students receive a stimulus toward ready condition, 3. Moral reasoning; it means the approach that high taxonomic intellectual transactions occurred in finding solutions to a problem. The three stages of the morals, namely: a. the phase of moral knowledge, b. the phase of moral feeling; and c. the phase of action morally. Moral reasoning is a systematic process for evaluating a personal virtue and developing a consistent and impartial of moral principles which is used to live. Moral knowledge is the cognitive phase of learning about moral issues and how to resolve them. Moral sense is a moral respect which is the basic of what is believed about him/her and others. Moral action is a person who is acted obviously based on his/her values and knowledge. 4. Value clarification; it is an approach through targeted stimulus in order to the students are invited seeking the clarity of moral imperative message, 5. Value analysis; it is an approach which the students are stimulated to perform the analysis of moral values, 6. Moral awareness; it is an approach which the students receive a stimulus and are raised their awareness of a certain value, 7. Commitment approach; it is an approach that the students from the beginning are invited to agree on the existence of a mindset in the value of education, 8. Union approach; it is an approach that the students are directed to act the real moral values in a life.

In a different context from the side effects caused by a person's intelligence, multiple intelligence can play a role in increasing human virtuous character described by Gunawan (2012: 19) because multiple intelligence is as an individual internal factor that can affect the formation of manner, character, moral and ethics in addition to the external factors such as through the education and the environment. Internal factors which are aimed are intelligence, instinct, heredity, and the willingness of each individual, custom and conscience.

CONCLUSION

Multiple intelligences is a term that describes the plurality and comprehensiveness of human intelligence, but of a plurality of intelligence possessed by each individual making human be *establish* in facing of the complexity of human life, so if in a *holistic* manner has multiple intelligences, it would be sure formed human virtuous character. Many experts try to identify individual multiple intelligences like Howard Gardner identifes them into verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, bodily-kinesthetic intelligence, rhythmic intelligence, interpersonal intelligence, intra-personal intelligence, naturalistic intelligence. Sternberg grouped into three intelligences; they are analytical ability, creative ability and practical ability. Another case Garnder and also Sternberg, Thrustone considers multiple intelligences has the characteristics of the primary ability in the intelligence consisting of verbal comprehension, word fuency, numerical ability, spatial factor, memory, perceptual speed and reasoning.

The efforts to optimize multiple intelligences which are obtained toward optimizing the role of environmental context, the role of prior knowledge, the role of cognitive processes, the role of genitive, the factor of distributed intelligence and the role of scaffolding process are expected that they can increase human potential towards virtuous character. This can be understood as human virtuous character that will not be out of environment as expensive as building the intelligence; therefore, increasing the character in a *nurturant* manner can be realized if multiple intelligence is formed in addition to the characteristics of multiple intelligence containing the intelligence which

is oriented on forming the character as interpersonal and intra-personal intelligence. Besides that, there are the processes that are immediate to establish the potential toward human virtuous character.

But besides that, there are strategies that can achieve the optimizing of multiple intelligences as well as the process of instructional effect increasing human potential toward virtuous character which is through the process of multiple inelegance approach, the management of emotional intelligence (Emotional Question), the process of evocation, inculcation, moral reasoning, value clari f cation, value analysis, moral awareness, commitment approach and union approach.

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MAINSTREAMING MULTICULTURAL STUDIES FOR RADICAL ISLAMIC MOVEMENT IN YOGYAKARTA

Written by:
Nur Hidayat
Lecturer of PGMI FITK UIN Sunan Kalijaga Yogyakarta
Email address: bos_hidayat@yahoo.com

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ABSTRACT

Study of radicalism in the body of Jama'ah Shalahuddin, can be concluded that Jama'ah Shalahuddin conceptually or in radical thought, but socially, is very plural. This is seemed to be contradiction, but apparently this is the chosen path of Shalahuddin to "escape" from a variety of other student organizations. In the context Jama'ah Shalahuddin, multicultural education could be perceived as an alternative offer of pedagogic practices that leverage the diversity of disciplines.

Keywords: *Radicalism, multicultural, Jamaah Shalahuddin of UGM university mosque*

A. INTRODUCTION

The developments in the after math of the events of 9/11 brought all Islamic educational institutions into the spotlight.[1] In Indonesia, attention directs to to Salaf boarders.[2] The incident which started from some groups of men wore long fowing robe, calf-length trousers, turban and long beard, also niqab women, strength the attention around.[3] The incident of arrested Abu Bakar Ba'Asir with his Ngruki boarders, and the emergence of Ja'far Umar Thalib, as if convinced the world as their correct accusation. Since that time, the spotlight to salaf boarders becomes prominent.

But, the international spotlight lately has refuted by the arrest of terrorists who were not in salaf background, but rather from public school and even university which they are inclusive and multicultural in fact.[4]

This research is focused on Jama'ah Shalahudin from public university, Gadjah Mada University[5]. The fall of the option is based from the reality that Jama'ah shalahudin in UGM university mosque emerged as militant Islam group which is the most phenomenal that shakes the plural society because of the persistence of members to be "martyr" for God. Then, the enchantment of Jama'ah Shalahuddin is on the fact that they can not be separated with Salaf propaganda movement. Focusing on Jama'ah Shalahuddin in UGM university mosque, this research explores

1 Noorhaidi Hasan, "*The Salafi Madrasas of Indinesia*" dalam Farish A. Noor, Yoginder Sikand & Martin van Bruinessen (eds.), "*The Madrasa in Asia, Political Activism and Transnational Linkages, e-book,* (Amsterdam: Amsterdam University Press), hal. 249

2 Martin Van Bruinessen, (1995), *Kitab Kuning, Pesantren dan Tareqat*, (Bandung: Mizan, 1995), hal 19

3 Noorhaidi Hasan, *Laskar Jihad; Islam, Militansi, Pencarian Identitas di Indonesia Pasca Orde-Baru,* (Jakarta: LP3ES, 2008), hlm. 31

4 Ibid., hlml. 233-234

5 Setna Krisna Sumargo, *Noordin M. Top dan Co. The Untold Stories,* (Jakarta: Gramedia, 2009), hlm. 63-67; bandingkan dengan pengakuan mantan aktivis NII, Dani Dwi Permana, alumni SMA Swasta di Jakarta, dalam Baban Sarbana, Blogger Ngomomg Politik, (Jakarta: Elex Media Komputindo, 2010), hlm. 38-39

the history of an Islam community and the process on how it is built in around multicultural society. Therefore, this research focus is in mainstreaming multicultural studies in de-radicalization of religion effort for public schools.

Explicitly, this research wants to answer the problem: *first,* what are the factors which indicating of the spread of religion radicalism movement, both in public schools and public universities? *Second*, how is the process of the spread of radicalism religion movement, both in public schools and public universities? *Third*, how to mainstream multicultural studies for radical islamic movement?

B. RESEARCH METHODOLOGY

This research uses sociology approach based in transformative sociology theory. This research unites theoretic and empiric research. The data sources is collected by library and feld research. Library research is done by researching books and dissertation, thesis, graduating paper, journal and others. Beside that, the library research is also done by electronic exploration (internet) and mass media (newspapers and magazines) which are related to the research subject. The second primary research is feld research. Field research is done in Jama'ah Shalahuddin Gadjah Mada university mosque in Yogyakarta. This subject is chosen because it is reputed as "prominent circle" of development in Islamic university communities in Yogyakarta. This prominent circle is known by the same Jama'ah Shalahuddin movement actors although they are in different mosque locations.

This research is qualitative research which has some characteristics, *first*, it is in scientifc feld, *second*, researcher is instrument or primary data collector, *and third,* data is analyzed in inductive way.[6] According to *Yin*, research focus will answer more about "how".[7] Philosophically, as with data characteristics, collecting technique and research analysis in this research point to *post-positivisme-phenomenology*.[8] This qualitative approach choice is based on this study characteristics that the aim and data are convinced to be more relevant with qualitative approach.[9] Validity and data reliability which are obtained from this research is fundamentally will rely on observation of vary sides who participate in managing the community and/or activities in Jama'ah Shalahuddin.

Collecting data techniques are done in four ways: (a) participant observation become active participants in the Jama'ah Shalahuddin forum for 1 month. (b) interviewing the board and prominent fgures of other Jama'ah Shalahuddin, (c) collecting documents, organization structure, bulletin, tabloid, and audio record in every recitation.[10]

C. RESEARCH SETTING

Geographically, Jama'ah Shalahudin is now located in UGM university mosque and managed in different management than Lembaga Dakwah kampus (LDK) Jama'ah Shalahuddin. For that reason, duty and role are also different. Under its own management, UGM university mosque only manages external mosque parts, which are: manage and keep the mosque clean, both inside mosque, outside mosque, and wudhu place; organizing mosque management; keep infrastructure of university mosque in complete; also providing glasses for people in the mosque.[11] While LDK

6 Lexy J. Moleong, *Metodologi Penelitian Kualitatif* (Bandung: Remaja Rosda Karya, 1989), hlm. 3.
7 Robert K. Yin, *Case Study Research, Desighn And Methods*, Terj. M. Jaudzi Mudzakir (Jakarta: PT Raja Grafndo Persada 1996), hlm. 18.
8 Noeng Muhadjir, *Metodologi Penelitian Kualitatif* (ed. IV) (Yogyakarta: Andi Offset, 2002), hlm. 17.
9 Lincoln & E. G. Guba, *Naturalistic Inquiry* (California: Sage Publications Inc. 19985) hlm. 39.
10 R.C Bogdan & S.K. Biklen, *Qualitative Research Education; An Introduction to Theory and Method* (London: Allin dan Bacon, Inc., 1982), hlm. 145.
11 Interview with Muhammad Ali on Tuesday September 24th 2013, at 14.15 WIB in masjid kampus UGM.

Jama'ah Shalahuddin management manages internal problems, which are: keeping the mosque in prosperity with certain recitation, and making the university mosque as Islamic Center.

LDK Jama'ah Shalahuddin UGM secretariat is located in Jl. Tevesia No. 1 Bulaksumur – Yogyakarta, exactly in south wing of UGM mosque pulpit. In the end of 1999, exactly in Ramadhan 1420H, by UGM rector, the secretariat is moved from Gelanggang Mahasiswa to UGM university mosque. In this reliance, rector hopes that the managing and prosperity of mosque is still kept.

Shalahuddin is built in 1976. But, there was no agreement reached about date and month of when it was built, especially because in year one, Shalahuddin was more than anomie group than organized group. In years before Shalahuddin is built, student movements activities in Gadjah Mada (like the most universities in Indonesia) most of them is motive by rivalry between two dominant student organizations: GMNI (Gerakan Mahasiswa Nasionalis Indonesia) and HMI (Himpunan Mahasiswa Islam). GMNI is secular-nationalist student organization, and before it was related with PNI. While HMI is Islamic student organization, and in the past, this organization was close to Masyumi politic party. This rivalry started from politic context of student activities, but the effects was broader than politic problem itself. Some muslim students who were really worry because of fact that islam speech missionary in university is always failed over GMNI muslim students (or for more: non-HMI). This was only because the speech missionary is seem only from HMI. Then, one of the students who is pertinent stated a problem to the researcher, "in that time, GMNI muslim students will not come to Jum'ah pray or taraweeh pray because they do not want to be identified as HMI member![12]

That was also because Gerakan Mahasiswa Indonesia in the broader context was having a hard time since the era of the New Order political restrictions. In this context, Saladin established in the very early forms: loose and unstructured. Surprisingly, this is a fairly early. Establishment Saladin begins with Maulud program, commemorating the birth of Prophet Muhammad. In contrast to conventional Maulud, which consists mostly of religious sermons, the program also consists of performing arts such as painting exhibitions, choirs, poetry readings, as well as dialogue and group discussion forums. One of the speakers in the cultural dialogue is the late YB Mangunwijaya, a well-known Catholic priest. The program was named the *Maulid Pop* and then it became a model for the propagation method Saladin.

Five new boarders were also students of UGM at the time; Ahmad Fanani, Muslich ZA, A. Luqman, M. Toyibi, and Samhari Baswedan, is recognized as the founder of Jamaat Saladin, ie, the people who set Maulid Pop.

Fanani, Muslich, and Luqman are students of Faculty of Engineering, while Toyibi and Samhari are students of the Faculty of Medicine. Toyibi was chairman of the Student Council in Gadjah Mada at the time. As told very interesting, a magazine published by Saladin, Fanani Toyibi came in 1976 when the afternoon rains. He requested that the Chairman is willing to cooperate in the preparation of *Maulid Pop*, a set of programs aimed at presenting Islam based on scientific culture campus.

Jama'ah Shalahuddin name was first used in the RIC Program (Ramadan in Campus). And for the very simple reason: they would need a name for structural committee that will be announced to the public. Then, the organization is named after a famous Muslim hero of the Crusades; *Salahuddin al Ayyubi*, although most members of Saladin claimed that there was no particular reason for choosing this name. Then, one of the RIC Committee announced a name "Shalahuddin" and would be a good name for a committee. The researcher views that Salahuddin opined that

12 Interview with Muhammad Ali on Tuesday September 24th 2013, at 14.15 WIB in masjid kampus UGM.

Salahuddin al Ayyubi is someone who " can communicate with all people on each side, and that's why we use his name". Although not all Shalahuddin activists agreed with this opinion, when they are asked if the name was chosen based on certain considerations such as "reproduce" the spirit of the Crusades—which to some extent imply the anti-Christian feeling. On the one hand, it would be hard to ignore isolated statement that the choice of name reflects Shalahuddin's willingness to inherit the spirit. But on the other hand, there is no evidence to corroborate this speculation. Since Jamaat Shalahuddin begins with Maulud celebration, researchers will also speculate that the reason the committee chose the name because *Shalahuddin al-Ayyubi* was the first person to start Maulud tradition. He did it for the purpose of maintaining and restoring the spirit of the Muslims during the Crusades.

D. ANALYSIS AND DISCUSSION

In short definition, multiculturalism means "cultural diversity".[13] There are three terms that are often used interchangeably to describe the diversity of the communities that comprise both the diversity of religion, race, language, and culture, which are the plurality, diversity, and multicultural.[14] According to Bhikhu Parekh, in the 1970s, *multiculturalism* appears first in Canada and Australia, then in the United States, Britain, Germany, and others. After that, the discourse of *multiculturalism* is growing very rapidly. After three decades since it was rolled out, *multiculturalism* has experienced two major waves, which are, *the first*, multiculturalism in the context of the struggle for the recognition of different cultures. The principle of the need for recognition is the main characteristic of this first wave; *second*, *multiculturalism* that legitimize the cultural diversity and undergo several stages, including:[15]

The need for recognition, involving a variety of other academic disciplines, liberation against *imperialism* and *colonialism*, liberation movements of identity groups and indigenous peoples, *post-colonialism*, *globalization, post-nationalism, post-modernism* and *post-structuralism* that deconstructs establishment structure in the society.[16] This second wave of *multiculturalism*, according to Steve Fuller, it raises three challenges that must be considered as well to watch out for, namely, *the first* is the existence of western hegemony in the politic, economy, and science. Community, especially developing countries, need to study the causes of western hegemony in these fields and take the necessary steps to overcome, so they can be aligned with the western world. *The second* is culture essentialization.[17]

Radical Islamic movement and its meaning, *etymologically*, radicalism comes from the word *radix*, meaning root. A radical is someone who wants to change the existing situation by breaking it through the roots. A radical is a person who likes quick and fundamental changes in laws and methods of government. So, radicalism can be understood as an attitude that craving for change of the status quo by way of totally destroying the status quo, and to replace it with something new which is different. Normally, the way that is used is revolutionary way, that means turning over the

13 Scott Lash dan Mike Featherstone (ed.), *Recognition And Difference: Politics, Identity, Multiculture* (London: Sage Publication, 2002), hlm. 2-6.

14 Agus Moh. Najib, Ahmad Baidowi dan Zzainudin, "Multikulturalisme dalam pendidikan islam (studi terhadap uin yogyakarta, iain banjarmasin, dan stain surakarta)", dalam httt://idb3. Wikispaces.com.

15 H.A.R. Tilaar, *Multikulturalisme; Tantangan-Tantangan Global Masa Depan dalam Transformasi Pendidikan Nasional* (Jakarta: Grasindo, 2002), hlm. 83.

16 Gregory Jay. "Critical Contexts For Multiculturalism" dalam *http://www.uwm.edu/~gjay/Multicult/contextsmulticult.htm*, download 2 Desember 2005

17 Steve Fuller, "Social Epistemology as a Critical Philosophy of Multiculturalism" dalam Ram Mahalingan dan Cameron McCarthy, *Multiculturalism Curriculum,* 2002. hlm. 15-36 sebagaimana dikutif oleh H.A.R. Tilaar, *op. cit,* hlm. 84-85.

existing values drastically through violence (*violenceri*) and extreme actions.[18]

Sociologically, radicalism often arises when there are many contradictions in the existing social order. When people who experience anatomy or gap between values and experiences, and people is no longer having the power to overcome that gap, then radicalism can emerge into the surface. In other words, there will be a process of radicalism in layers of society, especially among young people. However, there is no consensus for the right term of Islamic radical name to describe the radical Islamic movement. The most common term is "*fundamentalism*", in order to show the attitude of Muslims who reject the existing social order and try to apply a separate order model based on religious values.[19]

However, the term is too much influenced by the Christian tradition refers to the movement of Protestant fundamentalism. To avoid religious bias, some analysts use certain terms, that are sociological and political as "radical, extreme, religious nationalists, or simply by Islamists". The difficulty of applying this term is also arises from the fact that members of religious radicalism movement have never called himself as fundamentalist. Arab mass media are usually call them radical or extreme while *Hasan al-Banna* himself as the founder of *al-Ikhwan al-Muslimun*, one of the religious organizations known as radical, calling themselves *Salafiyah* which means it is the former. This term is technically indicate an attempt to follow the religious behavior based in al - Qur'an, Sunnah and the practice of previous pious people.[20] Islamic movements are oriented on law enforcement as Islamic Fundamentalists, as indicated by *Ikhwanul Muslimin*. *Hizbuttahrir*, *Jamaah Islamiyah*, dan *Islamic Salvation Front* (*FIS*).[21]

Multiculturalism of Jama'ah Salahuddin and its development. In the context of Jama'ah Salahuddin, multiculturalism can be understood as a " middle way " of various campus organizations, especially when they were HMI and GMNI at the time. In other words, one of the goals of Jama'ah Salahuddin is to find a safe, neutral way to preach in overcoming the classic rivalry between HMI and GMNI which are mentioned above. It has also dedicated to be an independent preach organization in the university, not connected with the student extra organization. Or, as re-formulated in *Boulevard*; commemorating the 20th anniversary of Salahuddin, the organization aims to create a form of propaganda that is free from the influence of practical politics. The focus of propaganda is the Muslim communities in and around University of Gadjah Mada. They never try to convert non-Muslims. One former chairman Salahuddin told the researchers: "we do not want anyone to change their beliefs to Islam. Our goal is to sharpen muslim commitment to Islam". In fact, researcher has never heard of a case where the "conversion to Islam" happened to Salahuddin.[22]

Salahuddin claimed that all Muslim students at UGM with any culture are its members, and all the programs that are provided to them as a propaganda media. Organization divides the target of propaganda into four categories:[23] 1) external groups, the people who do not understand and are not interested in Islam. It is the largest group and propaganda aiming to get them interested and then understand Islam by doing book fairs or popular Islamic studies. 2) Those who are interested, but according to Salahuddin activists, they did not really understand and not committed to Islam. Da'wah in this group is aiming to build their commitment to Islam. This is done by giving lessons

18 M. Amin Rais, *Cakrawala Islam*, Bandung: Mizan, 1987 Cet. 1, hal. 136-137.

19 Tarmizi Taher, *Anatomi Radikalisme Keagamaan Dalam Sejarah Islam*, dalam Bahtiar Efendy dan Hendro Prasetyo, *Radikalisme Agama*, (Jakarta: PPIM-IAIN, 1998), hal. 6.

20 Martin E. Marty dan R. Scott Appleox (ed): *Fundamentalism and the State, RemakingPolities, Economis and Militance*, Chicago: The University of Chicago Press, 1993, h. 153.

21 Olever Ropy, *The Failure of Political Islam*, London: I.B. Tauris & Co. Ltd., 1994, h. 2.

22 Interview with….

23 Interview with JS ex-chairman 2013

and discussions of Islam, especially during Islamic big days. 3) Those who understand, interested and committed to Islam, but has not been involved in da'wah, by trying to deepen the commitment of Muslims through religious activities. It is a medium-leveled group. The propaganda method used for them is trying to maintain or restore their commitment to Islam by doing some khalaqah (intensive discussions) on Islamic issues. It aims to encourage them to engage in missionary activity. 4) Those who engage in missionary activity. This is the core group, and a propaganda activators itself. In defining the obligations of those who understand Islam to engage in propaganda efforts, the Salahuddin rule quotes a verse of the Qur'an, which means: "And let there be [arising] from you a nation inviting to [all that is] good, enjoining what is right and forbidding what is wrong, and those will be the successful."(*Ali Imran*: 104).

Thus, the real Saladin Jama'ah is very multicultural, not just having background from many disciplines (Medicine, Geography, Physics-Chemistry, Engineering [Nuclear, Architecture, Engineering, Industrial], etc., but also a variety of religious knowledge, ranging from the unreligious one up to the boarders. Salahuddin Jama'ah also seems to be pragmatic in becoming a "peacemaker" of the various university camp, especially HMI and GMNI. Naturally, one of the consequences to be borne by the Salahuddin Jama'ah is receiving both while rejecting both, in terms of campus practical politics.

Another element of multiculturalism is Jama'ah Shalahuddin members consists of academics, musicians, unreligious people and boarders. Most of academics who concerned about Salahuddin Jama'ah are UGM lecturers who have Islamic insights provide and can scientifcally speech or speeches about Islam. Musicians of Jama'ah Shalahuddin members are dominated by campus extra organization in collaboration with off-campus traditional arts, such as puppet or the like and often staged at UGM. Unreligious people of Jama'ah Shalahuddin members dominate almost all members, both academics and the arts/musicians. There is also boarders who do not stay last long in Jama'ah Shalahuddin membership because it is seemed "less Islamic" for them.

Organizationally, multiculturalism elements in Shalahudddin can be seen from the personnel of vary socio-religious organizations, such as: **Chairman**: Efri Dian Kusuma (Geography 2010); **Secretariat General**: Muhammad Ali (Engineering Physics 2010); **Executive Secretary**: Khozainu Rohmah (West Asian Literature 2011); **Treasurer**: Ardani Latifah Hanum (Nursing 2010); Sharia Entrepreneurship: Nanang Sunardi (Management 2010); **Directorate of National Propagation**: Wening Mulat Asih (Chemistry 2010); **Special Bureau Regeneration**: Irfan Islami (Agriculture 2010), Mukhtar Witono (Accounting 2010); Ervira Rushdiana (Computer and Information Systems 2010), Minuk Kusmiati (Biology 2010), Annisa Prita Rizkiana (Physics 2010); **BP Faculty Propagation Institute**: Muhammad Lutf Firdaus (Psychology 2010); **Head of the Department of Services and Syiar**: Sri Wahyuni (Agricultural Engineering 2010); **Social**: Riri Dwika A (Anthropology 2011); **Femininity**: Lisa Nur Aeni (Forestry 2011); **Strategic Studies**: Fahmi Restu Fuadillah (Social Development and Welfare 2010); **Media Center**: Agus Aminanto (Electronics and Instrumentation 2010); **External**: Hardy Santoso S (Electronics and Instrumentation 2011).

Jama'ah Shalahuddin radicalism and its development. Seeing from its multiculturalism content, Salahuddin Jama'ah should not have any element of radicalism in religion. However, if it is examined more in-depth studies of the content of it, especially studies in the last 10 years, the radical element is noticeably in the discourse of the scriptualist, textualist, and fundamentalist.[24] As an example, in a study on Thursday-Sunday afternoon, an ustadz who fll the session said that Islam is the truest religion..."[25] At frst glance, there is nothing wrong with the statement. But

24 Governance structure document of Jama'ah Shalahuddin 2013

25 Recitation review of Jama'ah Shalahuddin on Thursday and Sunday afternoon at 15.30 until 17.30

understanding that emerged among Jama'ah Shalahuddin is considering another religion outside of Islam is wrong. This implicit assumption among the Jama'ah Shalahuddin became the seeds of radical understanding. While this is still a thought or understanding and not in action, but it is quite alarming.

This Jama'ah Shalahuddin view is because the majority of Jama'ah Shalahuddin is less religious people who then suddenly experience a "resurrection faith" and become the new boarders who studying Islam intensively with the spirit of Islam. But unfortunately, Jama'ah Shalahuddin did not examine Islam with enough scientifc device the scientifc device except to the extent "recitation"—differ it with study—that are popular. It can be seen clearly on the Ustadzz who give tausiyah or preachers in studies Salahuddin Jama'ah. Most of them in fact do not have background of depth Islamic studies, but rather the background of general sciences, such as medicine, Physics, Chemistry, Geography, and so on. As an example, in a study on Sunday afternoon, speaker who flled Jama'ah Shalahuddin was a student majoring in Geography.[26]

Jama'ah Shalahuddin in this condition has implications for the quality of the result in Islamic studies. Views on substantial matters in Islam are only sourced from secondary holy book that is popularly studied. For example, the study was taken from the book of *Riyadush Sholohin* translations delivered by an academic who have less competence in it. Of course this way may not actually called "studies", but merely "recitation". Recitation generally examines only textual because the writer does not use related scientifc device, such as *Ulumul Quran, Hadith Ma'anil, Ushul Fiqh,* and other related sciences, as well as its correlation with the actual phenomena present. As a result, the way of Salahuddin Jama'ah study did not arrive at meaningful substance of Islam but limited to textual messages which seem to be doctrinal-theological.

Based on the study of radicalism in the body of Jama'ah Shalahuddin above, it can be concluded that the Jama'ah Shalahuddin conceptually is very radical, but socially, is very plural. It seem a contradiction, but it seems this is the way Jama'ah Shalahuddin chose to "save themselves" from various other student organizations.

Mainstreaming of multicultural education for Radical Islamic Movement. In the context of Jama'ah Shalahuddin, multicultural education can be interpreted as an offer of alternative pedagogical practices that take advantage of the diversity of disciplines (Medicine, Geography, Physics, Chemistry, Mathematics, etc.), class (HMI and GMNI), ethnicity (tribal UGM students who come from various regions), religion, and so forth. In other words, this multicultural education is investigated from Jama'ah Shalahuddin religious practices which—as mentioned above, conceptually tend to be radical but in social practices tend to be plural.

Thus, the meaning of mainstreaming multicultural education for radical Islamic movement is mainstreaming multiculturalism (respect for differences) without diluting the identity of the characteristics of each, including radical ideas though. In this case, the interesting quote of interview with Shalahuddin Jamaa'ah is stated here: "It is not like that, small samples of student extra organization in UGM are 4; joint secretary of sports, arts, mapalaska, cooperation, spirituality like Jama'ah Shaluhiddin, Mass Catholic, Christian, Hindu Dharma, and Buddha. From this multicultural situation, which we understand it, is takken progrented. the condition is already like that, because multicultural in Jama'ah Shalahuddin coming from a wide range of motion instead of creating a wide range of motion. The reality is that there is already an existing movement before, and some of them want to get in Jama'ah Shalahuddin, so we accepted them. So, how do we create a system, when there is always argument fght, they could had always understanding the difference

26 Recitation document of Jama'ah Shalahuddin on Sunday afternoon, September 22nd 2013.

each time. Because the implied vision of Jama'ah Shalahuddin in the feld of regeneration is makes people understand their choices. So when Jama'ah Shalahuddin cadres come out, they will choose what they want to be later, and not thinking about Jama'ah Shalahuddin own agendas that affect change in their minds. That is to understand the difference of thoughts that should be based on a mature ideology. Not that he only knows this thought, but indifferent toward other thoughts."[27]

Based on quotes above, it is clear that the praxis reality of Jama'ah Shalahuddin is promoting multiculturalism. They also recognize that in the process there is argument fght, but it is not an obstacle to unite. That is, the praxis of social life in Shalahuddin prioritizes or mainstreams multiculturalism. But in conceptually thought, they survive and fght for his opinion in the midst of differences. In other words, they can live and thrive in multicultural society, but in this society, they have a radical thought in their respective felds. This seems contradiction, but Jama'ah Shalahuddin deliberately chose that path with reason 'for safety' of various conficts so that they can make peace in the surrounding contradiction.

E. CLOSING

Factors that affect the spread of radical Islamic movements from Islamic traditional boarding schools and salaf schools to public schools and universities are: *first*, the background students come from less religious. *Second*, experiencing sudden revival of faith and studying Islam intensively since they become student. *Third*, reciting Islam from the popular recitation forums lead by of ustadzz who are less competent in Islamic studies. *Fourth*, an attitude of people that tends to seek a safe zone without any effort for seeking a deeper understanding of the misunderstanding conflict.

The process of spreading radical Islamic movement starts from the pulpits of popular lectures followed by most less religious people and accept Islam as a simplifcation. For example, the concept of Jihad is supposed to be served by ustadzz who are less knowledgeable about religion, so it causes in a misconception. Those who understand Islam in a "false concept" then build up the communities that led to the potential for radical movements.

Based on the review of the Jama'ah Shalahuddin, mainstreaming multicultural education for radical Islamic movements can be done by promoting respect for diversity without distorting the respective radical thought.

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THE DEVELOPMENT OF MATHEMATICS LEARNING PRODUCTS BASED MULTIPLE INTELLIGENCES

by:
Luluk Mauluah
PGMI FITK UIN Sunan Kalijaga
m.luluk@yahoo.com

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ABSTRACT

This study aims to produce products of math learning based multiple intelligences such as math flms.

The method used in this study is the research and development follows the model of Borg & Gall. Subjects in this study were students in the fourth semester of PGMI (Education of Primary Islamic School Teachers) department year 2012/2013. The technique of collecting data used was a questionnaire. Procedure of the development include: planning, organizing, implementation, and assessment of the fnal product.

The result of this research concluded (1) (a) There are 2 flms those are Film 1 and Film 4 created by students as the remedial of mid-semester test of math study 2 in fourth semester year 2012/2013. (b) The competence that exists in the flm 1 is to understand the comparison and its application, while in the flm 4 is to understand KPK-FPB and roots-ranks and logarithms. (c) Film 1 can be accessed on http://youtu.be/we8r90xFEIE(FILM MATEMATIKA PGMI UIN SUNAN KALIJAGA MOVE ON!). Film 4 can be accessed on http://youtu.be/r7-5TuH4alw(FILM MATEMATIKA PGMI UIN SUNAN KALIJAGA MI ISLAM ALHAQ). Student's perceptions showed that math learning based multiple intelligences contribute in linguistic, kinesthetic, musical, existential, logical-mathematical, visual, and intrapersonal with high category, except for the very high interpersonal intelligence and natural intelligence in medium category. (3) The result of assessment in the last product: Both of the flms include the very good category according to material expert and those include good category according media expert.

Keywords: *learning product, mathematic study,multiple intelligences*

A. INTRODUCTION

Organizing lectures in PGMI Department facilitates various subjects including mathematics. Mathematics as principal subjects in SD/MI should be mastered well by all prospective teachers in MI/SD. Mathematics is taught at primary and secondary level aims to equip students with the ability to think logically, analytical, systematic, critical and creative. Also to be able to use mathematics to communicate ideas or concepts using symbols, tables, diagrams and other media[1]. It also has the ability to manage and utilize the information to survive in the conditions which always change, not sure and competitive. This is due to the development of science and technology that enables all

1 Ibrahim dan Suparni, Strategi Pembelajaran Matematika (Yogyakarta, Bidang Akademik UIN Sunan Kalijaga: 2008)page:36

parties can obtain abundant information, quickly and easily from a variety of sources and places in the world, besides the fast growth, the changes also occur rapidly[2].

The theory of Multiple Intelligences developed by Howard Gardner was officially introduced in 1983 through his book Frames of Mind which were revised with Intelligence Reframed in 1999[3]. The development of multiple intelligences of this study led to a new consciousness, that human beings are created in diversity, and should receive this as a gift that can be a positive potential for mutual support, not as a potential difference to each other being selfish.

Researchers have carried out some form of mathematic lecture based multiple intelligences. Among others, a math exhibition projects:which consists of several parts: math material, visual aid and manipulative materials, slogans and mathematics songs and mathematic posters. Implementation of the course also consists of mathematics quiz contest with each student playing the role of a citizen group madrasa of certain areas. From the implementation of the model classes, when conducted research produce a positive influence with the result: Implementation of multiple intelligences-based mathematics instruction with visual aid, games and quiz competition design can develop not only logical-mathematical intelligence but also linguistic, kinesthetic, musical, visual, interpersonal and intrapersonal. Mathematics learning based multiple intelligences had a positive effect on the character of the student with 95% confidence level[4]. After evaluating the course in the previous semester and year, it turns out no one has developed a learning product based multiple intelligences. Intention of the learning product here is something that is made by a student that can be widely accessed by students and observers of mathematics learning.

Starting from student's remedial activities that are getting some scores less than the minimum standard, then formed a group to make a video/film with Math 2 lecture material and its learning. The target of the group task is that students who get remedial can role as a teacher or a person who can explain the lecture material, which is shown in video format.

Based on some of the videos that are produced, researchers are encouraged to further develop it into a research of development mathematic learning product based multiple intelligences.

From the description above, the problem that can be formulated is: How do the characteristics of mathematics learning products based on multiple intelligences produced in PGMI? How do students' perceptions of the contribution of learning mathematics with the multiple intelligences to the complex intelligences? What is the quality of mathematics learning products based on multiple intelligences according to the expert judgments?

B. STUDY OF THEORY

1. The Nature of Learning

The term 'learning' in the Merriam-Webster dictionary is: to gain knowledge, understanding, or skill by study or experience[5].While 'study' is defined as: to consider attentively or in detail[6]. It means that learning is acquiring knowledge, understanding or skills through observation or attention in full or based on experience. In other hand, Ibrahim & Suparni said that learning includes three

2 Departemen Pendidikan Nasional, Kurikulum KTSP.(Jakarta:2006) Depdiknas
3 Ibid, page: iii
4 Penelitian *quasi eksperiment* dana Fakultas Tarniyah year 2012
5 Merriam-Webster, New Merriam-Webster English Dictionary. Massachussets: Inc. of Springfeld (1989):page. 420
6 (Merriam-Webster, 1989: 712).

things: preparation, execution, and purpose or learning outcomes[7].

Based on the explanation of a wide variety of definitions of learning or learning can be summarized that learning is a process of changes made by the students themselves to acquire knowledge, understanding, attitudes, beliefs and skills through full attention or experience, which is done through the 3 stages of preparation, implementation and achievement of goals.

2. Reality of Mathematics

Etymologically, mathematic means knowledge gained by logical reasoning. Mathematics has a root word meaning 'mathema' which means knowledge or science. According Elea Tinggih mathematic means knowledge which obtained by logical reasoning[8]. The characteristics of mathematics as a deductive science does not accept generalizations based on observation (inductive), but must be based on logical proof[9].

Reys and friends said[10]:

"...Mathematics is a study of patterns and relationships, is a way of thinking, is an art, is a language, and is a tool...."

It means, Reys and colleagues state that mathematics is research and study of patterns and relations, a road or way of thinking, an art, a language and a tool. And Kline explained that the math is not separate knowledge that can perfect itself but because of the presence of mathematics it can help people to understand and know the problems of social, economic and nature[11].While Gatot Muhsetyo convey the sense of mathematics learning is the process of providing learning experiences to students through a series of activities are planned so that students gain competency about mathematics learning material[12].

3. Learning products

According to the Oxford Paperback Dictionary & Thesaurus Dictionary[13] meaning of 'product': Product (noun): 1) An article or substance manufactured for sale 2) A result of an action or process 3) A substance produce during a natural, chemical or manufacturing process 4) Math's Multiplying a quantity by one number by another.

4. Mathematics Learning Product Type

Remember the type, if the type of learning products are similar with the media or teaching materials, then according to Gatot Muhsetyo distinguish and classify the media in different aspects, they are: 1) From the material, in the printed media and non-printed media, 2) Of the impressions, a projection media and non-projection media, 3) From the electricity, in the form of electronic media and non-electronic, and 4) From the measure of progress, a simple and modern media. Such tools can be shaped as board (board, paste), all forms of print (books, worksheets, modules, practice guidelines), all forms of electronic materials (calculator, radio, TV, VCD, computers, internet, LCD[14])

Another case when it similar with the teaching materials, according to their shape teaching

7 Ibrahim dan Suparni. Strategi Pembelajaran Matematika. Yogyakarta: Fak. Saintek UIN Sunan Kalijaga(2008) hal.50

8 Erman Suherman dkk, Strategi Pembelajaran Matematika Kontemporer (Bandung, UPI: 2003) page15-16

9 Erman Suherman dkk, Strategi Pembelajaran Matematika Kontemporer (Bandung, UPI: 2003)page 15-16

10 Reys et al, Helping children learn mathematics. (Fifth edition; Boston: Allyn and Bacon, 1998)page.2

11 Opcite, hal 17

12 Gatot Muhsetyo: Pembelajaran Matematika SD. Jakarta:Universitas Terbuka(2009) page.26

13 Oxford & Thesaurus. Paperback Dictionary (Oxford University Press;2009)page: 730

14 Gatot Muhsetyo: Pembelajaran matematika SD (2009):page 2.1

materials are distinguished into 4 types (Andi Prastowo, 2012: 40), those are: printed materials, teaching materials or hear audio programs, instructional view, and heard materials or audiovisual, and teaching interactive materials.

5. Video and Film in Learning Mathematics

More specifically, the definition of 'videos' can be explained by KamusBesarBahasa Indonesia[16]. Video is a live image or recording television programs through the television show. In other words, a video is a moving picture show with sound[17]. According to Indonesian dictionary (KBBI) film is a live picture or play of a live picture story[18]. So in general it is not very different between video and film. The characteristics of the film, both the advantages and limitations have many similarities with video. According to Andi Prastowo there are 8 steps[19] for creating a program in instructional videos or films are: Finding the title matches with the basic competencies, manufacture synopsis that describes briefly and clearly about the material that will be discussed in the video, story board drafting, image capture, editing, assessment the substance of the program both of education and cinematography, giving the task at the end of the screening and assessment of a given task.

6. Learning Approach to Multiple Intelligences Understanding Multiple Intelligence

Various views of intelligence at the limited scope motivate Gardner brilliantly convey the idea of multiple intelligences. Howard Gardner in his book Frames of Mind brilliantly describes eight intelligences that can be used to measure the intelligence of children. The eight intelligences are: logical and mathematical intelligence capabilities, musical, bodily kinesthetic, linguistic, spatial, interpersonal, and intrapersonal and naturalist[20]. In 2002 Colin Rose and Nicholl convey there is an additional intelligence to the 9 that is spiritual intelligence/existential[21].

To jump-start the ability of each student, it is necessary to understand the characteristics of a person in terms of the myriad of 9 intelligences[22]:

Linguistic intelligence

Linguistic intelligence is the ability to use words effectively, orally and in writing.

Logical-Mathematical Intelligence

Logical mathematical intelligence is the ability of a person with respect to a series of reasons, recognize patterns and regularities[23].

Visual - spatial intelligence

Visual da spatial intelligence is the ability to think in terms of image and towards a place or space and 3 –dimensional[24].

16 Suharso dan Ana Retnoningsih, KBBI (CV Widya Karya, 2011)page 630
17 Andi Prastowo, *Panduan kreatif membuata bahan ajar inovatif*(Diva Press, 2012)page 300
18 Suharso dan Ana Retnoningsih, KBBI (CV Widya Karya, 2011) page 140
19 Andi Prastowo, *Panduan kreatif membuata bahan ajar inovatif*(Diva Press, 2012) page 313
20 Thomas Armstrong, *Setiap anak cerdas (Panduan membantu anak belajar dengan memanfaatkan multiple intelligence)*, USA: ASCD: 2005;page 18
21 Colin Rose dan Malcolm J. Nicholl, *Accelerated Learning for the 21st century; Cara Belajar Cepat abad 21* (Bandung, Nuansa: 2002) page 60
22 Thomas Armstrong, *Setiap anak cerdas (Panduan membantu anak belajar dengan memanfaatkan multiple intelligence)*, USA: ASCD: 2005;page 22-40
23 Kezar, Theory of Multiple Intelligences: Implication for Hegher Education, Innovative Education, vol 26, No 2, Winter: 2001
24 Sonawat and Gogri, Multiple Intelligences for Preschool Children; Mumbai:Multi-Tech Publishing co (2008)

Bodily - kinesthetic intelligence

Bodily-kinesthetic intelligence is the ability of physical intelligence to use whole of body in expressing ideas, feelings, and use your hands to produce or transform things[25].

Rhythmic intelligence - music

Rhythmic intelligence is the ability to enjoy the music, observe, distinguish, fabricate, and forming and expressing the music.

Intrapersonal Intelligence

Intrapersonal intelligence is the ability to understand itself and act on the understanding about it[26].

Interpersonal Intelligence

Interpersonal intelligence is the ability to understand the behavior, attitudes and thoughts of others[27].

Naturalist intelligence

Naturalist intelligence is the intelligence to recognize, differentiate, express, and create categories to what is found in the natural environment.

Existential intelligence - spiritual

The definition of spiritual intelligence is the capacity of a human life that comes from the heart, inspired in the form of nature to be developed and grown in, overcoming the difficulties of life[28].

7. Model and Learning Activities with Multiple Intelligences

Method or strategy of learning with multiple intelligences are as follows[29]. (1) Linguistic intelligence: the listening, reading and writing (2) Logical-mathematical: developing a scientific learning environment, using logical reasoning, and using the numbers (3) Kinesthetic: using classroom physical environment, through drama, creative movement, dance, play instruments and games. (4) Visual - spatial; using images and forms (5) Musical: using music, make a song, using or making musical instruments (6) Interpersonal: create a group, learning with cooperation and respect differences and also the giving tasks, project design (7) Intrapersonal : observation per individual, increased self-confidence, preparing reports/personal journal. (8) Naturalist: using objects in nature around (9) Existential: integrated with religiosity students

C. METHODS DEVELOPMENT RESEARCH

Procedures performed in research development is composed of 4 stages:

1. Phase I (Planning)

At this stage the researchers prepare all materials include:

a. Mathematics 2 SAP and It's learning.

25 Muhammad Yaumi,Pembelajaran Berbasis Multiple Intelligences (Jakarta: Dian Rakyat, 2012) page. 17
26 Ibid, page 20
27 Ibid, page 21
28 M. yaumi,page. 25
29 Isniatun Munawaroh, Pengembangan RPP Berbasis Multiple Intelligences: page 3-6

b. ollect and provide references related to mathematics learning based multiple intelligences and reference and results about the flm research.
c. Collect data 7 flms or videos made by students.

2. Phase II (Organizing)

At this stage the researchers began to analyze which is the used material, which materials are interrelated and determine the shape and specifcations of flms that will be used or will be developed.

a. Analyzing the Competency of basic subjects of Mathematics 2 whether all.has been stated in the flms made by the students or not.
b. Analyze how the student product 7 flm storyline, the implementation of teaching methods and strategies.
c. Ask for input to the expert on the grille good flm.

3. Phase III (Implementation)

a. Ask for input to 1 peer reviewer that is a lecturer in mathematics who have.an understanding of the mathematical material.
b. Revise the flm and select it based on input of expert media.

4. Phase IV (Assessment)

a. Validation of the flm products that have been revised by the expert of flm media. In this process the expert gives judgment over the fnal product.
b. Trial by uploading to 'Youtube' and social media and requesting direct.comment from the audience. (Students and students of SD/MI)

D. RESULTS AND DISCUSSION

1. Implementation and Process of Mathematics Learning Based on Multiple Intelligences

At the 15 meeting is to discuss the results of Mid-Semester Test of 2 classes, they are class A and class B. There are 5 students in the class A (Asep, Umi Fauziyah, Vikriyani, Fera and Ahmad Agus Eka Prasojo) and 2 students in class B is Singgih and Nur Hanif whose had score is less than 50 and the maximum amount that can be achieved 100. Based on this fact we need to hold remedial programs for students who scored less than the 50.

16 meeting is to discuss follow-up remedial. The shape of remedial are: a group assignment to make a flm with a target: students who score less than 50 are able to master at least two topics or two questions in mid-semester test. The Implementation, he/she can act as a teacher who can explain the material in question, or make any other sort of scenario. The 18th meeting is collecting the task and screening the flm.

Data Description of Seven Films

Film 1 (Move On Matematika)

Description of flm: Starting accompaniment tracks, it looked atmosphere of Adisucipto road ahead UIN SunanKalijaga, and displayed the gate to the campus Faculty of Tarbiyah and Teaching. Once it looks classroom atmosphere full of wayward students.

Film 2 (Film Pendek)

Showed various grades of cast test results for the purpose of opening a story that begins as the problem of understanding the lessons learned. Then at the beginning of the story the students who have difficulty with the material given are gather in study so that no remedial learning in the future if there is another task.

Film 3 (Widya-KPK dan Persamaan Garis)

Narrated that Afrilia and Widya are meet and giving greeting with the topic being warmed about mathematics 2 and its learning. Then at the beginning of the story Vikriyani role as a teacher who teaches his friends about the mathematical material that has been given to the midterms. Here the discussion of the Commission and FPB factor tree after it in the subsequent discussion compute algebraic equations used to determine a straight line with a gradient as the root of the problem.

Film 4 (Matematika di MI Islam Al-Haq)

Consist a story about students of MI on going to their dream school. But the subject matter they are inhibited about math-related material and KPK-FPB logarithm. Explain about the material that becomes problem by the students.

Film 5 (Film 233)

At the beginning of the story to the students came to discuss the mathematical material that has been given in the form of a matter of Mid-Semester Exam. Fera then explained to her friends about the material that it is difficult to do. After that, each student is welcome to try the matter has been discussed in order to gain a deeper understanding.

Film 6 (MATEMATIKA)

Film Description: Tells about a group of students who have difficulty learning about math courses. Ahmad then come and explained the subject matter discussed in the Middle Semester Exam number 3 and number 4. Then other friends asked and asked for an explanation to Ahmad.

Film 7 (Video Pembelajaran Matematika)

Students studying together in the library looking for the mathematical material they are Yulia, Rohmatul, and Umi. Then the next morning they met in college and shared learning with Umi as a teacher and taught her friends the difficulty of mathematical material. In the discussion by Umi that is used using different methods with balloons and paper to discuss subject KPK and FPB then followed by discussion of the logarithm with Umi as the teacher who taught her friends.

Data Analysis of Assessment Material Expert

Instrument of product assessment by experts based films prepared lattice: basic competence, language, learning, strategy and media.

Results: 1, 4 and 7 films in the category very well, then the film 2, 3, 5 and 6 in the category good in the material. However, the film 3 still need to be revised based on the input of experts. It should be made clear when explaining the line, especially on the positive-negative gradient, the case of parallel or perpendicular and passing through the point (a, b)

Data Analysis of Assessment Media Expert

Analysis of the data follows media expert which uses instrument drawn up by media experts, Mr. Andika Dwijatmiko, S.Sn team from Syafa'at Marcomm.

There are four flms that can be revised to be tested/uploaded those flms 1, 2, 4 and 6. The 3, 5 and 7 flm does not deserve to be tested/uploaded.

Revised the Product

Remember the limitations of time, from 4 flms gets expert recommendations for revised only 2 flms with the highest score made revisions. Two of the flm is the flm down 1 and 4. Film revision- editing done by flms technicians assisted by the students. Revision refers to the input of the expert is to add the music to the flm since the title is displayed. Eliminate the numbering after the title, because it has entered the core of the flm. And also a reduction in the duration of the cast credits roll.

Final Product Assessment

The fnal product of this research is two revised mathematics flms and expert assessment. Based on the initial idea of the preparation, the flm was made based on the basic competencies to be achieved based on the score of Mid-semester test. The basic competency is a basic competence in SAP Mathematics 2 and its Learning was at 1-14 meeting. Because 1-3 meeting is the practice, the basic competencies evaluated on the basis of Mid-semester test competence is meeting 4-14. The basic competencies include understanding the roots and logarithms rank numbers, primes understand, KPK_FPB and solving its problem, understand comparison and its application and understanding the Cartesisus coordinates. In the frst flm the student chose number 4 and 5 of UTS questions, means the flm contains basic comparison and applied competence. In the flm about 4 students chose number 1 and 3 means the flm contains basic competence and understanding KPK_FPB square root and logarithm.

Questionnaire to obtain data on how much the learning of mathematics on the basis of multiple intelligences encourage the growths of other intelligences arranged meet 5 different scores. Strongly agree was given a score of 5, agreed to be given a score of 4, abstentions: 3, does not agree: 2 and strongly disagree with a score of 1. Questionnaire consists of 20 items that need to be responded statement. Based on the results of a questionnaire study of 10 students of multiple intelligences, the obtained results: the growth of all intelligences compound in the high category, except the natural intelligence in the medium category and the category of very high interpersonal intelligence.

Assessment of media experts on the fnal product refers to both categories in both flms, the frst flm score was 36 and the flm 4 is 37.

Conclusions

Based on the results of research and discussion in chapter IV the following conclusions can be drawn.
1. The characteristics of the fnal product of math learning based multiple intelligences in this study are : (a) There are two flms which flms 1 and 4 flms made by students of the Mid-semester test remedial Mathematics 2 courses and its learning was semester 4 year 2012/2013. (b) The existing of competencies in the flm 1 is to understand the comparison and its application, while in the flm 4 is to understand the KPK and FPB, dub roots and logarithms. (c) Film 1 can be accessed at: http://youtu.be/we8r90xFEIE (FILM MATEMATIKA PGMI UIN SUNAN KALIJAGA MOVE ON!). As for the flm 4 address that can be accessed is: http://youtu.be/r7-5TuH4alw (FILM MATEATIKA PGMI UIN SUNAN KALIJAGA MI ISLAM AL HAQ).

2. Students' perceptions Showed that mathematics learning based on multiple intelligences contribute

linguistic, kinesthetic, musical, existential, logical-mathematical, visual, and intrapersonal with high category, moderate to very high interpersonal intelligence and natural intelligence to medium category.

3. The results of expert judgment on the final product: the two films are very well categorized according to expert materials and well categorized according to media experts.

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A REFLECTION OF A BASED ON CHARACTER BUILDING EDUCATION

Written by:
Maemonah
Faculty of Tarbiyah UIN Sunan Kalijaga Yogyakarta

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ABSTRACT

The latest issue of education discourse in Indonesia is an education based on character building. There are many factors which pushes to fourish the discourse. There are also hopes and targets which will be reached from the fowing issue. Eventough, the simple question appears in our minds, as a part of society which contributes in education feld. Is it true that the character building education is an education discourse which relatively new, promises the education advancement in Indonesia. Particularly, is it the education construction which must be applied as a model for the future education in Indonesia?

The questions about character building education show how important the deep explanation to avoid misunderstanding, either it deals with the essence of concept or its realization in the practice of education. As the effort to contribute the thought of the discourse, this paper tries to formulate some points of thought, particularly in the feld which perhaps more substantive from the writer's opinion. With the substantive dimensions choice of the discourse of character building education. Historic-philosophical perspective, as an approach, will color this paper. Historic perspective will analyze the conceptual roots which go along with the character building concept, while the philosophical perspective is applied to analyze the substantive side and the relevance between some elements which exist in the discourse of character building education.

Keywords : *Education, Method, Character*

A. Introduction

Character education is needed because of the moral degradation in the society and nation in this reformation era now. The reality of value crisis which falls on the youth becomes the anxiousness to the people. So, the character education is hoped to be a solution for the nation social problem lately. The people expectation towards the contribution of concept, like the concept of character education, it has to be gone along with the ideas about the character education which more comprehensive and applicative. Using those ideas, these can be applied to be a part of thought contribution which can help to achieve those expectations and the thought contribution which can utter the solutions of the problems above.

But, to formulize the character education is not that easy. The obstacle begins with the appearance of the imbalance discourse of the character itself. Is it a part of education discourse or the character itself becomes the discourse in morality, psychology, anthropology, or others. If it becomes the education discourse, what is the difference with the moral education, is the character education itself mean the value education, self education. Another imbalance appears to be a context

of character education as an education vision, character education as a curriculum and character education as an approach in the learning process. The point is there are imbalances in the chartacter education feld, either in the discourses, methodology, or policy.

The imbalance above needs a like-minded about the point which the character education is talked about, in the context of what the character education is analyzed, and what orientation of character education will be seeked. It is important to get straight not for avoiding the opinions which is in the discourses, those needs will be directed to form a clear mainstream where do those come from and where does the concept will go along with the character education lately?

This paper does not defnitely try to direct or guide discourse in order to go into the intended mainstream. It can be precisely said that this paper is an effort of the beginning of how the discourse-discipline vision can be formed. Thus, this paper is started by opening the conceptual sides from the education and character, character education in historic context, and the refective researches.

With those choices, the lack of the practice and real examples may become the weakness of this paper. But, the expectation is the refections of this writing can be applied to be the answers, if it cannot be said as the solutions, of the reality of character education problem, particularly, in practice or application.

B. Education and character

Character derived from English *character*. This word comes from the Greek *charaktêr* means stamp which applied to print money until the coin can be seen from its character or the stamp, whether these are king stamp, animal, or war stuff. Next, character word means distinctive mark to something or somebody until it can be distinguished from the others. Finally character is meant as a distinctive mark which sticks on somebody as a distinction from the others. In modern context, character concept will become very individual. Character means self character of someone, not collective character. Therefore, it can be stated that character concept from the start is colored of collective and as a distinction from the others; this concept will be shifted to the character concept individually.

The changes happen, from the writer's opinion, because of the discourse changes in the character concept of main ideas feld. In the classic and middle era, character concept becomes the ideas of social, state, plurality, and morality. Meanwhile in the modern context, character concept more associated as a part of psychology discourse. As an example, when Aristoteles divides human excellences to the excellences of thought and excellences of character, he gives name the excellences of character with *êthikai aretai* which means *moral virtue* or *moral excellence*. The other forms of word *êthikai* becomes *êthikos* and the adjective form becomes *êthos*. The point is, character intelligence is not particularly individualistic but also the combination of quality which formed with and by social as a precondition in order to get happiness (*eudaimonia*). Meanwhile in the contemporary psychology, character concept is understood as a form of character development of somebody appropriate with the factors or outside development. Development psychology places character concept as a form or development measurement to understand the problem of the distance between moral judgment and moral action of somebody.

About education, the writer will describe Driyarkara's view. The reason is just simple, Driyaraka gives inspiration of how urgent character education is, because, education has to be meant as a "fundamental phenomena or basic in the human's life." Therefore, Driyakara stated "where is the life exist, the education appears". Because of the life starts to present the meaning when human starts to seek and realize about the life itself. So Driyarkara insists that "teaching is to

form the youth so that they become the intact of whole". Intact means it integrates from all aspects of life. Intact also means to be humans who have full consciousness of their existences. Therefore, from Driyarakara's view, education is a solution of humans existence problem.

Theoretically, Driyarkara distinguishes between education and teaching knowledge. Education more stressed to the ontology-anthropocentric human as a subject and object of education, while teaching (theoretic) is "a view which responsibly methodically and systematically for the phenomena or humanity indication which we called it education." Therefore, it can be understood that teaching is more stressed in the aspect of method and system of education.

Driyarkara's view above is clear that teaching is to form human becomes the intact of whole. It is no other but the character concept. Therefore, the substance of education is to form character. So if there is a character education, from Driyarkara's view, it has two possible answers. First, education which exist until now is not succeed yet to educate character of the students or second there is an ignorance from the stakeholders, education experts, and society that the substance of education is to build the character of human.

If it happens, the existence and discourses of character education need to be analyzed again. The reason is, the structure and grand design of education concept in Indonesia pasca-reformation nowadays seem not clear enough. Education is still burdened by the responsibility to form learners which have competention although psychologically they weak. The learners are demanded to be ready to work and absorbed by the market. Education's orientation is the market not as the market creator. Another side, education is also burdened by the moral messages which can be the *boomerangs* to the learners themselves.

It is realized by the education experts that education is not created in one face or school because of the expanse of the feld and perspective of education. But it is not wrong if someday Indonesia chooses one vision and education concept which can be applied as a guidance of education appliance with the notes definitely, the vision and concept are revised again if needed. Indonesia's importance as a nation to decide the vision because Indonesia as a nation definitely has an expectation to observe the youth to have strong nation character.

The point is in the context of self development, content and method of education, also from the humanity side or social generally, education, character, human as self, and nation or society meet in one word relationship or relation to the others. The essence in character is needed because human always in the relationship with the others. Those needs are realized into the learning process in the education felds and socialize to the workshops. Besides relation in the definition above, education and character also have the relation themselves. The real character is the choice action which can be positively accepted or agreed as an ethic of public.

Attitude and ethic level which is seen on the action is real so that it can be judged and felt by self and others through mechanism of relationship above. But, at the same time to create character in the real form above is needed to be fought and developed to be form of education because the substance of the education itself is one of remarkable insight. Learning process means revealing process of high potentions which is had by the learners to develop themselves and their social. Therefore, education has strategic meaning for character development either self discipline, public ethic or nation character building.

C. History of Character Education: History of human attitude

The idea of character education is begun since humans think about themselves as human. It means, tradition of Greece philosopher understands that the substance purpose of education

is to protect men character, to create the best men in the society. For the reason above, character education is re f ected deeply by Plato, Aristotle, Immanuel Kant, and John Dewey, just call some philosophers including the education experts. They all agree that the purpose of education is an effort to train the people to be better and incline into the goodness.

In the middle of 5 BC. Socrates is a philosopher or precisely said as sophist which placed as a father of education. In his piece titled Pananthenaicus, he describes the learned ones as someone who can manage their daily environment well, they can show the goodness of themselves, respected, fair, discipline, careful in action, and always try to be succeed. The can transform the values and better character towards the others.

The same thing is uttered by John Locke, he says, "If our nation is to repossess its civic soul, it needs to recapture the central civic responsibilities of public schools…" the statement shows how important the role of education to create the civilized society. As we all know that John Locke is the one who formulize the law of modern state through trias politica in the 17th century. But he does not forget of the strategic position for the concept of ideal state. It means, for Locke, character is not enough about self character but the most important is public character, a character which helps somebody to understand public dynamics, public ethic, public matters, and public domain.

De f nitely the character concept above is not same with the character concept in the character education f eld. Even if we discover more, moral education begins to create the character education concepts. Moral education clearly develops moral concern for the learners in the classroom or outside. Generally, moral education is developed to the context of values clari f cation. This principle is developed as an approach of morality learning (and character ?) the essence of principle with values clari f cation approach is the assumption that the learners more needed the direct practice about morality like what it has to be applied or used. The teachers as facilitators are advised to facilitate the application than lecturing the doctrine about good and bad. But, this problem appears since criticism born, when the question about the measurement and assessor about morality to be a question, so values clari f cation actually weak theoretically.

Beside of the value veri f cation approach, the approach in the learning of moral education process often used of what Jean Piaget called it cognitive development moral education theory or moral education through the development of the learners kognition. An approach that is fully inspired by Lawrene Kohlberg.

While from John Dewey's view (1944) theoretic education tries to strengthen the character of learnWhile from John Dewey's view (1944) theoretic education tries to strengthen the character of learners is the comprehensive purpose from the discipline and instruction which is decided in the school. In the end of his monumental book Democracy and Education in the context of Dewey's effort of the importance of moral education on the shcool, Dewey writes ; all learning process tries to develop power of share effectively in the social life is moral. The importance of learning is the real whole dimension is also the essence of how important moral is. So, it can be summarized that based on John Dewey's view, the mission of character (morality) development born from the development process of learners's social which is resulted from the continuous learning.

The mission of character development later will meet some obstacles in education f eld because of the appearance of some thoughts like logic positivism which has principle there is no morality truth, there is no objective, but moral relativism with adigiumall values relatively. Besides logic positivism also has a view about personalism. It says that everybody has their own freedom to choose what they believe as a value. Because for them, the self itself who decides the measurement about morality. There is also a concept about the increasing of pluralism principles in the society.

This concept however gives inspiration and problem to all aspects to decide what value concept which will be decided as a standard. Besides pluralism, 20th century era right now is colored by the reality of secularis in the society. The people tend to put aside the matters between social society and religious aspects. Church's education gets more to be left and dominated by public education and nation which controlled education.

Those thoughts above however give serious impact for the discourse and character education concept. Even the thoughts above ruin the urgency of character education which developed in some western countries. This impact finally truly makes education discourse down in the middle of 20th century.

The movement of education reformation in Europe happens in the 1960's and Vietnam war which USA involves is the events which refresh the stakeholders' memories to teach character education in the schools. Meanwhile from the intellectual movement side, character education starts to develop again because of the recommendation which is gave by Lawrence Kohlberg who later known as Kohlberg theory.

D. Character Education: nowadays perusal

From the writer's view about character education now is still spontaneous. Character education is suddenly came and it becomes the national issue including as a solution form and education phenomenon in Indonesia. Strategically character education is not to be an issue yet in the constitutional-systemic field which implied to the born of policy which solid of character. In other words, education is, character education does not also give spirit or even become a vision in the curriculum arrangement, syllabi.

Detached from all of that, there is a difference between moral education and character education. There is a moral education and character education. Kirschenbaum states, moral education means en effort to help learners to get the knowledge, skill, attitude, and value to give contributions to self satisfaction and social life which more constructive. Meanwhile Mockwood states that character education is a program of schools' initiation which is designed cooperatively with the other institutions to be directly and systematically in the effort to build high attitude.

This understanding shows that character education is placed as a non-curricula, either in extracurricular, intracurricula, or incurricular (integrated wit the curriculum). Besides, in the character education there are the other communities outside the main aspect in the education. It means to create a child who has character is not only charged by the teachers or the others who is in the school but also it needs help from the experts who can create a child who has character.

The view above shows that there is a difference between moral education and character education. The difference can be checked by the character modern history. As we know that character education particularly starts to develop in USA in 1960's. The expectation of education institutions of USA to develop character education is caused by the youth's facts who are followed by indiscipline culture, narcotic addiction, and so on. The point is, we need more particular policy to decrease the social problems in USA as an impact of modernity.

If it happens, the first thing that must be changed is what is the acute problem, systemic, and crucial that must be done in education problem ? Is ethic problem and learners' ethos in serious condition ? And so on. It means that the problem roots have to be first identified if character education may becomes the answers and solutions of education problem in Indonesia. If it not happens, the character education discourse will fall again to the old tradition of education discourse in Indonesia, the lost or withdrawal of discourse will go along with the changes of stakeholders.

Whatever the problems are, the writer is sure that the essence of character education can bring the learners to the successful life in the future. Therefore, one thing is needed to be affrmed in character education is its existence (read: practice juknis) inside or outside the class. It is important because character education is not that simple. There are many factors that influence the process of characterizing the learners, is it an obstacles, judgement, or booster. So the positive reformation and development for the learners need more time and need some ways for the process. The reason is the character forming is not enough to stimulate the learners' cognition, affection, and motoric sides, but the biggest stimulation is the forming process which comes from the learners' relationship with the others; family, community, media, and other entities.

Therefore, when the process of relation becomes positive factor so there is a negative factor also in the relational process. It happens because the relational process always be social will be trapped in situationalism. Social psychology called it school of situationism. It means that the ideas about the development and character education for the learners will be trapped by the borders and the situationalistic values, which it definitely is not the same with the other social conditions. Therefore, there is a skeptic for character education which has principle of character universalism.

Detached from the dilema above, character education must have priority scales to formulize the ideas and implement this to the daily activities. The priority ideas can be done by formulizing understanding of how character can be built and developed appropriate with the learners' reality, organizations, and society around. At the same time, it can be assured that the first character education is not placed in the learners' priorities but in the method and approach need to be formulized as a tool to build the learners' characters appropriate with the social reality and the education.

Talking about the method and its approach, the teachers' roles in the habitusi process of the learners with what self character brings. Habituating process covers the development and the rational dynamic of the learners, judgement, and emotion. Character is not only about the continuity. The continuity is needed but it goes along with the understanding or rational which can be accepted by the learners, habituating process concerns in the emotion dimensions for the learners if it is not concerned the emotion dimension of character habituation will only be stressed to the learners or the contrary.

E. CONCLUSION

From the series of the writer's thoughts which have explained above, some points are needed to be the consideration to formulize and develop character education as follows. First, character as a concept is the identity and also the nearer action to the morality concept. Second, character education actually is the phenomenon or existence of education itself. Third, the problems and also character education's prospects are in the method and learning process so the character development and the learner's self can be really formed appropriate with its dynamic and challenge by the society.

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THE ANALYSIS OF ERROR IN ANSWERING MATHEMATICS QUESTION IN V CLASS OF SD/MI IN YOGYAKARTA CITY

Written by:
Endang Sulistyowati
PGMI Department, Faculty of Tarbiyah and Teaching
Email: endang.uin@gmail.com

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ABSTRACT

Mathematic is one of subjects studied in all education levels and is one of subject examined nationally. In the school year of 2012/2013, the result of Mathematics in national examination in elementary school or Islamic elementary school in Yogyakarta, the average values is in the lowest place compared to other subjects: Science and Indonesian Language.

This research includes into the field research. The data analysis uses qualitative method. The data are taken from the result of tests done by the students including question aspects of geometry and numbers. The result shows that there are three types of mistakes made by students of class V of Elementary School or Islamic Elementary School in solving Mathematics problems. Type 1: error concept, including error in understanding the question, Type 2: error in arithmetic calculations, and Type 3: procedural error, writing errors include Mathematics notation, the unit of measure usage errors, and the efficiency of error calculation. In this research, the error of type-3 did not contribute to the perceived value of the test is obtained. The average test score is 50,97.

The most common error is an error of type 1. In the aspect of geometry, this type of error occured more than numbers on this aspect. The error of type 3 is also often happened, especially the use of unit of measurement errors and the writing errors of Mathematics notation.

Keywords: *Mathematics errors, Elementary School or Islamic Elementary School*

INTRODUCTION

The result of survey from the TIMSS (Trends in International Mathematics and Science Study) shows that the mathematics achievement scores average of Indonesian eighth graders were significantly below the international average. In 2003, Indonesia ranked 35th out of 46 countries, with a score of 411 (the international average score is 467). In 2007, it ranked 36th out of 49 countries, with a score of 397 (the international average score is 500)[1]. In 2011, itranked 38th out of 42 countries, with a score of 386[2].

Mathematics is one subject that is given in almost all levels of education, from SD/MI even to

1 Puspendik, Survei Internasional TIMSS, http://litbang.kemdikbud.go.id/index.php/survei-internasional-timss, diakses 10 Desember 2012.

2 Kompas, Prestasi Sains dan Matematika Indonesia Menurun, http://edukasi.kompas.com/read/2012/12/14/09005434, diposting 14 Desember 2012, diakses 20 Desember 2013.

university. Mathematics is very useful and its learners can use it as assistance in studying a variety of other disciplines. Therefore it can be said that every person requires knowledge of mathematics in various forms according to his needs. The role of mathematics is high to the development of science and technology.

Currently mathematics becomes one subject of tested nationally course. In 2013, UAN results for mathematics in SD/MI in province level reach the average value of 7.0. It is lower than other subjects; they are Indonesian Languages 8.15 and IPA 7.48. When it is looked from the deployment of its value, the value of mathematics UAN has a very large variance between students who are good and who are less intelligent. From the 50.211 participants of UAN, 946 students received 10 grades for Mathematics while for Indonesian Language are 46 and for IPA are 24[3].

The data shows that there are many students who have low score in Mathematicsin UAN. The success of VI grade students answer UAN's questions is inseparable from the ability of students to understand the material of Mathematics in the class before. In accordance with SKL (Competency Standards of Graduation) of 2013, almost all of the UAN material has been given to the class under VI class. So, it is very appropriate to be identified, what is the fault of the students while working on mathematicsquestions. From this identification, it can be decided what policy should be done by the teacher to correct the fault.

The reason why the grade taken is fifth grade is because in class V, students have acquired almost all mathematical material for SD/MI. In answering mathematics questions, the mistakes made in the upper classes are caused by the mistakes made in the lower classes. So by taking V class, it can be seen what are the calculation concepts which do not yet mastered by students from class I to class V.

Based on KTSP 2006 curriculum and curriculum 2006, 2013, basically the MATHEMATICS material learned by students of SD/MI from class I-VI:

- Numbers, numbers operations, and its implementation
- Geometry. It includes Planes and Solids
- Statistics and data presentation

Statistics and data presentation are learned in VI class. So, in this research, the analysis will be performed on the number and geometry material.

Learning Mathematics in Schools

The term mathematics is derived from Latin *mathematica*which is derived from the Greek *mathematike* which means "relating to learning". The term have the root word *mathema*which means knowledge or science[4]. The term *mathematike*is also closely related to the word*mathein* which means learning (thinking). So, etymologically, mathematics means the knowledge gained by means of reasoning[5].

Mathematics is a product of human intellectual thought. The intellectual thought itself could have come from the mere thought issue and also from of the issues related to real everyday life. Mathematical objects are socio-cultural-humanist. It means that mathematics is the property of all mankind. No matter how primitive a society is, mathematics is part of its culture. Mathematics is born from the long process of human history. Due to the fact that, mathematical concepts are

3 http://www.pengumumanun.com/2013/06/rekap-hasil-kelulusan-un-sd-yogya.html
4 Erman Suherman, dkk, *Strategi Pembelajaran* …, hlm. 15-18.
5 Ibid., hlm. 18-19.

universal in its characteristic[6].

There is controversy in the study of mathematics related to whether mathematics should be taught using cognitive approach, constructivist, or practices and counting[7]. Related to the controversy, Andrew Noyes (2007), in Ariyadi, said[8]: *banyak siswa cenderung dilatih untuk melakukan perhitungan matematika daripada dididik untuk berfikir matematis*(children are trained to do mathematical calculations rather than being educated to think mathematically). Looking at these statements, there is the tendency as if there are conflicting positions between 'trained in performing the calculations' with 'educated to think mathematically'. The word 'trained' more emphasis on 'know-how', which means learn to know how to do something. While the word 'educated' more emphasis on the 'know why', which place more emphasis on understanding why some things happen.

Ways and approaches in mathematics learning is strongly influenced by the views of teachers towards the learning of mathematics. There are four kinds of views about the position and role of mathematics, they are[9]:

1. Mathematics as a way of thinking. This view originated from the character of mathematicswhich is logical and systematic in organizing ideas, analyzing information, and drawing conclusions.
2. Mathematics as an understanding of *pola* and *hubungan* (patterns and relationships). The emphasis on this relationship is necessary for students to realize that the concept they are learning has similarities and differences with the concept that has been/ever learned.
3. Mathematics as a tool(*matematika sebagai suatu alat*). This view is influenced by aspects of the application and the history of mathematics concepts.
4. Mathematics as a language/communication tool. Because mathematics is the language of symbols, so, mathematics is the universal language.

Mathematical skill of students is not only seen from mere arithmetic skills. *Mathematics Learning Study Committee*in *National Academy of Sciences* reveals that mathematical skills are based on the five elements, they are[10]:

1. Comprehension (Understanding): the understanding of mathematical concepts.
2. Calculation (Computing): the ability to perform mathematical procedures such as addition, subtraction, multiplication, and division numbers carefully, efficiently, and accurately.
3. The using (Applying): the ability to solve mathematical problems by using the right strategies, procedures, and formulas.
4. Stating the reason (Reasoning): the ability to explain or prove the settlement or the concept of a mathematical problem.
5. Captivate (Engaging): look at mathematics positively as something useful.

In mathematics learning, there is no the best way of learning and teaching. Each individual people has his own way and style of learning and teaching. Each learning approaches have their own characteristics. The approaches in mathematics learning include:

Constructivism approach

6 Sumardyono, *Karakteristik Matematika dan Implikasinya terhadap Pembelajaran Matematika*, (Yogyakarta: PPPG Matematika, 2004), hlm. 8.
7 John W. Santock, *Psikologi* …, hlm. 111.
8 Ariyadi Wijaya, *Pendidikan Matematika Realistik,* (Yogyakarta: Graha Ilmu, 2012), hlm. 5-8.
9 Ariyadi Wijaya, *Pendidikan*…,hlm. 6-7.
10 J. Kilpatrick & J. Swafford, Editors, *Helping Children Learn Mathematicsis*, (Washington, DC: National Academy Press, 2002), p. 9.

In learning mathematics by using constructivism approach, teachers do not teach students how to solve problems, but he encourages students to fnd their own way for fnishing it. When students give the answer, the teacher does not directly say right or wrong, but he encouragesother students to give agree or disagree opinion over that. In constructivism approach, the teacher acts as a facilitator[11].

Santrock, an expert of educational psychologists, provides some mathematical learning principles of constructivism approach[12]:

1. Make the mathematics becomes realistic and interesting. Give the teaching of mathematics by involving a variety of interesting realistic problems.
2. Consider the knowledge that students have before.
3. Make the learning of mathematics that develop social interaction. Learning activities should provide opportunities for students to work together and improve communication skills.

With constructivism learning approach, students not only memorize the formula used and can answer mathematical questions, but they also can understand the concepts/mathematical formulas correctly.

Problem Solving Approach

Problem solving is an important mandate in mathematics curriculum. By problem solving, mathematical skills aspects such as the application of the rules, the discovery of patterns, generalizing, and the communication of mathematics can be developed better.

Not all mathematical questions can be categorized as the problem solving question. If a question is given to the student and the student immediately know how to answer it, it does not include question on the type of problem solving one. It could be a question becomes a “problem” for a student, but not for the others[13].

According to Polya, problem solving solution consists of four steps, they are: understanding the problem, planning a solution, solving the problem according to plan, and checking back on the results obtained and the steps that have been made.

There are various strategies that can be used to resolve the problem solving, they are: working backwards, doing/acting, using a table or a list, creating a picture/diagram, estimating or guessing and then checking, fnding and using patterns, or a combination of these strategies[14].

Open-Ended Approach

Mathematicsquestion which is designed to have a variety of answers, is called as open-ended problem. The purpose of open-ended learning is to develop a creative activities and mathematical mindset so that spurred higher level thinking abilities[15]. The use of open-ended in mathematics learning provide some goodness, including[16]:

1. Students are more actively participate and have the opportunity to express their ideas.
2. Students have more opportunities to use their knowledge and skills in a comprehensive manner.
3. More experience, give reason (reasoning).

11 Erman Suherman, dkk, *Strategi* …, hlm. 74-81.
12 John W. Santrock, *Psikologi Pendidikan* …, hlm. 113-114.
13 Endang Sulistyowati dan Luluk Mauluah, *Matematika I dan Pembelajarannya*, (Yogyakarta: Grass Media, 2012), hlm. 80.
14 Ibid., hlm. 81.
15 Erman Suherman, *Strategi* …, hlm. 123-142.
16 Ariyadi Wijaya, *Pendidikan* …, hlm. 61-62.

4. Provide a discovery activities (discovery), and receive recognition from other friends related to relevant solutions acquired.

Realistic approach

Realistic Mathematics Education (RME) which has been developed in the Netherlands since the 1970s, is based on the concept of Freudenthal, an expert Dutch mathematician. According to Freudenthal, mathematics is a human activity, so students must actively construct their own knowledge with the help of an adult/teacher[17].

PMRI (Realistic Mathematics Education of Indonesia) is an RME applied in Indonesia. In PMRI, there is no specific steps that must be passed. Although PMRI is derived from RME, but in its development it is adapted to the social conditions and culture of Indonesia. PMRI learning characteristics are[18]:

1. Pupils andteachers active, both physically and mentally/thinking.
2. Learning begins by presenting contextual/realistic issues.
3. Provide opportunities for students to resolve problems in their own way.
4. Teacher encourages interaction and negotiation.
5. Teacher acts as facilitator (*Tut wuri handayani*).

If students make a mistake instead of being scolded they are aided by asking leading questions.

The Error in Answering Mathematics Question

In mathematics learning, the error in learning an earlier concept will affect the understanding of the next concept because mathematics is a structured subject. There are several causes of students error in answering mathematical questions, they are: the error in understanding the question, the error in using the formula, the error in arithmetic operations, or the error in concluding.

Lerner argues in Mulyono[19]that some common mistakes made by children in mathematical tasks are the lack of knowledge about the symbols, the lack of understanding of place value, use the wrong process, calculation errors, and writing that can not be read so that students make mistakes because they do not unable to read their own writing.

According to Arti Sriati[20], students errors in answering mathematics questions are:

1. Error in mathematicsmodeling.
2. Misconception, i.e. the error in understanding mathematical concepts.
3. Error strategy, that is an error that occurs because students do not choose the right way of answering.
4. Systematic error, the error which relates to the wrong choice of extrapolation techniques.
5. Sign errors, i.e. errors in giving or writing marks or mathematical notation.
6. Count errors, i.e. errors in performing mathematical operations.

In answering geometry questions, Junia Mulyani in his research finds that the errors committed by students are[21]:

17 Koeno Gravemeijer, *Developing Realistic Mathematics Education*, (Utrecht: Freudental Institute, 1994), p. 12-13.
18 Y. Marpaung, Pendidikan Matematika Realistik Indonesia (PMRI), *Makalah*, disampaikan pada pelatihan guru-guru SD/MI kelas I-III pada 2 Oktober 2009.
19 Mulyono Abdurrahman, *Pendidikan Bagi Anak Berkesulitan Belajar*, (Jakarta: PT Rineka Cipta, 1999), hlm. 262.
20 Arti Sriati. 1994, Kesulitan Belajar Matematika pada Siswa SMA (Pengkajian Diagnosa), *Jurnal Kependidikan*, Yogyakarta, 1994, hlm. 4.
21 Yunia Mulyani Azia, *Upaya Mengatasi Kesulitan Siswa Belajar Geometridengan Pengajaran Remidial Kelompok*

1. Misconceptions.
2. Error count.
3. Error information, which often occurs in question using story form.

Based on various opinions above, basically the main errors in answering mathematics question are:

1. Error concept, that is the mistakes made at the time the students answer mathematics question which is caused by the students do not yet understand mathematical concepts required.
2. Calculation error, the error caused by the incorrect counting done by students, while the mathematical concepts used by them are correct.
3. Errors in understanding the question.
4. Errors in writing mathematical notation. In this case, the solution obtained by the students is correct, but the notations written are incorrect.
5. Errors in the use of unit.
6. Less skilled in performing numbers operation or arithmetic capabilities. Included in this case is the errors of writing operations that do not need, or do a number of inefficient operations.

In this research, the errors classified in number 4, 5 and 6, are not considered as errors in answering mathematics question, but it is something that needs to be fixed/better trained, so that students do not have difficulty in answering mathematics questions.

In this research, the mistakes made by students in answering mathematics questions are divided into three, they are;

1. Error concept, this case includes errors in understanding the question.
2. Calculation error.
3. Procedure error, this case includes the errors classifedas number 4, 5 and 6 above.

Research Methodology

This research is a field research which using qualitative descriptive method. The research was conducted by collecting data, and the data obtained is in form of descriptive data.

In broadly speaking, the steps of the research are:

1. Preparation, include: examine the curriculum in effect, create questions test, validate test questions, contact some schools/madrasah and ask for permission to conduct research.
2. Discuss with the class teacher/mathematic teacher about the procedures and test execution.
3. Retrieve the data, conducting tests in the class which becomes the object of research. At this phase, at the same time researcher conducts observations and interviews to some students.
4. The data analysis phase.
5. Making the reports.

The Result of Research in General

Data collection was carried out on 6-8 November 2013. The research subjects taken are 43 fifth grade students from four elementary schools in the city of Yogyakarta with various categories, they are: State MI, Private MI, SDIT, State SD (Elementary School).

The test questions which become instrument of research consist of 12 questions. Descriptively, the results of student answers can be described as follows:

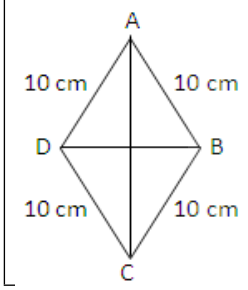
dan Remedial Bersama diSekolah Lanjutan Tingkat Pertama. Diakses dari http://digilib.upi.edu/pasca/available/etd-1011106-131035/padatanggal 13 November 2013.

From 12 questions, the student can answer 6.12 questions correctly on the average, and the average value was 50.97 with a standard deviation is 25.24. Most errors happens in question number 6, only 14% of students can answer it correctly. The fewest errors happens in question number 12, there are 83.7% of students answered it correctly.

Analysis of Error Types done by Students

1. Type 1 error: concept error.
2. Type 2 error: calculation error
3. Type 3 error: procedure error. Students who make the mistake of type 3 are not included in the group of students who make wrong answer.

Question number 1 and 2



The picture beside is an ABCD rhombud, the length of the diagonal BD = 12 cm, and the length of the diagonal AC = 16 cm. so:

Area = …..

Circumference = …

The correct answer is:

1. $Area = \frac{diagonal\ 1 \times diagonal\ 2}{2} = \frac{12\ cm \times 16\ cm}{2} = 96\ cm^2.$
2. $Circumference = 10\ cm + 10\ cm + 10\ cm + 10\ cm = 40\ cm.$

For question number 1, 27 students answer it correctly and 16 students answer it incorrectly. Based on three types of error occurred, from 27 student answer correctly, 18 of them make the type 3 error, that is: (1) do not use the unit area, and (2) using the wrong unit area.

From 16 students who answer it incorrectly, 2 students make a miscalculation and the rest make a misconception. There are various misconception of the student. Some of the wrong answers are as follows:

(a) $Area = \frac{10 \times 10}{2} \times t = \frac{10 \times 10}{2} \times 10 = 500\ cm$

(b) $Area = \frac{10 \times 4}{2} = \frac{40}{2} = 20$

(c) $BD = \frac{12}{2} = 6\ ;\ AC = \frac{16}{2} = 8$
$Area = 6 \times 8 = 48\ cm$

(d) $The\ area\ of\ A\ and\ B = 10$
$The\ area\ of\ B\ and\ C = 10$
$The\ area\ of\ C\ and\ D = 10$
$The\ area\ of\ D\ and\ A = 10$

Based on these answers, it can be said that the students make type 1 error, that is wrong in understanding the diagonal concept of rombus, do not understand yet how to calculate the area of a rhombus, and do nt understand yet the area concept/de f nition. The students also make type 3 error, that is do not use the correct unit.

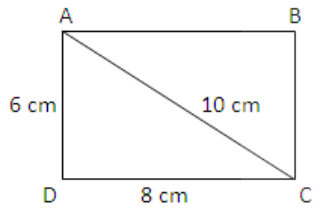
For question number 2, 29 students answer it correctly and 14 students answer it incorrectly. From 29 students who answer it correctly, 18 students make type 3 error, they are: (1) using the wrong unit, (2) do not use the unit, and (3) mathematic writing/notation error.

There are three kinds of wrong answers of the students because of concept error, they are:

(a) $Circumference = 10 \times 10 \times 10 \times 10 = 10.000\ cm^2$
(b) $Circumference = 10 \times 10 \times 10 \times 10 = 11.000\ cm$
(c) $Circumference = 12 + 16 = 28\ cm$

The answers show that the students do not understand yet the concept/definition of rhombus circumference. The students still confuse between the formula for the rhombus area and the formula for the rhombus circumference.

Question Number 3 and 4



Calculate the area and circumference of ABC triangle

Area = …

Circumference = …

The correct answer are:

3. $Area = \frac{6\ cm \times 8\ cm}{2} = 24\ cm^2$
4. $Circumference = 6\ cm + 8\ cm + 10\ cm = 24\ cm$

For question number 3, 16 students answer it correctly and 27 students answer it incorrectly. There are 3 types of error occurred. From 16 students who answer correctly, 8 students make type 3 error, that is do not use area unit or use the wrong unit area.

From 27 students who answer it incorrectly, 3 students make a miscalculation, and the other make a misconception. There are carious misconceptions made by students, they are:

(a) $Area = \frac{1}{2} \times (base \times height)$=…

(b) $Area = \frac{8 \times 10}{2} = 40 \times 6 = 240$

$Area\ I = \frac{8 \times 10}{2} = 40\ ;\ Area\ II = \frac{8 \times 10}{2} = 40$

(c) $Area = 40 + 40 = 80$

(d) $Area = 6 + 8 \times 10 = 140\ cm$

The students just write down the formula and they do not continue to work. The students do not know which one is *the base* and *the height* of the triangle. The students do not understand yet the area concept/definition, and they just memorize the formula of the triangle area. The students also make a type 3 error, that is the wrong use of area unit.

For question number 40, 20 students answer it correctly and 23 students answer it incorrectly.

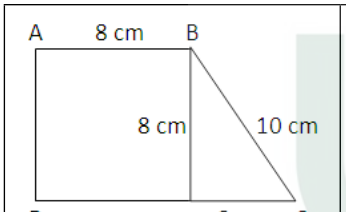
From 20 students who answer it correctly, 12 students make the type 3 error, they are: (1) do not use circumference unit, (2) use wrong circumference unit, and (3) do not write the answer in correct mathematic notation.

From 23 students who answer it incorrectly, all of them made the type 1 error, that is concept error. There are various concept error made by the students. The error is cause by the fact that the students do not understand yet the concept/definition of Planes circumference, especially triangle circumference. The students still confuse to differ between the circumference and the area concept. The students also do not use yet the formula of triangle are correctly. Some of wrong answer made by students are:

(a) $Circumference = 6 \times 8 \times 10 = 480$
(b) $Circumference = \frac{1}{2} \times 8 \times 6 = 24 \times 10 = 240$
(c) $Circumference = 10 \times 3 \times 5 = 150$
(d) $Circumference = 6 + 8 = 14 + 6 = 20 + 8 = 28$
(e) $6 \times 2 = 12\ ,\ 8 \times 2 = 16\ ,\ 10 \times 2 = 20$
$Circumference = 12 + 16 + 20 = 48$

The students make a concept error. The students do not understand yet the concept/definition of circumference. The students do not able yet to discern how to calculate the area and the circumference of a triangle.

Question Number 5 and 6



Calculate the area and circumference of the ABCD planes in the picture beside.

Area = …

Circumference = …

The correct answers are:

5. $The\ area = \frac{(8\ cm + 14\ cm) \times 8}{2} = 88\ cm^2$
6. $The\ circumference = 8\ cm + 10\ cm + 14cm\ + 8\ cm = 40\ cm$

For question number 5,16 students answer it correctly and 27 students answer it incorrectly. From16 students who answer it correctly, 8 students make the type 3 error, they are: (1) using the wrong unit,(2) do not use the unit, and (3) writing the wrong mathematics notation.

From 27 students who answer it incorrectly, 2 students make arithmetic error (type 2 error), and the rest make the concept error. Some of the wrong answers of the students are:

(a) $Area = \frac{8+10+6+8}{2} = \frac{32}{2} = 16$
(b) $Area = \frac{(8+6) \times 8}{2} = 51$
(c) $8 \times 8 = 64\ ,\ \frac{6 \times 10}{2} = 30$
$Area = 64 + 30 = 94$
(d) $Area = \frac{base \times height}{2} = \frac{10 \times 8}{2} = 40\ cm$
(e) $\frac{6 \times 10}{2} = 30 \times 8 = 240,\ 8 + 8 + 8 + 8 = 32$

The students understand that the planes is a trapezoid, but the students do not understand yet what is meant by "the number of parallel side". Some students divide the planes into two parts of a square and a triangle, but the students do not understand yet how to calculate the area of a triangle. The students do not understand yet the area concept and they do not understand yet the formula for calculating the area of a trapezoid.

For question number 6, the students who answer it correctly just 6 students, and the rest 37 students answer it incorrectly. From 6 students who answer it correctly, 4 students make the type 3 error, they are: (1) using the wrong unit, and (2) do not use the unit.

From 37 students who answer it incorrectly, all of the students make concept error. Some students, in addition to make concept error also make arithmetic error (type 2 error 2) and writing notation error (type 3 error). The concept error made by the students can be grouped into two maor groups, they are:

(a) Dividing the planes into 2 parts, a square and a triangle. The students calculate the circumference of each sides and then add them together.

(b) The students add or multiplicate all of the sides of the known length.

Some eamples of the error made by students are::

(a) $Circumference = 8 + 10 + 6 + 8 = 32$

(b) I $= 8 + 6 + 10 \quad = 24$

II = $\underline{8 + 8 + 8 + 8 = 32}$ +

$56\ cm^2$

In the frst work, the students add all of the sides. In the second work, the students calculate the circumference of the square and the triangle, and then add them together.

Question Number 7

402-37+68=....

The correct answer : 402-37+68=365+68=433

For question number 7, 24 students answer it correctlt and 19 students answer it incorrectly. From 19 students who answer it correctlt, 11 students make calculation error (type 2 error), and the rest 8 students make concept error (type 1 error).

Question Number 8

6 + 12 : 3 =...

The correct answer: 6 + 12 : 3 = 6 + 4 = 10

For question number 8, 26 students answer it correctly and 17 students answer it incorrectly. From 17 students who answer it correctly, 11 students make calculation error (type 2 error), and 8 students make concept error (type 1 error). The most common concept error made by students is adding 6 and 12 and then divide by 3, so the reault of the calculation becomes:

The error like this one is done by 13 students. Another error is a concept error which is *coupled* by calculation error (type 2 error). There are students who calculate:.

Question Number 9

$$\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\cdots$$

The correct answer is:

$$\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{8}+\frac{1}{2}=\frac{1}{8}+\frac{4}{8}=\frac{5}{8}$$

For question number 9, 13 students answer it correctly and 30 students answer it incorrectly. From 13 students who answer correctly, 1 student make a type 3 error by performing the wrong steps of calculation. The student writes:

$$\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{4}\times\frac{1}{2}=\frac{1}{8}+\frac{1}{2}=\frac{2}{16}+\frac{8}{16}=\frac{10}{16}=\frac{5}{8}$$

From 30 students who answer incorrectly, all of the students make the concept error (type 1 error), and 8 students, in addition to make concept error also make type 3 error, they are:write wrong of mathematic notation, and perform the unnecessary steps of calculation. There are various concept error made by students, they are:

(a) $\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{8}+\frac{1}{2}=\frac{1}{10}$

(b) $\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{6}+\frac{1}{2}=\frac{1}{8}$

(c) $\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{4}\times\frac{2}{4}=\frac{2}{8}+\frac{1\times4}{2\times4}=\frac{8}{32}$

(d) $\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{8}+\frac{1}{2}=\frac{2}{1}+\frac{8}{1}=\frac{10}{1}=10$

(e) $\frac{1}{4}\times\frac{1}{2}+\frac{1}{2}=\frac{1}{4}\times\frac{2}{4}=\frac{2}{4}+\frac{1}{2}=\frac{2}{4}+\frac{2}{4}=\frac{4}{4}$

Question Number 10

-2 - 2 - (-2) + 2 =...

The correct answer is:

-2 - 2 - (-2) + 2 = -2 - 2 + 2 + 2 = 0

For question number 10, 16 students answer it correctly and 27 students answer it incorrectly. From 27 students who answer incorrectly, all of the students make a concept error (type 1 error). The concept error is occurred because students do not understand yet how to do the addition and substraction operations in positif and negative number. Some examples of wrong works of the students are as follow:

(a) -2-2-(-2)+2=-4-(-2)=2+2=4

(b) -2-2-(-2)+2=-4-(-2)=-2+2=-4
(c) -2-2-(-2)+2=-2+2+2+2=4

Question Number 11

The number of students in V class is: 13 female students and 14 male students. For the purpose of decorating the class, each female students carries 3 red balloons and male students carries 2 white balloons. How many balloons in the whole which is carried by all of V class students?

The correct answer is: 13×3+14×2=39+28=67

For question number 11, 34 students answer it correctly and 9 students answer it incorrectly. All of students who answer it correctly, answer the question by the way which more and less is same:

$$\begin{array}{l} 13 \times 3 = 39 \\ \underline{14 \times 2 = 28} + \\ \quad\quad 67 \end{array}$$

From 9 students who answer incorrectly, 1 student make type 2 error, that is calculation error, and the rest 8 students make type 1 error, that is concept error because of misunderstanding of the question. Some examples of the wrong work done by students are as follow:

(a) $\begin{array}{l} 13 \times 14 = 43 \\ \underline{\ 3 \times 2 \ = \ 6} + \\ \quad 49 \end{array}$

(b) $13 \times 14 = \frac{182}{2} = 91 \quad ; \quad \frac{182}{3} = 62$

(c) $3 + 2 = 5\ balloons$

(d) Seeking FPB for 13 and 14, and finally can not continue to answer.

Question Number 12

Mrs Heni allots colored paper to her students for making the kite. The number of students in the class is 30 students. If each student receives 3 sheets of paper, how many papers are allotted by Mrs Heni?

The correct answer is:

30×3 sheets= 90 sheets

For question number 12, 36 students answer it correctly and 7 students answer it incorrectly. All of students who answer correctly, working in the question by the way which more and less is same, that is:

From 7students who answer incorrectly, all of them make type 1 error that is concept error. Some examples of the wrong works done by students are as follow:

(1) 30 : 3 = 10

(2) 30×1=30

(3) 30×3=93

(4) Calculating KPK, and writing:

The Efforts to Fix the Errors

Area and Circumference of Planes

To repair the students' understanding of the concept of area and circumference, it can be done by the following learning process. Before getting into the material of planes area, the teacher needs to repeat frst the defnition of area of a rectangle. Teacher gives rectangular piece of paper with patches of units as in fgure 1, and asks students to calculate the area and circumference of the rectangle.

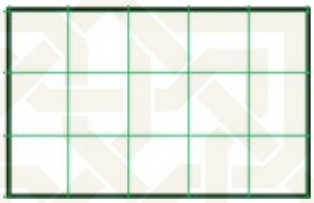


Figure 1. rectangle with unit patches

For reviewing the defnition of area and circumference, teaher gives the picture of non-geometrical form in tartan sheet as in fgure 2 and asks students to calculate the area and the circumference. Then the students are asked to create 3 different pictures of non-geomethrical form which have a certain area, and each of the pictures is calculated their circumference.

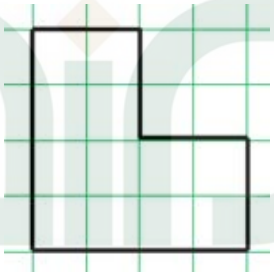


Figure 2. The Example of the picture of non-geomethrical form in a tartan sheet

Then the teacher gives pieces of parallelograms cardboard (with no certain size) as in Figure 3 and asks them to calculate its circumference. After that, the students are asked to calculate its area by cutting and reshapping it into a rectangular shape.

Figure 3. Parallelograms cardboard with no certain size

From this learning, it is hoped that the students will understand the concept of parallelograms area and determine the origin of the formula of its area. Then students are asked to draw some parallelograms with certain area and different size on tartan paper as in Figure 4.

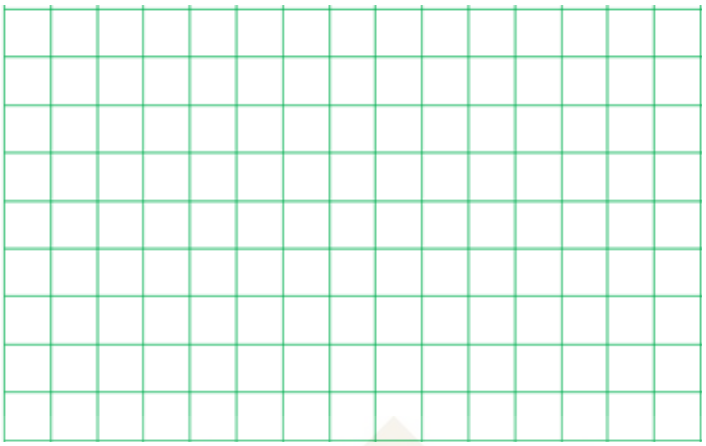


Figure 4. Tartan paper for drawing parallelograms

Similar activities can be done for another rectangular shape, rhombus, kite, and trapezoid.

The Mixed Operations of Integer

To practice and mastery of mixed operations of integer calculation, the following games can be used:

(1) **Four Number 4 Game**

Rules of the game:

Use 4 digits of number 4 for making the number 0 to 10, use any arithmetic operations. For example:

0 = 4 + 4 - 4 – 4

1 = (4 + 4) : (4 + 4)

(2) **Four Cards Game**

Prepare 10 cards (in the size of a playing card) and inscribed with the numbers 0-10. Shake the 10 cards, and take 4 cards at random. Then take another 1 card. With a variety of arithmetic operations, change the 4 digits of the card which is frst drawn into the numbers on the cardwhich is drawn last one. For example the drawn cards are the cards with the numbers 2, 5, 6, 7. One last card is the card with number 8, so it can be made 2+5+7-6=8.

The important point of these two games is that the students are asked to write down number operations performed. Students are trained to write correctly, using the correct brackets, and write the correct notation. By this game, in addition to material of integer operations that will be obtained by the students, the students are also trained to improve their creativity.

Addition and Subtraction of Positive and Negative Number

Negative number is an abstract concept. Teacher can use the visual aid pieces of positive/ negative to concretize the existence of positive and negative numbers. The visual aid is made of cardboard with a semi-circular shape with a diameter of approximately 3 cm, and it is made in 2 colors. White pieces to represent positive numbers, the black pieces to represent negative numbers.

See figure 5.

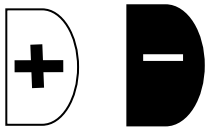


Figure 5. Positif and Negative pieces

Addition operation uses the unification concept of the member of the set. Subtraction operation uses the reduction principle of the member of the set. The basic principle of the unification of the pieces is: if one piece is negative, it will be a zero/neutral. See figure 6.

Figure 6. Positive and Negative pieces is unified into zero/neutral

Example:

-5 + 3 = …

The desmonstration:

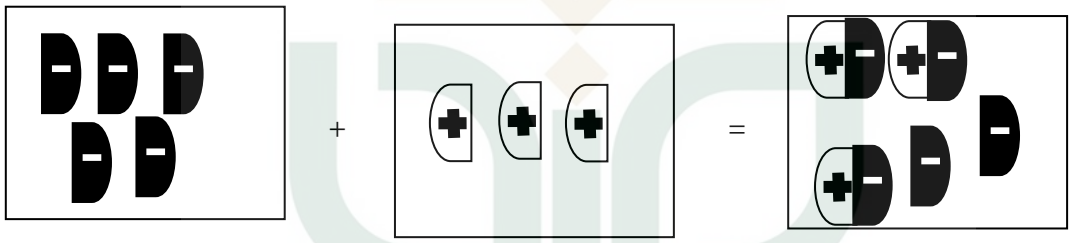


Figure 7. The demonstration of -5 + 3

Conclusion

1. The error made by students of the IV grade of SD/MI in answering mathematics questions can be classified into 3 types:

   Type-1: concept error, including errors in understanding the question.

   Type-2: arithmetic miscalculations.

   Type 3: procedure error, include: the use of unit, writing mathematical notation, the effectiveness of the arithmetic calculation.

2. In answering mathematics questions, the most frequent error is the error of type - 1, that is the concept error, both in the aspect geometry and the aspect of number. The error in the aspect of geometry is done more than in the aspect of number.

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THE IMPORTANCE OF VALUES CHARACTER EDUCATION FOR 2013 CURRICULUM

Written by:
Drs. H. Sedya Santosa, SS, M.Pd.[1]

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ABSTRACT

In the education discourse of curriculum in 2013, the character value has become a crucial topic. Not a few who were a little skeptical but also those who are having optimistic view. For the skeptic, the value is seen as something that is impossible to be named through educational institution such as schools because this institution only concerns about academics or cognitive aspect of students. In this view, investing value is the responsibility of informal institutions that house and non formal institution are a society. To support this view, empirically the result of the survey done by Hugh Harshorne and Mark May is often used as reference. This research concludes that (a) nothing correlation between character training and actual behavior, (b) moral behavior of the people is not always being consistence from one situation to another (c) nothing correlation between what people say and do about the morality, and (d) deceitful behavior is almost never done by the all of people.

Meanwhile, for the optimist person, the value of character education is a must in the educational institution. In this view, the educational institution has a strategic role and approach which is quite effective in instilling the values to the younger generation. Basically, there are no educational institutions that can break away from the value directly or indirectly. Moreover, the main aim held education is something contained a value which creates human with good character, intact, and adult. Kirchenbaun states that the center of character education is instruction of the value and the superiority of the moral in its research about character education relation and academic achievement. Edward Wynne discovers that (a) education character has positive influence to the academic achievement and (b) the approach of character education is more possible than modern techniques in arousing good behavior among students in the school.

This thesis will elaborate more about the important of main effect of character values in the curriculum in 2013 as the way to face moral crisis of the nation and the bawdy of the social order in this country we love.

Key words: *Value, Character, Curriculum in 2013*

A. DISCOURSE OF CHARACTER EDUCATION

In the discourse of character education, the issue of the value occupies in central discussion. There are some skeptical parties and optimistic parties. For the skeptical parties, the value is seen as something impossible instilled through educational institutions such as schools. The reason is these institutions are only dealing with academic problems or cognitive aspects of learners. In skeptical

1 A Lecturer of PGMI 's subject Tarbiyah Faculty and Teachership UIN Sunan Kalijaga Yogyakarta.

view, giving the value is a responsibility for informal institution that as known the home and non-formal institutions. Both of them can also be known with the name, the public. To reinforce this empirical view, the results of a survey conducted by Hugh Harshorne and Mark May[2] that is often used as a reference. This study concludes that (a) there is no relationship between the character training and actual behavior, (b) the moral behavior of person is not always consistent from one situation to another situation, (c) there is no relationship between what someone said about morals and what someone did, and (d) fraudulent behavior is not almost done by everyone.

Meanwhile, for those who are optimistic, the value is a necessity in the educational institutions. In optimistic view, the institution has a strategic role and has a quite effective approach in instilling the values to the younger generation. Basically there is no institution that can break away from the value, either directly or indirectly. In fact, the original purpose of convening education, are creating a good human being, creating totality and creating maturity. Kirschenbaum[3] stated that the heart of character education is teaching the values and moral virtue. In the research on the relationship of character education and academic achievement. Edward Wynne[4], has found that (a) the character education has a positive influence on academic achievement; and (b) the approach of character education are more likely than modern techniques in generating good behavior among school students.

In the optimistic view, character education and values can be likened as a cure for moral decay in society. The cure is considered more urgent because the disease and moral decay of society actually has occurred in young age or in school age. Thomas Lickona[5] summarizes 10-destructive behavior that occurs in adolescence, those are doing violence and vandalism, stealing, cheating, not respecting the figure or figures of authority such as a parent or teacher, having peer cruelty, having bigotry, using rude language, knowing harassment and sexual development too fast, increasing selfishness an decreasing responsibilities as citizens, and trying to spoil young age. James Arthur[6] also presents a list of problems that accompany teenage school, starting from: cases of suicide, teen pregnancy and abortion, the level of crime such as stealing, alcohol and illicit drug use, sexual activity and sexual abuse, skipping school, and having mental health problems.

When you see the development of contemporary education, optimistic view was more dominant than the skeptical view. It can see first from the more intensive publication of books and other media that associates with various values of character education. The second it can see in the establishment of various institutions or commissions to oversee the idea of character education. And, the third it can see in various state policies, including Indonesia, which pro- optimistic view of the character education. Mary M. Wlliams[7], in one of his articles, *Models of Character Education*, stated:

Today, schooling must be about both character and academic competence, focusing on

2 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 86.

3 E.H. Robinson III, Karyn Dayle Jones & B. Grant Hayes, *Humanistic Education to Character Education: An Ideological Journey*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 22-23.

4 Barbara J. Duncan, *Character Education: Reclaiming the Social*, Educational Theory/Winter 1997/Volume 47/ Number 1, page. 121-122.

5 Thomas Lickona, *Eleven Principles of Effective Character Education*, Journal of Moral Education, 25/1, 1996, page. 93-100.

6 Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 88.

7 Mary M. William, *Models of Character Education: Perspective and Developmental Issues*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 34.

achieving a balance between the cognitive, affective, and behavioral domains at the different stages of child development.

However, the centralization of these values usually branches when it comes to a critical question about the value of what and whose values should be instilled, as well as how to transmit and transform these values in the plurality of society values and stages of development of learners. And also the parties which are considered as a representation of the various interests that have authority in determining these values, is involved. J. Mark Halstead[8], states that there are two tasks waiting to be answered by the bearer of character education concepts. Those are (a) to identify the appropriate values and (b) to transmit the values that have standardized on the learner through the facilities that step on lines of educational institutions such as curriculum, sports, community, funding agencies, extra-curricular activities, educator - learner relationship, structure and management of the school, and so forth.

Although there is a belief in the character education that said there are values of virtue that should be part of education for all learners, however, identify the values of character education is not easy. It can be seen from the varied list of character education values are not always the same between one character to another, between one view and another view, or between one country and another country.

There factors that lead to the differences in determining list of the values are (a) the difference in the set where fundamental values and where the secondary values, and (b) the differences in the character set de fnition of education itself. For example, the Ministry of National Education (right now known as the Ministry of Education and Culture) makes priority to religious value as the value of character education because religiosity is considered as a fundamental value. In addition, the value of religiosity occurs from the notion of character education as a process of forming a whole person, which includes physical and spiritual.

One fact that can not be avoided when discussing character education is a matter of de fnition. There is almost certainly no agreement about what the de fnition of character education. When it is traced even further, one of the bases of the disagreement is a difference on how people understand the nature of the character. For example, if a character is understood as a moral, it will bring forth a similar understanding of character education with moral education. That is the same if a character education distinguished by moral education. James Arthur[9] saw that character education is a specifc approach to moral education, so moral education has a wider scope than character education. Thus, these three issues, those are: character, character education, and values education are integral characters that can not be separated. Furthemore, this section will describe three things in the following discussion questions to further provide an understanding of the values of character education.

B. CHARACTER AND CHARACTER EDUCATION

The discussion about character and character education equal to entering the full de fnition of con f ict and ideology. There are so many differences and disagreements. This difference is considered by some as something negative and counter- productive, while for others it is regarded as something positive and productive. For example, in the view of James Leming[10], differences in

8 J. Mark Halstead, *Values and Values Education in School*, dalam J. Mark Halstead & Monica J. Taylor (ed.), Values in Education and Education in Values, London: RoutledgeFalmer, 1996, page. 8.

9 James Arthur, *The Emergence of Character Education in British Education Policy*, British Journal of Education Studies, Vol 53 No 3, September 2005, page. 240.

10 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia

the definition of restrictions on the character would be a hindrance to the effectiveness of character education as educators that will not have a clear framework to work with. Meanwhile, Andrew Kaplan[11] has argued that the plurality of character sense should not prevent the productivity and effectiveness of character education. It is precisely these differences give each strut one another to provide an overview of the framework more completely.

In etymological term, the term character derived from the Greek meaning karasso that means blueprints, basic formatting, fingerprints[12]. The initial idea of "character" in Greek thought with regard to morality, namely the moral good, is basically expected something inherent in one's personal and something that is not acquired automatically but that is through acquisition and business[13]. The character is not something that can be installed and removed easily because it has stuck and become part of one's identity. However, how to achieve or to obtain the difference views between Plato and Aristotle. For Plato, a person has good character when we understand goodness and acted as well. Whoever knows goodness, the person will not leave the behavior of goodness. Meanwhile Aristotle's view is different. He said that a person can be good because of practicing good action. Character acquired by habituation in the action and not through the knowledge of thought. However, the two are different. The similiarities view character is not given but those are obtained achievement or something cultivated. They also agree that ethical behavior is something that can be taught and should be taught as early as possible.

In the *Oxford English Dictionary*[14], it explained that the character comes from the Greek. That means an instrument to mark and scratch, printing, labeling, marking a clear, prominent feature. It is also defined as a collection of moral and mental qualities that distinguish one person or a race. In the *Kamus Besar Bahasa Indonesia*[15], the meaning of character traits psychological, moral, or character that distinguish one person with another person: the nature and character.

Etymological sense or understanding of grammar and a dictionary, it could be an important clue to understanding what the character is. However, further exploration is still required. Joel J. Kupperman[16] determined that the term character does not have a single meaning in all its use. In some ways, he said that the characters have a common understanding of the personality. This is evident from the way people define them as quality or set of qualities that make a person himself and makes it different with others. It can not avoid that character one person to another is almost certainly not the same, so the personality and character seem to have the sense very closely. However, in other contexts both of these also have a different understanding. If the definition of personality more emphasis on individuality and difference with another individual, that is different with the character itself. For example, if a person has no personality, it means that the person does not have the distinguishing feature with other people. Meanwhile, when it is said that a person does not have the character, then it implies that the character is not yet formed. In the language of John Locke, it is like an empty board there has not been any written or engraved on it.

Meanwhile, the notion of character is also often used interchangeably with the moral

Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 80.

11 Andrew Kaplan, *Conversing About Character: New Foundation for General Education*, Educational Theory/ Summer 1995/Volume 45/Number 3, page. 365-366.

12 Doni Koesuma A, *Pendidikan Karakter: Utuh dan Menyeluruh*, Yogyakarta: Kanisius, 2012, hlm. 55.

13 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 80-81.

14 Joel J. Kupperman, *Character*, New York, Oxford: Oxford University Press, 1991, page.3.

15 *Kamus Besar Bahasa Indonesia*, Jakarta: Balai Pustaka, 1989.

16 Joel J. Kupperman, *Character*, New York, Oxford: Oxford University Press, 1991, page. 1-17. The discriptive paragraph below is brougt by Kupperman that pointing the part of book pages.

sense. Despite having a close relationship, according to Kupperman, a character has a different understanding of the moral sense. As an example case, a person can very easily become discouraged and depressed (this is a character) without having to be regarded as an immoral, and people usually just call weak or having less strong character.

According to Kupperman, character also implies that there exists a relationship between thoughts and actions. Characterized by a person's actions as the result of thought is not the result of coercion. When someone does an act of necessity, then people will call it contrary to his character. Exposure based on various sides of the character, Kupperman comes up with the definition of the character as follows:

> *X 's character is X 's normal pattern of thought and action, especially in relation to matters affecting the happiness of others and of the X 's, most especially in relation to moral choice.*

This definition makes clear that, *first*, the normal pattern is defined as something that is fixed in a variety of circumstances. For example, a person will continue to give aid to people in desperate need under any circumstances. *Second*, the character is composed of two entities, those are thoughts and actions. Character is not just something to think about, but it manifests in action and character. It also means a person acts with full consideration. *Third*, related to the moral character, despite having a different sense. For example, people with strong character will emerge from the downturn and it can not be referred to as moral or immoral. But the rise can show moral choices a person, for example for the happiness of their parents or families.

Meanwhile, Emmanuel Mounier[17], defines the term character into two (2) ways, those are a result of character and character as a process. As a result, the character implies a set of conditions that have been given away, or there was just like that, which is more or less forced on us. Meanwhile, as a process, character means the power level at which a person is able to control the condition. The character is more of a desired process.

Another view put forward by Andrew Kaplan[18] (1995: 366-377). He argued that the term character is an umbrella term that combines two humans are moral virtue and reason; characters also combines the two processes of human life to reason and act. So concluding what Kaplan said, understanding search character is not a journey to the point of singularity of meaning but a plurality of meanings that mutually support one another and not mutually exclusive. He classifies 4 (four) approaches to understanding the character. *First*, that is elemental sense which is to see the characters as something permanent, unchanging, and underlies about who the real person. The phenomenon of a person's activity is something that is beneath the surface and there is something underlying and unchanging character. These basic elements can constitute impulses unconscious or something inherent as a result of conscious adaptation to environmental forces. *Second*, the dramatic sense which is to see the characters as something more fluid and elastic. In this sense, the role of a learned character is to be displayed in accordance with the rules or certain stages, as well as a role in the game or the game. In this sense, the characters can be challenging under the layers that underlie human action in order to adjust to specific roles.

Third, the social understanding which sees the character as a public position occupied by a person, which is obtained through a long process such as internships or periods of service in an institution. A character in this sense is a package of behavior adopted and continues over time. *Fourth*, the ethical sense which is to see the character as a result of a continuous process of

17 Doni Koesuma A, *Pendidikan Karakter*: Utuh dan Menyeluruh, Yogyakarta: Kanisius, page. 56.

18 Andrew Kaplan, *Conversing About Character: New Foundation for General Education*, Educational Theory/ Summer 1995/Volume 45/Number 3, page. 360-375.

choosing life in the act of something that is considered good and scrutinized the process in order to understand the consequences of a choice as perfect as possible. The characters in this sense is a kind of wisdom which is applied to all kinds of meaningful decisions.

Furthermore, character education activists, like Ryan and Lickona, more emphasis on the aspect of understanding the characters 'quirks' (habits), the character is a collection of one's habits. Meanwhile, other figures emphasize the cognitive aspects. The figures such as DeVries and Berkowitz emphasize awareness, understanding, reasoning and establishment[19].

By presenting some case examples of how the experts define the character, it can be understood if there is no single understanding of what the character is. So, in this case, it can be understood if there is also no single definition or no single understanding of character education. As the deepening of the discussion, it can be shown some character educations as definition of the exponents or activists or supporters that vary from each other.

1. Wayne Ryan and Thomas Lickona[20] define character education as a process of knowing the goodness, love kindness, and to do well. With this definition also Lickona develop three (3) models of character education. *First*, students learn the moral of the socio-cultural heritage. This heritage is not static, but is subject to change or be changed. This model emphasizes moral reasoning, decision making, and the ability to acquire knowledge through self-review and evaluation of the action. *Second*, the affective domain, it includes feelings such as sympathy, care and love for others. This is a bridge to the realm of action or actions. *Third*, the model emphasizes the will, competence and one's habits. In the will, the learners are trying to overcome a sense of self-interest in acting. In the competency, learners must develop the basic skills to do something good. In the habit, learners do a kindness repeated to form a pattern.
2. Anne Lockwood[21] defines character education as any program instituted in the school, designed in collaboration with other community institutions, to shape the behavior of young people directly and systematically through the provision of values influence the non-relativistic so that it appears in the behavior. She says in detail, character education (a) must be supported by controlled curriculum and the goals set at a level that can be supported by the public and consensus, (b) the target behavior is part of character education, and (c) anti-social behavior learners arises because of the lack of value.
3. Vessel & Boyd[22], have said character education is a strategic learning that supports social and personal responsibility, and the development of the elements of good character and moral virtue. This definition indirectly to say that implies personal character, which is something that is related to the self and the social, which is something that is related to another person. In addition, understanding the character has a close connection with moral issues, namely the question of good and bad.
4. Ryan and Bohlin[23] define character education as a process of developing habits that virtue and good character that leads students to be responsible and mature.

19 Mary M. William, *Models of Character Education: Perspective and Developmental Issues*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 38.

20 James Arthur, *Educating with Character*, London & New York: RoutledgeFarmer, 2003, page. 115.

21 James Arthur, *Traditional Approach to Character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 90.

22 Quinn M. Pearson & Janice I. Nicholson, *Comprehensive Character Education in the Elementary School: Strategic for Administrators, Teachers, and Counselors*, Journal of Humanistic Counseling, Education and Development, Juni 2000 Vol 38, page. 244.

23 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page. 88.

When many leaders or experts see character education as a matter of terminological de f nition, it is not the case with the *National Commission on Character Education of America*[24]. The commission sees character education as an umbrella term that houses a variety of different approaches on the existing character education. The idea of character education includes a variety of approaches or different and diverse genres, such as the theory of the stages of cognitive development (Piaget), and a question and answer dialogue techniques *sokratesian* (Aristotle), progressive democratic practice (Dewey), up to the ethics matter in building community (Nodding). The Commission brie f y de f nes character education as:

> *Any deliberate approach by which school personnel, Often in conjunction with parents and community members, help children and youth become caring, principled, and responsible.*

When using this broad understanding of nature, the analysis Karen E. Bohlin[25], in the *Teaching Character Education Through Literature*, there are 4 (four) genre approaches in character education, which approach Dewey and Kohlberg's theory of moral cognitive development, values clari f cation approach, approach-building skills, and virtue ethics approach.

First, that is Dewey Progressivism approach and cognitive moral development Kohlerberg/ iaget. The approach recognizes that individuals proceed through the stages of development of different hierarchical qualitatively at each stage. Piaget and Kohlberg emphasize regions and the development of moral reasoning. Havighurst 's theory emphasizes social development. Loevenger emphasizes theory of ego development. According to Piaget, the children develop from a pre-operational phase to the operations phase of the real; children also evolve from being egocentric to the next phase of sociosentris that means everything in the perspective of self-centered perspective towards others. According to Kohlberg, those are evolved from the level of pre-conventional moral reasoning based on punishment and reward to the conventional level of moral reasoning, based on social adjustment. According to Havighurst, morally child at an early stage, children learn to distinguish between what is right and what is wrong. The next stage children learn to recognize their peers and also develop attitudes toward group consciousness and social institutions. Meanwhile, according to Loevinge, the theory of ego development, the children move from self-protection phase in which the child obediently rules in order to get what they want towards the conformist stage where children appreciate a good attitude, a helper, and cooperation with others.

The f rst approach is more pressing some points, those are: the characters in problem solving, democratic participation, improved moral reasoning, community building, and ethics of caring. This approach was developed further in the works Noddings, DeVries, and Schapps.

Second, values clari f cation approach developed by Raths, Harmin, and Simon. The purpose of this approach is to empower learners in identifying and de f ning their personal values regardless of its moral content. Raths, Harmin, and Simon[26], stated that "we can not dictate to children... we may raise questions, but we can not 'lay down the law' about what a child's values should be" (We can not dictate to us should ask a child.. question, but we can not be 'stretched the law' about what kind of value should be owned subsidiary). Thus, the last determinant is located on the children themselves.

Third, that is skills-building approach. This approach is basically an integration of theory and

24 Mary M. William, *Models of Character Education: Perspective and Developmental Issues*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 33.

25 Karen E. Bohlin, *Teaching Character Education Through Literature*, London & New York: Routledge Farmer, 2003, page. 2-5. The descrictive paragraph bases on the page of this book.

26 Josep F. Governali, *Health Education and Character Education*, Journal of School Health, November 1995, Vol 65, No 9, page. 394.

developmental psychology with character education. Narvaez[27] elicits this model of integration which he described as 'Integrative Ethical Education', which saw the character as a set of component skills that can be embedded on a high level of expertise. He identifes skills a person with good character and believes that children grow and develop within a swing of the leading experts in early learning in every realm of the ethical content of what he learned. The real ethical expertise requires interaction with a challenging environment by using an abundance of process, knowledge and skills. The approaches to ethical expertise is in the character education requires an orderly school environment agency in which the child can understand and develop skills along with opportunities for focused practice. This approach appears, in order to form social intelligence and confict resolution skills, to rescue sexual behavior and prevention of drugs and alcohol that emerges from the social and emotional learning movement.

Fourth, that is the approach emphasizes the primacy of ethical traditions and focus on the development of intellectual and moral habits. This approach is also known as the traditional approach. This approach was developed among others by Lickona, Wynne and Ryan, Ryan and Bohlin, Arthur. It is said to be a premier approach as meaning two things, *first*, its roots are deep in the traditional world of moral thinking at the time of Ancient Greece and, *second*, the method, which emphasizes 'indoctrination', habituation and models.

Such revisits the traditional idea of moral and character, advocates this approach as Lickona, Wynne, and Ryan that reproduce much Plato and Aristotle. Lickona[28] states that throughout its history the purpose of education is to focus on helping children become “smart“ and “good“. argues that smart and good are not the same, since the society from the time of Plato has made moral education as an essential part of the education. He also adds, Aristotle defnes as a living character with good behavior, in relation to self and others. This is something that needs to be reproduced continually, especially through education. Living with good character means good life for you with self control and simple way, and live with a good character for others with sympathy and generosity.

Meanwhile in terms of method, the proponent of the traditional approach is agreed that the maturity of moral and character education requires direct instruction and closely guidance. Even if there need to be rules and procedures for character education, so that education institutions should identify the values of character and values to help create the character of virtue in children[29].

Of the four approaches, if summarized in general can be classifed into two approaches, those are the indirect approach (including approximation theory of cognitive moral development, values clarifcation, and skill - building) and the direct approach (traditional approach)[30]. The direct approach assumes that the character is something that is fxed and the indirect approach sees that the characters evolve in the process. When the direct approach assumes the character of the dimension of action, then the indirect approach emphasizes the dimensions of reasoning.

Direct approach is an approach that encourages young habituation to the virtues of the community. This approach focuses on training habits. More direct approach based on the traditional view, emphasizes the importance of moral tales and examples of good practice. What is needed in this approach is an exemplary role, rules, discipline. This approach is also having the view that

27 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page 92.

28 Josep F. Governali, *Health Education and Character Education*, Journal of School Health, November 1995, Vol 65, No 9, page. 394.

29 James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: routledge, 2008, page. 93.

30 The descriptive of directly approach and undirectly approach bases on Barbara J. Duncan, *Character Education: Reclaiming the Social*, Educational Theory/Winter 1997/Volume 47/Number 1.

the students or children should know how to reach a level of moral literacy first and then they may have thought based on the moral literacy. Students are encouraged by the example of the classic, traditional stories, poetry, and literature containing ideas about morality and goodness that allows students to live in the future. This view uses the approach of "intervention" in the moral development of children, and not to explore the cultural context of the child, but to give a good example.

Meanwhile, the Indirect Approach focuses on building understanding and development of socio-moral development of children. This paradigm emphasizes the importance of dialogue and reasoning. This approach seeks to help students themselves define moral values and moral values of others, and thus also the reason behind the moral values which may be the same or different between himself and others. The assumption is that when the children grow and develop competence in the field of cognitive and reasoning through cooperation with others, then the same is true in the field of morals.

In this approach, the children are not familiarized with certain moral values that form certain characters, but this approach considers with invited discussing and reasoning about moral dilemmas around children in everyday life. An example is the dilemma between the rights of individual ownership of certain goods and human values resulting from the goods. Children are invited to interact and analyze accompanied by teachers or parents.

The purpose of this approach is not only uphold and develop a healthy school community atmosphere, but reaching a broader perspective that encourages students to see themselves as part of a community of democratic and pluralistic society more broadly.

Given the differences in approach, it is often appearing critique each other. For example, the progressive traditional approaches often alarming about how the approach is limited because it treats the child individually rather than socially. Between Kohlbergian and Piagetian also criticized conformity to the values regardless of the child 's cognitive development[31].

Meanwhile, the traditional approach is equally harsh in criticizing others behind the three approaches. According to Bohlin (2-3)[32], and cognitive developmental approach to moral progressif, though it can provide important insights, but it is not sufficient to teach the children who are growing up in the values identifying meaningful life. The approach is considered to have failed because they did not provide sufficient motivation to lead towards a better life. Without an adequate understanding of what is referred as a good moral and a good moral action, reasoning moral will only lose orientation. Likewise, without a clear understanding of what is good morally and what is good usefully, value clarification approach is a wasted effort. And also, having social skills and having conflict resolutions that are studied outside, the context of the moral can only produce skilled individual behave without having a value commitment. The goal of character education can only be met in the traditional approach of linking moral actions with human excellence and leadership in the good life.

Although it is in a position to criticize each other, the tendency in the implementation of character education leads to more similarities than differences. Kevin Ryan[33] (Duncan, 1997: 120) states that character education has entered a new phase, which is characterized by increasingly

31 Mary M. William, *Models of Character Education: Perspective and Developmental Issues*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 36.

32 Karen E. Bohlin, *Teaching Character Education Through Literature*, London & New York: RoutledgeFarmer, 2003, page. 2-3.

33 Barbara J. Duncan, *Character Education: Reclaiming the Social*, Educational Theory/Winter 1997/Volume 47/ Number 1, page. 120.

round re fux difference between the theorists who are competed for the strengthening and learn from each other. Character education becomes a phenomenon in the middle between the two extremes of cultural assimilation approach and moral cognitive development. The character education advocates are also increasingly aware that character education is a social process, and the learners internalize the discourses that surround them. Rationality is not ignored; just tend to not be stressed too much.

From the intersection-intersection is then established the principle and practices of highly fertile methodological in character education. That bears the thought more practical and programmatic in education. Some of the names can be included here to show the character education program, as follows[34]:

1. Thomas Rusnak develop six (6) principles approach. First, character education should not be seen as a special subject matter. Should it be integrated into any subject matter in school and forming part of a planned experience for each student? Second, character education should be seen as an ' educational measures ' (action education), which includes commitments and actions for both educators and students. Third, character education established and built environment through the school, which is a positive atmosphere, climate or ethos of the particular school. Fourth, character education must be part of the mission and policies created by the school. Fifth, character education must be taught by educators who can empower and free from pressure or limitations of the centralized curriculum. Sixth, character education must include the whole school environment and local communities in the vicinity.
2. Bill Puka identi fed six (6) methods of teaching character education. First, teaching is based on the values and basic virtues. Second, the rules of conduct have to be enforced and enforced. Third, tell stories with moral content. Fourth, give an example or role model in the characters and the desired values. Fifth, spread moral examples in history, literature, religion, and praise their virtues. Sixth, provide an opportunity to be involved in the school and community so that students can experience the characters well and follow good values.
3. Thomas Lickona outlines 11 (eleven) on the principles of character education plan. First, the school should be committed to the basic ethical values. Second, the character is thoroughly de fned includi ng thoughts, feelings and behaviors. Third, schools should pro- actively and systematically in the teaching of character education and not merely waiting for opportunities to come. Fourth, the school must develop an atmosphere of caring and being a microcosm of the community concerned. Fifth, the opportunity to practice moral action should be varied and available to all. Sixth, academic studies must remain central. Seventh, the school needs to develop ways to increase the intrinsic motivation of students who did better commitment to core values. Eighth, schools need to work together and have the same norm for character education. Ninth, educators and students should have the same moral leadership in the school. Tenth, parents and the community should be partners in character education in schools. Eleventh, to evaluate the effectiveness of character education in the school, that is good for students and the entire staff.

C. VALUES AND VALUES CHARACTER EDUCATION

In general, the central value is something that is related to the theory and practice of education. On the one hand, education is believed to have an important role in the creation of value for

34 Look at, James Arthur, *Educating With Character*, London & New York: RoutledgeFarmer, 2003, page. 113-131. Juga James Arthur, *Traditional Approach to character Education in Britain and America*, dalam Larry P. Nucci & Darcia Narvaez, Handbook of Moral and Character Education, New York: Routledge, 2008, page.93-94.

students, in addition to other institutions such as the family and the media. While on the other hand, education is also regarded as a representation of the values that flourish in society at large. So, the position of education is in a position to influence and being influenced in terms of value.

In order to explain the notion of value, Hill stated that[35]:

> *When people speak of values they are usually referring to those beliefs held by individuals to the which they attach special priority or worth, and by the which they growing niche to order their lives. A value is, therefore, more than a belief; but it is also more than a feeling.*

In one article, entitled *Values and Values Education in Schools*, J. Mark Halstead[36] summarizes some understanding of the value of some experts about the value of theories. *First*, according to Raths, Harmin, and Simon, values are beliefs, attitudes or feelings where someone feels proud, confirmed by the audience, selected with consideration and not through persuasion, and done repeatedly. *Second*, according to Fraenkel, the value is the emotional commitment and ideas of propriety. *Third*, according to Beck, the value is things (like objects, activities, experiences, etc.) that sustain the balance of human happiness. *Fourth*, according to Shaver and Strong, the value is a standard or our principle to assert advisability. Value is criterion where we assert about the things (people, objects, ideas, actions, and situations) that is good, useful and desired, or on the opposite, that is bad, useless and unwanted. Meanwhile, he himself defines value as follows:

> *Principles, fundamental convictions, ideals, standards or life stances the which act as general guides to behavior or as points of reference in decision-making or the evaluation of beliefs or action and the which are closely connected to personal integrity and personal identity.*

In addition to differences in the definition of an issue, the issue of value also extends to various different views to open and to respond the value. For example, there is the view that value is something that is fixed and unchanging, while there are others who believe that value is not something fixed and always changing with the times. If the value is seen as something that is fixed, then people will be more emphasis on how to maintain and preserve its value. On the other hand, if the value is considered as something that can be changed, people will be more emphasis on the attitude of how to transform the values at each developmental time.

People also have different views about whether certain values such as moral, social, political, religious a particular value or universal values. On the one hand, when considered as a particular value, then the value can only grow and flourish in a more limited scope and should not enter the public spaces. On the other hand, when considered as a universal value, then these values will tend to be applied in any environment and social strata of society.

In general term, the notion of value can be classified into three (3) views; those are absolutism, relativism, and moderate[37]. *First*, absolutism holds that value as something that can be applied at any time and anywhere. For example, the act of a person to be honest regarded as an absolute value without having to look at space and time wherever the person is. *Second*, value relativism, which holds no single value, can be considered more important or better than another value. Every person

35 Stephenson (ed.), *Values in Education*, London & New York: Routledge, 1997, page. 3.

36 J. Mark Halstead, *Values and Values Education in School*, dalam J. Mark Halstead & Monica J. Taylor (ed.), Values in Education and Education in Values, london & New York, RoutledgeFalmer, page. 4-5.

37 Mary Warnock, Moral Values, dalam J. Mark Halstead & Monica J. Taylor (ed.), Values in Education and Education in Values, london & New York, RoutledgeFalmer, page. 44-46. Also J. Mark Halstead, *Values and Values Education in School*, dalam J. Mark Halstead & Monica J. Taylor (ed.), Values in Education and Education in Values, london & New York, RoutledgeFalmer, page. 4-7.

has value, and no one's value exceeds its merits compared to the value of others. All values are valid. *Third*, moderate grades, which holds that there are values that can be agreed upon by everyone, but there are also the values that are not agreed upon by everyone. This view assumes that people can share in the same values, for example values that are fundamental such as tolerance, mutual respect, mutual respect, and so on. The values can be adopted and developed in each community. Nevertheless, moderate views of values also recognize the subjective value that is believed by any personal or part of the wider community.

With the background of a moderate view of value, it can be understood if, *first*, there are so many lists of values that have the same character education and have been considered as fundamental, and *second*, there is also a list of values that are not equal to each other or a list of specific values that are considered as fundamental but are not considered as fundamental by the other group.

The discussion on the value of character education can also be seen as a tactical move to get out of deadlock due to the abundance of understanding character education. So even though there is no definition of character education that can be acceptable to all parties, it does not mean it's a dead end. In a statement P. London[38], it is more important to identify the values associated with good character. Although the list of such values could be as much as the definition and character education, but at least there are the same values displayed by experts, authors, or a different character. The following will be displayed multiple lists character education values compiled by several leaders, experts, activists or organizations who put the matter on the issue of character education[39].

1. Thomas Lickona in *Educating for Character* classifies the values of character education into three areas, those are (a) the domain of moral knowledge which includes moral conscience, knowing moral values, perspective-taking, moral reasoning, decision making, and self-knowledge; (b) domain of moral sense, which includes conscience, self appreciation, empathy, love kindness, self-control, and humility; (c) the realm of moral action which includes competence, willingness and habits.
2. J. Braun in *Caring, Conscience Citizenchip* exposes the values that are considered generally accepted in the various cultures, which include honesty, respect for the property of others, and to be compassionate to the poor.
3. Pyszkowski in *Moral Values and the Schools* describe the main points in the fundamental values of democratic system which includes a fair, equal, sportsmanship, kindness, and honest.
4. Barnhill in the *Speak Up for Character* developed six pillars of character which include trustworthiness, respect, responsibility, fairness, caring, citizenship and the virtues.
5. *Character Counts*, a program that focuses on the character building in America long enough to provide a list of values that include the excitement of character education, citizenship, cleanliness, compassion, cooperation, courage, courtesy, creativity, trustworthy, diligent, fairness, benefactor, helper, honest, volatility, generous, loyal, patient, diligent, punctual, respectful, respecting the environment, responsibility, pride in school, self-control, loves to exercise, and tolerant.

38 Mary M. William, *Models of Character Education: Perspective and Developmental Issues*, Journal of Humanistic Counseling, Education and Development, September 2000 Volume 39, page. 244.

39 Taken by some sources. Josep F. Governali, *Health Education and Character Education*, Journal of School Health, November 1995, Vol 65, No 9, hlm. 394-396. Karen E. Bohlin, *Teaching Character Education Through Literature*, London & New York: RoutledgeFarmer, 2003, hlm. 6-7. Sharron L. Mc Elmeel, *Character Education*, page. xxiii-xxiv.

6. Sharon L. McElmeel has explained in Character Education 17 (seventeen) is important in the education of characters that include caring, confident, generous, curious, flexible, friendship, ability to set goals, humility, humor, initiative, integrity, patience, diligent, positive attitude, problem solver, self-discipline and teamwork.
7. Komensky provides a list of core values, which include fair, moderate, firmness, attitude, fair, commitment to duty, hard work, and generous.
8. Ministry of Education (now the Ministry of Education and Culture) identifies the values of character education into 5 (five) domains, those are (a) in relation to the realm of God or religiosity that includes thoughts, words and actions are always based on the sought values divinity and/teachings of his religion; (b) in relation to the realm of self, which includes an honest, responsible, healthy lifestyle, discipline, hard work, self-confident, entrepreneurial, think logically, critically, creative and innovative, independent, curiosity, love science, (c) in conjunction with other domains, which include the rights and obligations aware of self and others, abide by social rules, appreciate the work and achievements of others, polite, democratic; (d) sphere in relation the environment, which includes love of the environment, and (e) the realm of national values, which include a sense of nationalist and appreciate diversity.

Of these differences, there are various ways to classify the distribution of these values for easy grouping. According to Pearson & Nicholson[40], a variety of different values can be classified into three areas relate to each other, namely (a) how individuals relate to themselves, (b) how individuals relate to others, and (c) how the individual relates to the wider community. Region on how individuals relate to him include values such as responsibility, self-discipline, perseverance, and respect ourselves. Region on how individuals relate to others (in the sense of classmates, friends, and other people important) includes values such as honest, respectful, generous, and empathy. While the area on how individuals relate to the broader community environment, can include values such as fairness/honesty, fairness, and citizen virtue.

All three areas are not independent but interconnected. Even by Mary Elizabeth Mullino Moore[41] (103-120), education is essentially relational. He classifies five (5) regions in the individual relations in education. *First*, it is the relationship with yourself. In this relation, education is the process of finding oneself (self-discovery), criticism (self critique) and expansion (self-enlargement). In this case, education can help increase critical awareness and character development when there is no process of raising awareness of learners will boost self (passion), values, and concern. *Second*, that is the relation with community and culture. In this relation, education is a process of discovery, analysis, criticism, deepening, and the transformation of the community and culture. Education can encourage respectful relationships within the learning community, the wider community, with a broader cultural matrix, thus contributes in determining the relationships within the family, community, and cultural development.

Third, that is relationships with different people. Relationships with different people are inevitable. In this relation, education is a process of dance with diversity, which enters the process, perspectives, practices, and diverse lifestyle. In this case, education can increase knowledge, appreciation, understanding, negotiation, and reconciliation even across different communities. *Fourth*, that is about his relationship with the ecological environment. In this relation, education

40 Quinn M. Pearson & Janice I. Nicholson, *Comprehensive Character Education in the Elementary School: Strategic for Administrators, Teachers, and Counselors*, Journal of Humanistic Counseling, Education and Development, Juni 2000 Vol 38, page. 244.

41 Mary Elizabeth Mullino Moore, *Nourishing Relationship That Nourish Life*, dalam George Allan & Malcom D. Evans, A Different Three Rs for Education, New York: Value Inquiry Book Series, 2001, page. 103-120

is the process of connecting individuals with the development and future of the earth as a human ecological environment. Education is a process of appreciation, received from, learning from and care for the Earth and all human life rests. In this case, education can improve own self involved participants in the various forms of interaction with the natural world, so it can improve ecological awareness, joy and ethical practices. *Fifth*, that is about the relation with the social structure. Within these relationships, education is the process of connecting a person with social and political structures that can enrich the positive things in all kinds of relationships. In this case, education can be interactive actions, public that having a purpose, invited to conduct interdisciplinary reflection, communal analysis, and constructive criticism in the microstructure of the school and the wider structures (society).

One of the important targets in the list of exposing various values of character education is to find meeting points and equations. When examined, there are some average values appear in the list of figures, activists or different institutions. Cass Sustein[42] stated that in a pluralistic society is very possible disagreement value in the set of fundamental values, but such people also can reach an agreement in a particular region. This type of arrangement does not always have to be perfect, so he named as 'incompletely theorized agreements on particular cases', but the agreement could serve as a common ground to share the same values.

Some have the same value in the list of values between the figures with other figures can be found, such as:

1. *Caring*, it means an attitude or action where someone put the matter or put the interests to others and other situations.
2. *Confidence*, it means the belief in a person and the person's ability to achieve a success.
3. *Courage*, it means the firmness of mind and the will to face a danger or an extreme difficulty.
4. *Curiosity*, it means a strong desire or passion for learning, researching or knowing something.
5. *Patience*, it means the ability to hold or waiting for something to achieve the goal.
6. *Emphaty*, it means a person's mental ability to be able to identify themselves with other people or events.
7. *Responsibility*, it means a readiness to bear any risk of doing the act itself and the ability to solve problems that are inside constructively.
8. *Self-Discipline*, it means the ability to control, organizes or fixes own self in order to improve quality.
9. *Respect*, it means to treat others with care and respect, and to appreciate other points of different views.
10. *Integrity*, it means to obey a set of principles or code of values, especially moral values.
11. *Honesty*, it means the attitude to say something objectively or to say what the fact is.

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OPTIMIZATION OF MULTIPLE INTELLEGENCES THROUGH SCIENCE LEARNING FOR SD/MI (ELEMENTARY SCHOOL) STUDENTS

Written by:
Sigit Prasetyo[1]
email: siepras@yahoo.co.id

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ABSTRACT

Optimization process of multiple intelligences through science learning for students of SD/MI should be done by the teacher as an actor behind the transfer of knowledge by starting from a positive stigma on the ability of the students. The abilities which belong to the students are various including linguistic intelligences, logical-mathematical, visual - spatial, intrapersonal, interpersonal, musical, and kinesthetic intelligences. The main supporting factor which belongs to the teacher is a sense of caring and sharing the equal treatment of all students. Starting from this perception, it will create a sense of high con f dence for teachers on how to teach their students. Integration of science with multiple intelligences can be started by inserting the materials of science to the diverse student learning skill such as playing a character, in which it is a kinesthetic intelligence that is combined with the material of science which will be studied. The methods used are intended to encourage the student interests. The application of multiple intelligences can be applied in science learning with a method that is very varied and diverse. Thus, a teacher must have the motivation and professional skills in teaching science to the students.

Key words: *Optimization, Multiple Intelligences, Science Learning*

A. INTRODUCTION

In the process of education surely a teacher f nds many things related to the problems of their students. There is a very *extrovert* students even there is a very *introvert* students. *Extrovert* students refer to the students who have exceptional character which this condition can be categorized as hyper-active child who is not close to the outside world, while *introvert* students are the students who are close to the situation around them so that the teacher should be able to open the students' nature in order the *transfer of knowledge* can be run well as the expectation of teacher. However, in this the situation the teachers are required to have a role in the understanding of the characters which belong to the students themselves. Hence, the learning process here means the students understand the teachers who give understanding to them in order the process of knowledge transfer can reach an optimal point.

Based on the existing problems can be drawn a conclusion that learning style of each student has diversity or plural. Some are happy with the way by learning to music, drama, or even by using a method of self actualization. Considering from the variety of learning methods can be obtained the result of analyses that every student has various intelligences (multiple intelligences). The various characters and natures and the different brain in receiving stimulants are a challenge for a

1 Lecturer of PGMI majors, Faculty of Tarbiyah Science and Teachership UIN Sunan Kalijaga Yogyakarta

teacher to be able to provide their knowledge in different ways. Therefore, the quality school is a school which assumes that there is no stupid student and there is no teacher who cannot teach.

One of strategies that can be used by teachers to optimize multiple intelligences belongs to the students is to use science learning as a pathway to provide a transfer of knowledge. The science learning is integrated with the learning material presented to provide optimal understanding to the students, for instance by throwing a ball or playing to open the bottles, where learning science can be found here. Throwing the ball is a physical science lesson that applies the theory of gravity, and then in opening the bottles is applied the theory of how to use a lever.

B. MULTIPLE INTELLEGENCES

Intelligence is not fxed. Intelligence is like the ability or skill that can be cultivated and developed. Intelligence is the ability to solve a problem, the ability to create new problems to be solved, the ability to create something or offer a service that is a valuable in a culture. In this case, Gardner states that:

> *An intelligence entails the ability to solve problems or fashion products that are of consequence in a particular cultural setting or community. The problem solving skill allows one to approach a situation in which a goal is to be obtained and to locate the appropriate route to that goal*.[2]

Furthermore, another opinion states that the theory of multiple intelligences is the highest validation of the idea that individual differences are important. The application in education is very dependent on recognition, acknowledgment, and appreciation for each or the various ways of students (learners) learning, besides recognition, acknowledgment, and appreciation for each interests and talents of individual learner.[3]

Gardner also states that there are seven intelligences that can be used in learning, namely: 1) linguistic intelligence (related to language), 2) logical-mathematical intelligence (related to mathematical and logic reasoning), 3) visual-spatial intelligence (relating to space and pictures), 4) musical intelligence (pertaining to music, rhythm, and sound or voice), 5) bodily-kinesthetic intelligence (relating to the body and gestures), 6) interpersonal intelligence (related to interpersonal relationships, social), 7) intrapersonal intelligence (associated with things that are very personal). [4]

The seven intelligences in the multiple intelligences can be described as belowed:

1. Linguistic intelligence

   Linguistic intelligence is the ability to use words effectively, both in speaking and in writing. This intelligence includes sensitivity to the meaning of words, word order, sound, rhythm and intonation of words that are pronounced. It also includes the ability to understand the power of words in the altered state of mind and to convey the information.

2. Logical-Mathematical Intelligence

   Logical mathematical intelligence is the ability of someone in problem solving. Someone will be able to fgure out and put together a solution (exit) with a logical sequence (sense). Moreover, he/she likes numerals, sequence, logic and coherence. Further he/she understands this system and capable of doing the inductive and deductive thinking. Deductive thinking process means

2 Julia Jasmine. *Mengajar dengan Metode Multiple intelligences Implementasi Multiple intelligences.* (Bandung: Nuansa, 2007). pg. 35.

3 *Ibid*. *Mengajar dengan Metode Multiple intelligences Implementasi Multiple intelligences.* pg. 11.

4 Gardner, Howard. *Multiple intelligences* (Batam Centre :Interaksara, 2003). pg. 23.

the way of thinking from the big things to the small things. Inductive thinking process means the way of thinking from small things to big things.

3. Visual and Spatial Intelligence

   Visual and spatial intelligence is the ability to see and observe the visual and spatial world accurately (carefully). Visual means picture. While spatial relates to the space or the place. This intelligence involves awareness of color, line, shape, space, size and also the relationship among these elements. This intelligence also involves the ability to see the object from different angles.

4. Musical Intelligence

   A musical intelligence is the ability to enjoy the music, observe, distinguish, fabricate, form and express musical forms. This intelligence includes sensitivity to rhythm, melody and timbre of the music which is being heard. Music has a profound influence on the development of math and science abilities in a person.

   Based on the results of researches in seventeen countries on the ability of students aged 14 years in the fields of sciences are found that children from the Netherlands, Japan, and Hungary have the highest achievement in the world. When they are examined more deeply, the countries incorporate this element into their curriculum. In addition, the music can also create an atmosphere that is relaxed yet alert, can encourage enthusiasm, stimulate creativity, sensitivity and ability to think. Learning by using the right music will greatly help us in improving memory.

5. Interpersonal intelligence

   An interpersonal intelligence is the ability to observe and understand the meaning, motivation and feelings of others. It is also sensitive to the expression of the face, voice and body movements of others, and he/she is able to respond effectively in communicating. This intelligence also is able to get into the other person, understand the world of others, understand the views, understand the attitudes of others and generally he/she is able to lead the group.

6. Intrapersonal intelligence

   Intrapersonal intelligence is the ability of someone relates to the consciousness and self knowledge. He/she is able to understand his/her own strengths and weaknesses. He/she is also able to motivate his/herself and to do self-discipline. Someone who has this intelligence is very appreciative to the values (rules) of ethical, and moral.

7. Kinesthetic intelligence

   A kinesthetic intelligence is the ability to use body skillfully to express ideas, thoughts and feelings. This intelligence also includes the physical skills in the areas of coordination, balance, endurance, strength, flexibility and speed. [5]

   The teachers realize that every child has all of the intelligences, but they have different levels. Teaching overall intelligences will ensure them to be superior; for example, in the musical intelligence will give them the opportunity to learn using that intelligence. [6]

The concept of multiple intelligences is a critique to psychometric which is commonly used to measure human intelligence based solely on the strength of the human left brains. During the measurement of intelligence is only on the quantitative aspects (logical) and verbal. Humans who have low scores based on these tests are considered to have a low intelligence level or called low IQ

5 Riyadi Mubdi Zhaahir. *Multiple Inteligences.* Accesed on 25 November 2013. http://www.wikimu.com/news/displaynews.aspx?id=2108.

6 Johnson, Elaine.B. *Contextual Teaching and Learning*. (Bandung: Mizan, 2007). pg. 67.

(Intelligence Quotion). Measurement of intelligence with an IQ in the development is considered unrepresentative, because there are a lot of facts that man with a low IQ is more successful in life than a man who have high IQ level. People with a mediocre IQ is found to have great competence in specific areas, such as painting professional, sport professional, singing professional, and others. The strengths which drive the multiple intelligences tests are the tests which are usually done inconsistently on well-established major scientific theories. Multiple intelligences is not a domain or a discipline. The concept of multiple intelligences is a new type of construct, but the multiple intelligences is not similar to the style or learning style, cognitive style, or style of work.

Multiple intelligences as a new concept impact on the design and curriculum of the school. The theory of multiple intelligences suggests that there are some human intelligence which are relatively independent and can be combined in a multiplicity way in order to suit each individual and culture. The independence of each type of intelligence can be shown in the case those who cannot master mathematics, but they can produce or understand the beauty of a painting or a song composition quickly. Another case, a person who cannot have verbal and spatial ability, but he/she is very smart in motion or kinesthetic. In human beings there may be one, two, three or more types of intelligences that stand out. This type of intelligence may further relate to learning style and life style.

C. OPTIMIZATION OF MULTIPLE INTELLIGENCES THROUGH SCIENCE LEARNING

Related to the learning process, Winkel opines that learning is a mental or psychic activity, which takes place in the environmental and active interactions that result a number of changes in the understanding of knowledge, skills and attitude values, and the change is relatively constant and impressive. Correspondingly, the local design is needed to maintain and direct the students to the stage that does not stagnate on the knowledge about where they live so that they better understand and know the available resources around them that have the potential to be empowered.[7]

In the optimization process of multiple intelligences there are some things that should be known in advance by the teachers. One of them is they are required to have a perspective that no dumb students. The statement shows that there is no fool students, however why there are many students have less academic and character values or lower than expected.

According to Munif Chatib, the theory of multiple intelligences offers fairly fundamental changes in the assessment as the output of a learning process. This theory suggests a system which does not rely on tests that are based on the formal score, but the tests are more based on the authentic assessment that refers to specific criteria by using the test that have a specific reference point and *ipsative* (a test that compares the student achievement today with the previous performance). Based on this, the students' potential development will be attached and make the level of consciousness and their potential is more immune to any changes that occur.[8]

The problem arises because the teaching way of teachers is still far from expectations. They are still using monotonous conventional method in teaching –learning process, and it is too easy to be guessed by the students who are mostly bored with such methods. Therefore, in order to optimize the process of multiple intelligences goes well, of course, the teachers should also strive to provide the best solution through a new breakthrough innovative and creative teaching methods.

7 Winkel, W.S. *Psikologi Pengajaran*. (Yogyakarta: Media Abadin, 1999). pg. 59
8 Munif Chatib. *Sekolahnya Manusia* (Bandung: Kaifa, 2011). pg. 155

Science learning is one of the subjects that can be used as an example in the optimization of multiple intelligences. For instance, in a physics class, the material is about levers. There is a super hyper - active student which is very difficult to set up. Then the teacher as a parent and teacher at the school of course is obliged to seek a solution to the problem by finding out what he/she likes and what can encourage his/her to something positive in the classroom. If the student has a high kinesthetic intelligence thus the usual methods cannot accommodate the intelligence, so give his/her a breakthrough method, for example, is to give an active role to the student as an object of lever material or tool holder so that he/she would have a sense of responsible and able to follow the lesson like the other students.

Based on the cases above can be known that the optimization process of multiple intelligences consists of several factors such as the internal motivation of teachers, the appropriate teaching methods, the equal treatment of all students, and of course the positive thoughts that no students are stupid. Here is the optimization of multiple intelligences through science learning for students of SD/MI: [9]

1. Science learning process that develops verbal linguistic intelligence

   The learning process which develops verbal linguistic intelligence can stimulate the development of multiple intelligences in each subject including science, or *IPA*. Some ways to do in learning to develop verbal linguistic intelligence in science learning is to listening to the material that will be covered from the cassette or from information that is directly delivered by teachers, classroom discussion, making an observation reports, conducting interviews, finding the materials to complete the task, writing scientific papers and so on.

2. Science Learning which develops mathematical-logic intelligence

   In science learning, the noteworthy things in teaching is the application of basic science concepts appropriately in making decisions every day and help the students recognize the relationship between science and technology in society. The application of mathematical-logic intelligence in science learning can be in several ways, namely:

   a. The scientific method

      The scientific method is a way to find scientific products trough step-by-step logically and mathematically. The general process of empirical scientific method is: finding a problem, formulating a hypothesis or provisional estimates, testing the hypotheses by performing experiments, drawing conclusions, and testing conclusions.

   b. Thinking scientifically based on curriculum

   c. Deductive logic

      The deductive logic is a way of thinking by outlining the general concept to a specific concept. For example:

      i. Syllogism is an argument that is composed from the rationale and the conclusion.

      ii. Venn diagram uses complementary circle to compare a bunch of information.

   d. Inductive logic

      Inductive logic is a way of thinking of someone by considering special facts

9 Sri Wahyu Widyaningsih. *Multiple Intelegensi Dalam Pembelajaran* http://sriwahyuwidyaningsih.blogspot.com/2012/01/multiple-intelegensi-dalam-pembelajaran.html accesed on 1 December 2013

general conclusion analogically.

e. Improving learning and thinking

To improve the students' thinking, teachers use instructional media in learning.

f. The process of thinking mathematically

Mathematics is the subjects which have specifcally abstract thinking and hard, so the children are not interested in. For the teacher can construct the teaching-learning with pattern images, graphics, and codes to cause them curious.

g. Working with numbers

Students who like the thoroughness will discover the pleasure of working with numbers such as measurements, opportunities, and problems in the form of a story.

h. Technology that increases the mathematical-logical intelligence

Students can learn effectively by using interested software.

3. The learning process which develops a music intelligence

Music has a close connection with someone's emotional, namely:

a. Providing a friendly atmosphere when the student enters the room.
b. Offering the ease effects after doing physical activity.
c. Smoothing the transition between classes.
d. Generating the energy back which has been falling down.
e. Reducing the stress.
f. Creating a positive atmosphere in the school.

The methods that can be done to develop musical intelligence at school for instance: a) install a soft and universal music background in the school, b) through the learning of each feld of study in the schools for instance creating the theme songs of the material which is being taught, c) learning processes that develop kinesthetic intelligence.

There are various tactile-kinesthetic activities that aims to enhance the student learning in the age of SD/MI (elementary school), namely:

a. Physical environment: classroom area, in classroom planning, the teacher makes the room where can make sense of the students became excited.
b. Drama: theater, role play, creative play, simulation (a state that mimics) the real situation.
c. Creative motion: understanding the physical knowledge, introducing creative movement activities, applying the basic skills of creative movement, creating the content that is more focused on the movement activities.
d. Dances: dance sections, a series of learning through dance.
e. Playing instruments: task cards, task card puzzle, drawing the additional tools, making signs for classrooms.
f. Classroom game: Beast hunted (scavengers) large foor games, the games which respond totally physical motion, repeating the game in general.
g. Physical Education: the characteristics of a physical teacher, educational adventure, spider web, a pyramid of ten people, adventures of ten people.

h. Training opportunities

i. A trip to the wild

4. The learning process which develops visual-spatial intelligence

This learning process is a process that develops the perceptual abilities. Imagination and esthetical in the book Mc.Kim *Experience in Visual Thinking* identified three broad components of visual depiction; they are the external picture that we perceive, the internal picture that we dream or we imagine, the picture that we create through irregular images.

5. The learning process which develops interpersonal intelligence

To build a positive interpersonal environment, an effective group is needed. The criteria are: a) warm and open classroom environment, b) teachers and students together make rules and sanctions based on humanity, c) the interdependence of the learning process, means an active role and contribution from all students, d) the learning is to aim learning from the curriculum, from friends, and from experiences. e) Duties and responsibilities are divided equally, so that each member of the class feels important in the classroom.

5. The learning process which develops intrapersonal intelligence

The development of intrapersonal intelligence can be done through several things including: a) establishing an environment to develop self-knowledge, b) supporting self esteem, c) composing and achieving the goals, d) thinking skills, e) emotional skills education in the classroom, f) writing journal, g) knowing themselves through the others, h) reflecting astonishment and life purpose, i) self-directed learning, j) technology that enhances the interpersonal intelligence.

6. The learning process that develops naturalism intelligence

This learning process is a process that develops the naturalism students ability: a) organizing the school environment to be green and lush, b) when studying the materials which are related to the classification of plants, ecosystems, environmental pollution, invites the students directly to the nature, c) the school provides the teaching tools such as the torso and the chart of the human body organs, d) applying the lessons of agriculture or fsheries that are adjusted to the local conditions respectively, e) the school develops the learning processes that can arise the students' concern for the environment.

7. The learning process which develops the emotional intelligence

The emotional learning can improve cognitive learning system, whereby an emotional brain involved in logical reasoning learning as strong as the brain thinks. The things that can be implemented by teachers in developing emotional intelligence are as followed: a) the teacher should begin the lesson with a gentle demeanor, by gradually increasing the enthusiasm, b) creating an atmosphere as desired by students, c) teachers can move students slowly to the social circumstances which has different emotional, d) when teaching. the teacher should develop a sense of humor to reduce the tension that may arise due to lack harmony between teachers and students.

8. The learning process which develops the spiritual intelligence

The learning process should expand the scope of the Quranic verses and the meanings contained in it, so it will be deeply rooted in the soul and mind of students by drawing lessons from the material learning which is presented to students. Material implications of science learning in developing spiritual intelligence are very much, as an example about the solar system. In these materials the students are required to master the sun

as a star, the sun as the center of the solar system, the earth's rotation and revolution, 9 kinds of planetary movement and so on. At the end of the lesson the teacher invites students to observe the regularity of motion in the solar system and connect it to the letter *Yasin* verse 37 to verse 40 which means:

"And as a sign of the greatness of Allah for them is the night, we remove the day from the night, then while they were in the dark. And the sun runs its place circulation. Such is the command of Allah the Almighty, the All-Knowing. And We decreed place of the moon, so (after he came to the last passage) back to the old form tanndan. It is not possible for the sun to overtake the moon and the night could not outstrip the day. Each orbits on geostationary orbit".[10]

D. CONCLUSION

If the optimization process of multiple intelligences through science learning want to run optimally, of course the teachers as actors behind the transfer of knowledge have to start with a positive stigma against the ability of the students. The multiple intelligences are a diverse distinction which is owned by the students considering to their basic abilities differently.

In this case the students have different abilities as stated by Howard Gardner that there are seven types of intelligences include Linguistic intelligence, Logical-Mathematical, Visual-Spatial, Intrapersonal, Interpersonal, Musical, and Kinesthetic Intelligence. From the seven intelligences that exist in their students need different approaches so that the teachers are required to have a creative and innovative teaching in order to do not make the students become bored.

The supporting factors of optimization multiple intelligences through science learning is started from the teachers who are required to have a sense of caring and sharing the equal treatment for all students, because the teacher basically is an organism of educational management which has the function as the students' entrance academic. Hence, the teachers are also required to have the perception that no students are stupid and there is no teacher who cannot teach. Starting from such a perception, it will create a sense of high confidence for teachers on how to teach their students.

Integration between science and multiple intelligences can be started by inserting materials of science to a diverse student learning ability, for instance through a role play-it is a kinesthetic intelligence which is combined with science material to be studied. The methods used are intended to foster the student interests.

E. SUGGESTION

Related to the development of students skill, the teachers are required to have the appropriate soft skills to the development of education which is growing at present, besides the teachers refers to a rule of the education system (curriculum). Preliminary understanding to a curriculum culture can be a solution when it is done optimally. In curriculum 2013, there is a solution that the genetic is almost similar to Multiple Intelligences methods. Here, the role of the teacher as an actor behind the successful students is necessary to be tested due to every student has different capabilities in capturing a subject matter, so teachers need to make new methods in action as a teaching materials to raise students' motivation in learning in order to do not make them feel bored with monotonous method.

The application of multiple intelligences which is applied to the materials of science can be

10 Surat Yassin. Ayat 37 – 40. Kementerian Agama RI.

highly variable and various methods, considering to the science as a discipline which has many branches such as: Physics, Biology, Chemistry, and so forth. Thus, the focus of the science teachers as well as the science learners should have an extra ordinary motivation and ability in teaching science to the students.

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THE REFORM OF LEARNING SCIENCE THROUGH MULTIPLE INTELEGENT PARADIGM TO AGAINST CURRICULUM IMPLEMENTATION 2013 IN SD/MI

(Considered From The Dynamics Between Teacher And Student)

Written by:
Dian Noviar
Email: diannoviar84@yahoo.co.id

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ABSTRACT

Science education quality improvement efforts in Indonesia is not enough by changed the curriculum. The curriculum change has to be followed paradigm shift in learning science, from teaching paradigm to the learning paradigm. The learning paradigm can be realized by either integrating the knowledge, senses, environment, curriculum, and the sense of mind (intelligence variety) owned by each student. Comprehensively it can maximize the diverse capabilities of multiple Intelligence owned science students in the learning process. By using the paradigm of learning -based multiple Intelligence and scientifc approach to the curriculum in 2013, students are guided to reconstruct the knowledge that needs to be capable by observes the students' characteristics of various types of intelligences. Learning of science should be meaningful for them. It means the students, in learning science, should be able to see that science is important for them to face life in the future. The students need to be exposed to the problems which is realistic and contextual in purpose it can not be imagined by students and starting from what have been experienced and known by students. Therefore, in line with the pillars of the curriculum in 2013 that is productive, creative, innovative, and affective then the teacher must understand the characteristics of students' diverse capabilities so that science can be understood well by students not only as the level of knowledge.

Key words : *Reform, Learning science, Paradigm, Learning, Multiple Intelligence.*

A. Introduction

School is a learning place for students to prepare themselves to face the future. The future is full of challenges and different from their future which is learned in previously years in school. The rapid development of technology and science making a change the condition from year to year. About 10-15 years ago, globalization is still a discourse, but now has become a reality. The need for mastery of science increased. Relational understanding in learning science more important and meaningful than instrumental understanding.

Because of rapidly changing circumstances, the school should be able to adjust toward the change so that the graduates are not left behind and get into trouble later in creating jobs for

themselves and for others. As a consequence, curriculum in school have to adjust to the demands of the times, especially the advancement of science, technology and information. Then it is natural if the curriculum change regularly.

However, the curriculum changes are not enough. Change the curriculum does not change the way of thinking itself. Curriculum changes are not followed in practice by a change in the learning and assessment process which is used. Since from the beginning, the teaching paradigm is used in learning process[1]. Teachers actively transferring knowledge to the students' mind and students passively receive it. Understanding which is achieved by the students is only instrumental understanding. Students complete a question of physics and chemistry merely using the formula without understanding why using these formulas or why students use certain strategies. Students use these formulas because it is what the teacher taught. Often students do not dare to use their own way, afraid of being incompatible with what is taught by the teacher. Students' way of thinking is simply an imitation of the teacher's way of thinking. Students are no longer as themselves, but they become a small robot in their way of thinking.

Similarly in the process of learning, the way how to collect student's learning result data do not change. The assessment which is used always a kind of objective tests with its variations. Even, learning process ultimately affected by the assessment which is used. Learning is for testing. The important thing is to pass the test and get a high score. Finally, schools are racing to pursue high score of the UN, so that all efforts of learning is directed to make students able to answer the questions of National Exam or questions for college entrance exam. Though National Exam is not a measure whether someone understands toward what they have been learned. Since there is no change in theleaning paradigm of science and its evaluation then the quality of the graduates of our schools become low. Passive learning habits from elementary through high school bring into college. Is it not strange, when students were asked about the concepts they have learned in school they did not want to answer (probably because they could not answer, possibly due to fear of being wrong or because they are not sure of the answer).

1. The need for a change paradigm in learning science universally

To face the challenges of the present time, curriculum which is going on needs to be changed. The purpose of learning is not just to know, but the student can apply and able to do what they known. If during the learning process is more geared to make students knowing something (facts, concepts, procedures) by transferring knowledge into the student's mind, then it is not enough anymore.

Science deals with the way how to find out about nature systematically, so that science is not only for mastery the knowledge collection in the form of facts, concepts, or principles, but also a process of discovery. Science education is expected to be a vehicle for students to learn about themselves and the environment, as well as prospects for further development in applying them in everyday life. The learning process emphasizes to provide direct experience to develop competence in order to explore and understand the nature scientifically. Science education is directed to do and inquiry so it can help learners to gain a deeper understanding of the nature around. Science is scientific knowledge, it is knowledge that has undergone the test of truth through the scientific method, with the characteristics: objective, methodical, systematic, universal, and tentative[2].

Basically science is watch over in terms of products, processes and the development of attitude.

1 Marpaung. 1998. Dan Mengajar ke Belajar Matematika. Makalah yang disajikan pada Seminar Rumpun MIPA, USD, Paingan, Yogyakarta. 10 Juni 1998

2 Depdiknas. 2007. Panduan pengembangan pembelajaran IPA terpadu SMP atau MTS. Jakarta. www. puskur. Net

These three dimensions are interrelated. This means that the learning process of science should contain the three dimensional science. Similarly, Carin and Sund defnes science as a systematic knowledge and structured regularly, generally accepted (universal), and in the term of data set of observation and experimental result[3]. According to Collette and Chiappetta, essentially science composed of three dimensions, they are:

> 1.Science as a way of thinking such as human is enormous curiosity, imagination, and desire to understand phenomena, and then they possess attitudes, beliefs, and values that motivate them to answer questions and solve problems; (b) Science as a way of investigating such as human is desire to understand nature and to discover its laws must study objects and events with manner experimentation, observation, hypotheses, tested and validated; (c) Science as a body of knowledge from the scientifc disciplines represents the creative products of human invention such as the facts, concepts, principles, laws, theories, and models specifc for the content science[4].

According to Carin and Sund, science has three essential elements. They are:

> (a) *Processes or methods as ways of investigating problems, observing such as making hypotheses, designing experiments, evaluating data and measuring; (b) Products such as the facts, principles, laws, theories; (c) Human attitudes as beliefs, values, opinions*[5].

Referring to the notion of science, then science is essentially composed of four dimensions:

1. Attitudes: curiosity toward the object, nature phenomenon, living creature, and causal relation which is rise new problem that can be solved through the proper procedures.
2. Process: The procedure of solving problems through scientifc method; scientifc method are arranging hypothesis, design of experiments or trials, evaluation, measurement, and drawing the conclusion.
3. Product: it contains facts, principle, theory, and law.
4. Application: the application of scientifc method and concept of science in everyday life.

Students have to understand what they are learned and able to use that knowledge to solve problems, draw conclusions logically, well communicate, and able to see the connection between a concept with other concepts. That competence which is expected from the students who is studying science. Curriculum based on competency intended in order that students who learn science try to seek that competence. Despite, even it is a good intentions, if not accompanied by a willingness to change the way of thinking, then the purpose will not be achieved as we have experienced so far. There is needs a new reform in learning science, at least it includes three aspect:

1. The change of learning paradigm from teaching paradigm to learning paradigm.
2. The change of evaluation paradigm, from evaluation that relies on standardized test (objective test) as type of assessment to the evaluation which based on variety of assessment.
3. The change of paradigm which emphasizes ratio to the paradigm which is blend to the various type of intelligence that includes rational intelligence, emotional, and spiritual, or according to Gardner (in Bellanca, et.al.) are classifed into:
    1. Intelligence logical/mathematical

3 Sulistyorini. 2007. Pembelajaran IPA sekolah dasar. Semarang: Universitas Negeri Semarang.

4 Collette dan Chiappetta. 1994. Collette, A. T., & Chiappetta, E. L. (1994). Science instruction in the middle and secondary schools. New York: Macmillan Publishing Company.

5 Carin dan Sund. 1989. Teaching science through discovery. London: Merrill Publishing Company., A Bell., & Howell Information Company.

2. Intelligence verbal/linguistic
3. Intelligence musical/rhythmic
4. Intelligence motor/kinesthetic
5. Intelligence visual/spatial
6. Interpersonal intelligence
7. Intrapersonal intelligence
8. Naturalistic intelligence[6].

For example, learning science in elementary school, it is developed the concept of SANI (polite, open and communicative) as a modification of RANI (friendly, open and communicative). Friendly is not equivalent with courtesy. Friendly has connotation on the way how to speak while courtesy has connotations in term deeds. People who act friendly is not consider to have courtesy, because a lot of people who speak smoothly, it sound polite but the actions are not same as what is said. In contrary, courtesy describe the actions of people who are generally friendly. If the child wants to be a well-mannered, they should be treated in a dignified manner not only required them in order to be well-mannered. In this case, adults who need to understand the characteristic of the children, it is not the children who should be demanded to behave and understand adults. In other words, an adult should be able to manage their emotions when they are dealing with a child, according to their judgment, that deviate from the general rule and adults can guide children to be open minded (think rationally) in communicative way so it can be accepted by child.

4. The problems that might appear on Teachers and Students

It is proper that in starting something new will show-up problems. The problem is whether we want to solve the problem. Willpower is not the same as desire. But the will can not arise due to several constraints such as:

1. Students which is only being passive toward the changes around them especially development of the science that is increase rapidly, it is caused during their learning of science education they only learn theory so that students are not able to respond the problems which is arise especially to look for solution of these problems.
2. Students are still dependent to the teacher, so they are not independent in constructing knowledge. Their knowledge only stock-still to the information which is provided by the teacher.
3. Teachers feel they have received additional burden without additional incentive. It can be understood because teachers have been long-serving in education without adequate remuneration.
4. The most difficult is to change habits, moreover if the habit is considered enough or good.
5. Reticence. There is desire to change but feel that have a trouble to do it and do not want to share to others, especially to the boss.
6. Stay still attitude until there is instruction. This thought pattern become a culture, so that people no longer creative. Moreover, if the desire to do a reform has no appreciated, it is inhibited with various reason and rules.
7. The lack commitment from the top to improve the quality of education and respect the teachers truly.
8. Unfamiliar synergy. Interaction, collaboration, and reflection are a way to overcome the problem.

6 Bellanca, et.al., 1997. Multiple Assesment for Multiple Intelegences. Arlington Heights: IRI Skylight.

5. Evaluation between teacher and student

Knowledge called science can not be transfered from someone who knows to people who are learning. In learning science, teachers should not move knowledge from their mind to students' mind through lectures (taught) but help students to construct knowledge in their mind. Teacher need to create condition that enable students to do constraction process, for example: students' learning time is no longer controlled by the teacher but by the students themselves. The subject matter is no longer atomistic but holistic. Teachers help student in order that something potential become actual. Another way is through interaction and discussion with friends which is led bt teacher. Someone interested in learning something if they could see something which is learned can be used to fulfll their needs, in other words useful to them. Therefore, learning science has to be meaningful, it means students see that science is important for their future because it can help them to solve problems they faced. In this way students begin learning from problem that are realistic, means it can be imagined by students, or it has connection with the real world. This kind of learning approach called as contextual or realistic approach. By this kind of learning opportunity for the students to gain relational understanding become larger. Paradigm as basis of learning is called *learning paradigm*.

This change is not easy todo, because it is difficult to change habits that have been carried out for years. Moreover, if what it has been doing become a belief. Altough it is difficult, that change is needed in order that we can catch up with the other nation. The reform by change paradigm of learning science need to held now together with curriculum change that will come. Because, if not then the intention of the curriculum will not be achieved.

6. The science essence in teacher's and student's perspective

The essence of science needs a critical study. This will certainly bring a consequence to other people persepctive in responding and comprehending the essence of science. The consequence of people perspective (teachers) to what is a science in a narrow scope will bring a color to a study applied when a teacher performs an activity with children in a science study. Actually a more completed understanding in describing science, doesn't certainly perceive a science as an imaginary knowledge bank. Before the curriculum based on competence is applied, teachers consider sciences only in mind and the characteristic of sciences theoretic so the students only imagine every knowledge about science in their mind without consistency or application after they study sciences. Finally teachers and students perceive cyinically to sciences whereas the sciences is very important to the future of students. Therefore, it is necessary to start it by the teacher first to understand science definition in wider perspective. Several definition of sicience are in the following:

1. Science as a bank of knowlege
2. Science as an exploration process
3. Science as a bank of value
4. Science as a way to know the world
5. Science as a social institution
6. Science as a result of human construction
7. Science as a daily activity

The principle of lecturing process is lecturing, whereas lecturing is a change process of individual behavior that is relatively persistent as a result of experience. Therefore, study is an exertion of condusive environment in order to the study process can grow and develop. Because

the study characteristic is engineer, the process of preparation involves a purpose. In sociological perspective, study process is a process of student preparation in order to be able to have their life in a society. School is social system that is a miniature of wide society. Therefore, study process cannot be separated from a socialiszation process and what are studied in the school should be re fections of real condition around the students that can be exploited or implemented in a society[7].

Study is an arranged combination involving human unsures, material unsures, facility unsure, equipment unsures, and procedure unsures that are in fuencing each goal of study[8]. In a study, there are four steps: a) a preparation as a surface of interest, b) delivery in the frst meeting with new knowledge and new skill, c) a training of new knowlege and skill intregration, d) a result performance as an application of new knowlege and skill to a real condition. Science is a *body of knowledge* that has been examined, that can be expressed in the form of general principle[9]. David states that:

> Science is something that is discovered, some experimenting about the world around us, experimenting about things that will help us, facts about nature, what a scientist works on, facts about the earth and atmosphere, friction and tests about nature, trying to solve problems, the world's history, nature of the world, discovering new things, about the facts of the world, making things easier around home, chemicals and research[10].

It means science is a process of fnding something by some experiments about worls is round, natural fact, earth, and atmosphere, trying to resolve natural problem, fnding something new about world fact, making something ease for environment and research.

Science is defned as a knowledge that is gotten through data collection by using an experiment, observation, and conclusion to produce an explanation about a believable indication. There are three skills in sciences tha are: a) a skill to know what is observed, b) a skill to predict what doesn't happen yet, and a skill to examine the follow-up of experiment result, c) scientifc development. An activity of science study includes a skill development in giving a question, fnding an answer, understanding an answer, completing an answer about "what", "why", and "how" about natural tendency or natural characteristic through sistematic ways that will be applied in environment and technology. Those activities are known as scientifc activity based on scientifc method[11].

In studying science, students are directed to prove their prediction result by using theory through experiment by using scientifc method. Science education in schools are expected to be able to be a tool for students to study theirself and their environment around, and also a prospect of following development in applying them in daily life, based on scientifc method. Science study focused on direct experience to develop competences in order to the students are able to understand enviroment around through the process of "looking for knowledge" and "acting". This will help students to get a deeper understanding. Therefore, science study in schools should:

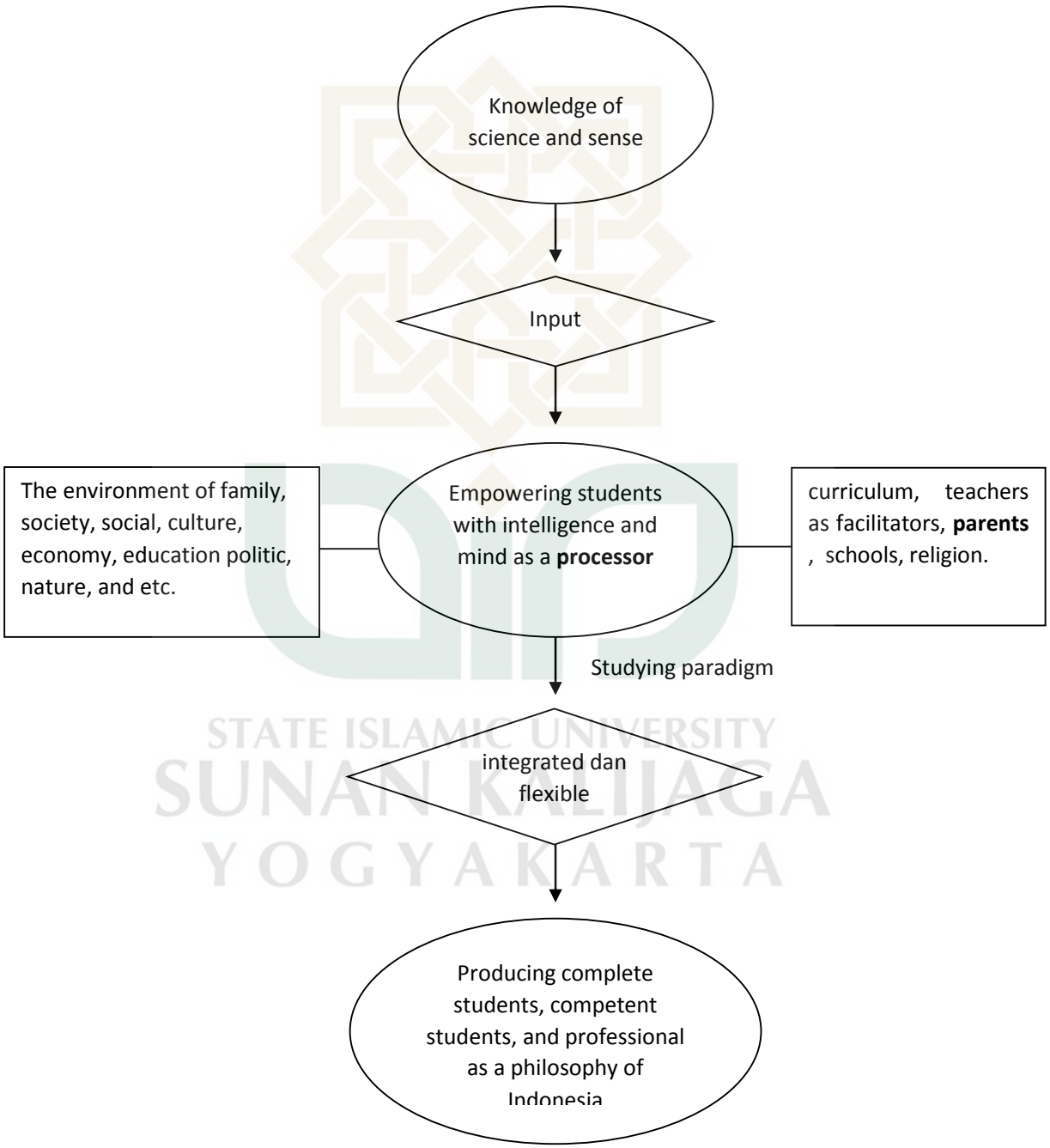
a. give experiences to students in order to be competent to do measuring many physical scales.
b. encourage students about the importance of emphirical observation in examining a scientifc statement (hypothesis). This hypothesis is from an observation toward daily occurences needing scientifc provement.

7 Depdiknas. 2003. Standar penilaian buku pelajaran sains. Jakarta.
8 Oemar. 1995. Kurikulum dan pembelajaran. Jakarta: Bumi Aksara.
9 Meier. 2002. Panduan kreatif dan efektif merancang program pendidikan dan pelatihan. (Terjemahan Rahmani Astuti). New York: McGraw-Hill. (Buku asli diterbitkan tahun 2000).
10 David. 1974. Teaching science in elementary and middle schools. America: McKay Company, Inc.
11 Depdiknas. 2007. Panduan pengembangan pembelajaran IPA terpadu SMP atau MTS. Jakarta. www. puskur. Net

c. train to think quantitatively that supports mathematic studying process, that is as an application of mathematics to real problems relating to natural phenomena.

d. introduce technology world through creative activity in an activity of arranging and producing simple tools or an explanation about many tendencies and the potency of science in answering many problems.

8. The solution of science education reformation toward students and teachers



Scheme 1. Positions of students and teachers in a school

Actually a reformation of education begins from out intention and goal to complete an education cohesively. Many factors extremely influencing education developments now when the

case becomes a focus in the development of education. Actually students have a potential coming from theirself or from environment around. Actually, all extremely in f uence student empowering. By the change of curriculum, education in schools doesn't precisely create a good education system but confussion does. If the change of curiculum is followed by professionality and competency had, teachers are not doubted.

teacher management ⟶ The quality of teachers increase ⟶ the quality of teacher works increase ⟶ the quality of students increase

a way to think relevantly with a purpose to education importance without private or instutional unsures in order to those students become the main focus needing to be noticed. Empowering students to study from their experience "study how to study" to problems occured with the result that the way of intelligent and mind can function as usual. In empowering s teacher position is only as a facilitator in study process in schools, so demanding students to construct their knowledge to be more impressing but still follow the procedures of science study delivered by teachers. Science study is an active process and extremely in f uenced by what will be studied by students. From this perspective the result of lecturing doesn't depend on what teachers explain, but is in f uenced by interaction result among some information gotten by by them from the previous environment around the students with the response of students to information given by teachers. Science is received by students through the f ve sense that then is interpreted in mind and intelligence of students, teachers as facilitators by harmonizing aspects around like society, parents, social culture, religion and other environment to be a complete union whithout discriminating one of those aspects because their involvement extremely determines the succes of student study and teacher's role completely. Ignoring one of those aspects will make a continual fault, in other words meeting point of attainment will not be realized. Because in participation to create students that completely competent, professional, like our country phylosophy and also teachers that are really competent and professional in their f eld it is necessary to notice a reality show and teaching paradigm becomes studying paradigm that the characteristic is integrated (unite) and f exible (graciousness).

9. Closing

Fixing the quality of science education in Indonesia not only needs curiculum changes but also more. The changes of curriculum have to be followed by the change of paradigm in science study, that is the paradigm of teaching to the paradigm of studying. By using the paradigm of studying, students are guided to reconstruct knowledge needing to be mastered. The science educatin have to be meaningful for them. It means that students in science study have to be able to the importance of science for them to face their future. Therefore, students need to be faced to real and contextual problems or in other words, the problem can be imagined by students and begun from what they have and know.

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HOLISTIC-INTEGRALISTIC TEACHER

"The Necessity And The Needs For Multiple Intelligences-Based Learning Process In The Islamic Elementary School"

Written by:
Andi Prastowo
Lecturer in Education of Islamic Elementary School Teacher
Faculty of Islamic Education and Teachership
State Islamic University Sunan Kalijaga Yogyakarta
E-mail: anditarbiyah@gmail.com

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ABSTRACT

Howard Gardner's notion of multiple intelligences has brought major changes to the way people in the world view the key to success in life. The view of multiple intelligences offers a richer description of the capabilities and the potential success of a child rather than raw IQ. This view also has a major impact on the rearrangements purpose, process and output for the provision of education, including in Islamic educational institutions in the elementary school level. As a result, many efforts, programs, and activities are compiled by the Islamic elementary school managers to realize the implementation of multiple intelligences-based education. Unfortunately, such a teacher profile which is suitable for the implementation of multiple intelligences-based educations has not been studied in depth. Therefore, this research seeks to explore the concept of teacher in Islamic perspective which is relevant to multiple intelligences-based education. Through literary study with post-structuralism hermeneutic approach, this research seeks to offer an alternative idea about the concept of teacher for learning multiple intelligences-based that is unearthed from the meaning of creativity to the development of classical Islamic concept of the teacher, i.e. mu'allim, murabbiy, mursyid, and mu'addib. The result of this research concludes that an expected professional teacher for Islamic education in Islamic elementary school which is relevant to the Islamic school with multiple intelligence orientation is holistic-integralistic teacher. The teacher has four competencies: intellectual and research capacity, spiritual capacity, moral and ethical capacity, and emotional capacity

Keywords: *multiple intelligences, professional teacher, Islamic Elementary School*

A. INTRODUCTION

The emergence of the theory of multiple intelligences has wide implications on the beliefs and perspectives of people in the world on how to achieve success in life. From this concept, there is a view that to achieve success, there are many ways that can be taken and a lot of different capabilities that can help to achieve that success. IQ tests are not the only determinant of the success in life. In a book entitled *Frames of Mind*, published in 1983, Howard Gardner, the originator of the theory of multiple intelligences, reveals that not only one kind of monolithic intelligence (intelligence quotient) that are important for success in life, but there is a wide spectrum of intelligence (Goleman, 1997: 50-51). Intelligence comes in the form of eight skills: verbal, mathematical, spatial, body-kinesthetic, musical, intrapersonal, interpersonal, and naturalist skill (Santrock, 2007:140-141).

The theory of multiple intelligences has stimulated people to think broadly about what

constitutes a person's intelligence and competence. This theory motivates teachers to develop a program to teach children in different domains. Therefore, as the impact, there will emerge technologies to facilitate intelligence area of the learners, such as the computer development for learning, the use of *touchscreen* display, the development of *Musical Instrument Digital Interface* (MIDI), the use of the *National Geographic Online*, and so on. In addition, it also develops a wide range of learning strategies for each of the eight skills above (Santrock, 2007:146). Moreover, multiple intelligences-based curriculum has been prepared in thousands of schools. Armstrong points out that in thae curriculum, students take a special feld in various subjects involving the eighth intelligences for the real-world skills (e.g. course architecture, the art of planting, the composition of music, yoga, rock collection, or publication) (Armstrong, 2011:178-179).

However, there are some things that are rarely touched in the discussion of the implementation of multiple intelligences in the educational practices in elementary schools and Islamic elementary schools. One of them is about the appropriate profle of Islamic elementary school teacher to emerge the multiple intelligences-based class. It is important to study more depth because the role and the function are very central in the educational process. Saiful Anam discloses that a teacher is the generator that drives teacher's teaching activities. Teacher has a very strategic role in the achievement of educational goals, and becomes one of the determinant factors that determine the level of success of a child in the process of transformation of science and technology, as well as ethical and moral internalization (Anam, 2005:337). The teacher is the mission of the waves in the feld of education as well as an important factor in creating a qualifed and effcient education system (Harsono and Susilo, 2010:24).

In addition, teacher is the central fgure in the feld of education, especially in the Teaching-Learning Process (PBM). Thus, this profession is a special job referred in Article 7 of Law No. 14 Year 2005 about Teacher and Lecturer. It is said that the profession of teacher and lecturer is a special feld of work carried out on the basis of having academic qualifcations and educational background in their respective sectors. Teacher, as a professional trainer is also required to have the qualifcation, competency and certifcation (Harsono and Susilo, 2010:24). Therefore, there is no doubt that the assessment of the teacher profle for multiple intelligences class is very urgent and necessary.

Based on some of the arguments, this research explores a number of classical Islamic concepts of the teacher and the relevance to the theory of multiple intelligences. Some of the problem statements are developed in this research includes: frst, how is the teacher profle for multiple intelligences class? Second, how is the basic concept of professional teacher in the classical Islamic concept? Third, how is the relevance of the concept of professional teacher in the basic education of Islam with the multiple intelligences class? This research is expected to fnd the basic concept of professional profle of Islamic elementary school teacher that is consistent with the demand of the multiple intelligences class.

B. METHOD OF RESEARCH

The method of this research applies the literary research (literature). The approach uses post-positivistic paradigm (qualitative). The analysis uses content analysis technique with post-structuralism hermeneutic approach. It means, this research is directed and conducted by developing the meaning of creativity from classical concepts such as *mu'allim, murabbiy, murshid,* and *mu'addib*. The analysis process, the text or something spoken is deconstructed from the conventional understanding to a new understanding (Muhadjir, 2011:317-318).

Data sources used in this research are books or articles related to the topics in this study. The data of this research come from the thought of the Islamic scholars about the various terms associated with teacher, such as *mu'allim, murabbiy, murshid,* and*, mu'addib* which is contained in various writings both in books, articles, and journals. Besides that, it also learns about the Islamic education scholars thought on professional development of Islamic education teacher.

To perform this study, the procedure of the research, researcher collects the concept of teacher that includes *mu'allim, murabbiy, mursyid,* and*, mu'addib* from a variety of relevant library materials. Start from this first step, it is followed by an intertextual analysis interpretively which is sought to bring *meaning of creativity* of the concept of Islamic education teacher who have been there at the top. After that, the researchers combines the concept of a professional teacher who emerges from the concept *mu'allim, murabbiy, mursyid,* and*, mu'addib* to develop the professionalism of teacher in Islamic education in order to obtain a strong and firm foundation. Lastly, the writer makes abstraction and inference of the concept and its development in a professional teacher of Islamic education. Thus, it can be obtained operational definition of the concept and its development in a professional teacher of Islamic education that can be applied in the practical realm.

C. FINDING AND DISCUSSION

1. Teacher's Profile for Multiple Intelligences Class

The emergence of the theory of multiple intelligences is a new chapter in the education field. This theory explicitly rejects that intellectual intelligence (IQ) is the only factor determining the success of a person's life. Howard Gardner, in his latest book Multiple Intelligences: New Horizon, states that intelligence is bio-psychological construction (Gardner, 2013:49). In his book Frames of Mind (1983), he states that it is not just one kind of monolithic intelligences (intelligence quotient) that is important for success in life, but there is a wide spectrum of intelligence (Goleman, 1997:50-51). Intelligence comes in the form of eight skills: verbal, mathematical, spatial, body-kinesthetic, musical, intrapersonal, interpersonal, and naturalist skill (Santrock, 2007:140-141).

Briefy, each of these skills is elaborated as below (Santrock, 2007:140):

a. Verbal skills: the ability to think in words and to use language to express meaning (author, journalist, speaker).
b. Math skill: the ability to solve mathematical operations (scientists, engineers, accountants).
c. Spatial ability: the ability to think three-dimensional (architects, artists, sailors).
d. Body-kinesthetic skill: the ability to manipulate objects and smart in physical things (surgeons, craftsmen, dancers, athletes).
e. Musical skill: sensitive to the tone, melody, rhythm, and sound (composers, musicians, and sensitive listeners).
f. Intrapersonal skill: the ability to understand themselves and organize their life effectively (theologians, psychologists).
g. Interpersonal skills: the ability to understand and interact effectively with others (exemplary teachers, mental health professionals).
h. Naturalist skill: the ability to observe patterns in the nature and understand natural systems and man-made systems (farmers, botanists, ecologists, soil experts).
i. Existential intelligence: the intelligence to reflect on the most fundamental questions of existence (Gardner, 2013:35), or the ability to put oneself by paying attention to the achievements furthest in the cosmos and the related ability to put oneself by observing patterns in the existential self human and profound experiences (Armstrong, 2013:195).

Spectrum Project is an innovative business conducted by Gardner to test the eight intelligences. Spectrum Project begins with the basic idea that every student has a potential to develop strengths in one or two areas (Santrock, 2007:141). It gives context to see more clearly the strengths and weaknesses of children. As Santrock describes the description below:

> What does the Spectrum Class look like? This class has a lot of materials that can stimulate a variety of intelligences. However, teacher does not try to stimulate intelligence directly by grouping similar activities that are labeled 'spatial', 'verbal', and so on. Teachers use a combination of materials related to the intelligence domain. For example, naturalist students explore and compare the biological specimen, which does not only sense the ability to train students but also a logical analytical capability. In the area of storytelling, the students create an interesting imaginative story and design the plots. Thus, it encourages students to use the linguistic, dramatic, and imaginative ability. In group structuring, for example, students can construct their own models of class and organize photos of students and teacher in the classroom. This area stimulates both spatial and personal skill. Overall, Spectrum class has 12 areas designed to train and improve the multiple intelligences of the students (Santrock, 2007:141).

According to Landa (2000), as cited by Santrock, he believes that the multiple intelligences approach is the best way to teach children because children have different abilities. According to him, this new approach has brought great changes to the role of the teacher. Teacher no longer stands in front of the class and teach the students. By this approach, teacher is the facilitator rather than a commander when the students learn in different learning centers associated with different intelligences. The students participate in cooperative learning groups in the center. The learning center provides an opportunity for them to develop their interpersonal intelligence (Santrock, 2007:133).

In addition, students also use body-kinesthetic intelligence to prepare the letter shapes as they learn to write. They also use the intelligence to learn pronouncing vowels when they learn, and learn to pronounce letters when they write. Meanwhile, intrapersonal intelligence is the type of intelligence which is most widely ignored in the traditional classroom. In the multiple intelligences class, the students complete their own self-evaluation sheets after they complete the task in a few centers of learning. Students also make (a portfolio where they record the results of their work so that they can see the progress. Similarly, the implementation of multiple intelligences approach is optimal, and then it also needs the awareness of the parents or the guardian of the students. Therefore, it is also needed parental education called "The Parent-Teacher Connection" (Santrock, 2007:133).

Armstrong also states that in the multiple intelligences curriculum, students take a special feld in a variety of subjects involving the eighth intelligence for the real-world skills (e.g. course architecture, the art of planting, the composition of music, yoga, rock collection, or publication) (Armstrong, 2011:178-179).

From the explanation above, it can be concluded that the multiple intelligences as a new learning approach in elementary school has brought a lot of changes in learning activities and classroom management. Teacher is no longer a central fgure who dominates the information and learning resources. Students are no longer subjects who receive the information and knowledge provided by the teacher. Teacher is the facilitator and generator that assists the students in learning. Students actively construct their own knowledge. The success of learning is not only judged on one aspect, called logical-mathematical intelligence, but it is also assessed from various aspects, such as

linguistics or language, spatial or visual, kinesthetic or gestures, musical or rhythm, intrapersonal, interpersonal, and naturalist or nature. Thus, essentially, all students have a unique and individual intelligence. Therefore, each of the unique potential of the students needs to be appreciated and developed in accordance with the uniqueness of each student.

2. The Meaning of *Mu'allim, Murabbiy, Mursyid, and Mu'addib* in Islamic Education

This discussion will develop a meaning of creativity of professional teacher of classical concepts which have been used in Islamic education: *mu'allim, murabbiy, mursyid*, and *mu'addib.* In the two main sources of Islam, Al-Quran and Al-Hadith, the terms are explained from the root word as follows:

> *And He taught Adam the names - all of them. Then He showed them to the angels and said, "Inform Me of the names of these, if you are truthful."* (QS. Al-Baqarah:31)
>
> *And lower to them the wing of humility out of mercy and say, "My Lord, have mercy upon them as they brought me up [when I was] small."* (QS. Al-Israa':24).
>
> *There shall be no compulsion in [acceptance of] the religion. The right course has become clear from the wrong. So whoever disbelieves in Taghut and believes in Allah has grasped the most trustworthy handhold with no break in it. And Allah is Hearing and Knowing.* (QS. Al-Baqarah:256).
>
> *It has been told to us, Muhammad ibn Muqatil has told us, 'Abdullah had preached to us, Salih bin Hayyi said that there was a man from al-Khurasan told asy-Sya'biy, Abu Burdah has told me from Abu Musa Al-Asy'ariy radliallahu' anhu said, the Prophet Sallallaahu 'Alaihi Wasallam said: If someone educated a female slave and taught a knowledge, then he freed her and married to her, he would get two rewards. And if someone believes in Isa 'Alaihis Salam and believes me, it would be two rewards for him. And a slave (man) when he was devoted to his Lord and obey his master, he would get two rewards.*(Narrated by Bukhari No. 3190; Sunan Abi Dawud No. 4481, Musnad Ahmad No. 18777, Sunan an-Nasa'iy No.3292, and Sunan at-Tirmidziy No. 1035).[1]

From the explanation above, it can be revealed that a professional teacher here actually can be termed as holistic-integralistic teacher. The root word mu'allim means that a teacher is required to explain the nature of science he taught and explain the theoretical and practical dimension and then try to awaken students to practice it. Thus, the figure of the teacher, at the same time, is required to transfer knowledge and implement the process of internalization and amaliah (implementation) (Muhaimin Mudjia Rahardjo (ed.), 2006:101).

Furthermore, from the term murabbiy, a teacher has a task to educate and prepare students in order to be creative, also to set and maintain their creation not to be disastrous for themselves, society, and the natural surroundings (Muhaimin Rahardjo (ed.), 2006: 102-103). This is based on the basic view that God, as rabb al-'alam and rab al-nas, creates, organizes, and maintains everything in it, including human nature. Mankind, as His vicegerent (QS.Al-Baqarah: 30; QS. Al-An `am: 165) is ordered to develop their creativity to create (Surah Hud: 61), organize, and

1 Narrated by Bukhari No. 3190, the quality of this hadith is authentic both *sanad* and *matan*. This is also corroborated by other authentic hadiths from another chain of narration that expresses the same thing on Sunan Abi Dawud No. 4481, Musnad Ahmad No. 18777, Sunan an-Nasa'iy No.3292, and Sunan at-Tirdziy No. 1035. See the complete information in Soltanera, *CD of Enscyclopedia Hadith Kitab 9 Imams* (Lidwa Pustaka, 2010-2011). This programm is the translation project of the original software Kitab Kutubut Tis'ah, it is CD Mausu'ah Hadis Syarif Versi 2.00, Dar us Salam Publication, Inc, 1991-1997.

preserve nature and its contents (Djumransyah and Amrullah, 2007:36-37).

Meanwhile, the term of mursyid is understood that a teacher (mursyid) tries to pass on the appreciation (trans-internalization) or the character and personality of the students, either in the form of worship ethos, work ethic, ethos of learning, or all-round dedication which is Lillahi Ta'ala (i.e. because sincerity solely to expect the pleasure of Allah SWT). In other word, the teacher is an exemplary fgure and role model for their students as well as consultants (Muhaimin Rahardjo (ed.), 2006:104-105).

The last, the terms mu'addib means that the teacher is ethical person who has a role and a function to build civilization (Muhaimin Mudjia Rahardjo (ed.), 2006:1045). According to Djumransjah and Amrullah explanation, the teacher in the context of understanding mu'addib must be able to master and practice the knowledge and be able to teach and provide awareness based on civilization (Djumransjah and Amrullah, 2005:36-37).

From the explanation above, it can be concluded that holistic-integralistic teacher is a person who has intellectual and research capacity, the spiritual capacity, moral and ethical capacity, and emotional capacity. The intellectual capacity is manifestation and born from the understanding of the concept mu'allim. The spiritual capacity is manifestation and born from the understanding of the concept of mursyid. Moral and ethical capacity is manifestation and understanding of the concepts of muaddib and murabby. Meanwhile, the capacity to control emotion is the concept of mu'addib. The detailed descriptions about each of these capacities are explained more in the next segment.

3. Holistic-Integralistic Teacher as the Concept of Islamic Elementary School Educator of Multiple Intelligences-Based Class

The nature of holistic-integralistic teacher is realization of noble person (QS.At-Tin: 4), intact, and has many advantages more than others (Surah Al-Israa ': 70). He is a person who is intentionally able to care for an individual or some individual, so that they can grow and succeed in life. Muhammad and the other Messangers are the example of the holistic-integralistic teacher. However, Moh. Slamet Untung says that the frst educator (as Muslims believe in) is Allah, while the Messenger is the perfect man, insan kamil, chosen by God to convey revelation through guidance and education (Untung, 2005:52-53).

As if it is decomposed further, a holistic-integralistic teacher as professional teachers in Islamic education has a number of components as shown in Figure 1:

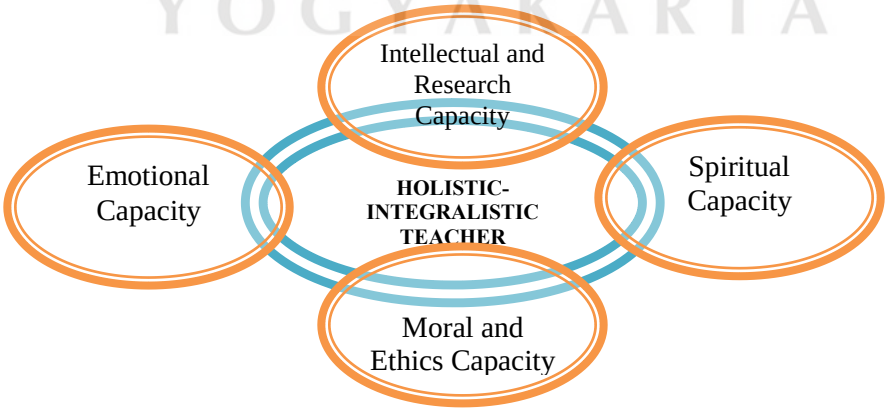

Figure 1. The characteristics of Holistic-Integralistic Teacher as a Professional Teacher in Islamic Education

Below is the explanation of the chart in Figure 1 above. *First*, a holistic-integralistic teacher has the intellectual and research capacity. Thus, a professional teacher must have mastery of the science of knowledge both in terms of philosophical, theoretical and practical aspects. In addition, he is also capable of being a mediator and facilitator for students to conduct more research, in laboratory experiments, problem solving for social problems and so on. Hence, the educational process he created can produce positive values in the form of an empirical-rational, objective-empirical, object-mathematical, and professional attitude (Muhaimin Mudjia Rahardjo (ed.), 2006:104).

Second, a professional teacher has a spiritual capacity. Thus, the teacher is able to have a religious, work, and learning ethos, and also dedication. In other word, the teacher carries out the profession with full of love, appreciation, passion, and dedication to the profession organization, the institution, the nation and the country. It is not just worldly happiness, but also the Hereafter importance (Muhaimin Mudjia Rahardjo (ed.), 2006:104-105).

Third, a professional teacher has moral and ethical capacity. It means, a professional teacher is a teacher who is able to become central of self-identification of the students. With his presence, the students will be infected by trans-internalization (appreciation) character and personality of the teacher (Muhaimin in Mudjia Rahardjo (ed.), 2006:105). In addition, ethical and noble character is the basis for the implementation of roles and functions in development progress of civilization through education, both in physical and spiritual dimension. Fourth, a professional teacher has emotional capacity. It means that a professional teacher is a generator for the process of internalization of values, knowledge, attitude, and skill of the students. He should be able to be a motivator for the implementation of the values that have been taught to be applied in the empirical realm (Muhaimin Mudjia Rahardjo (ed.), 2006:103).

The components of a holistic-integralistic teacher consist of intellectual and research capacity, the spiritual capacity, moral and ethical capacity, and emotional capacity which are relevant and appropriate to the needs of teacher profile for learning process in the multiple intelligences-oriented elementary schools. The relevance can be described as below:

First, intellectual and research capacity has relevance to the teacher profile of multiple intelligences class. This is because the teacher in the classroom must be able to accommodate multiple intelligences and provide stimulus to develop linguistic or language, logical or mathematical, spatial or even visual intelligence. Based on Armstrong's explanation, teacher in the classroom who implements the theory of multiple intelligences needs to find the way to give students a hint, not only through the spoken word, but through a picture or graphical symbols (spatial), behavior and physical gesture (body-kinesthetic), musical phrases (musical), logical patterns (logical-mathematical), social signals (interpersonal), emotions (intrapersonal), and living creatures (naturalist) (Armstrong, 2013:121).

Second, the spiritual capacity has relevance to the development of intrapersonal intelligence efforts. This is based on the new intelligence found by Gardner. It is existential intelligence. Nonetheless, according to Gardner, this intelligence is still not fully placed on the ninth position of the eight types of intelligence that have been found previously. The appearance of the candidate is based on the intelligence of the human tendency to reflect on the most fundamental question of existence (Gardner, 2013:35). Here, the spiritual capacity has an important role in the development of the new intelligence which is found by Garder.

Third is the moral and ethical capacity. This capacity is demonstrated in the figure of the teacher who is able to become central of self-identification for the students. With his presence, the

students will be infected by trans-internalization (appreciation) character and personality of the teacher. In the multiple intelligences class, the teacher which is able to be central of the students' self-identification can help in activating their intelligence. Arsmstrong, in a segment "Activators and Deactivators Intelligence" taken from *Multiple Intelligences in the Classroom*, states that the students often experience the 'turning point' in the development of their talents and abilities. It occurs at any age during the period of life, although it usually occurs in early childhood. On the other, Armstrong reinforces that the profile of teacher's intelligences influences their teaching approaches in the classroom. Furthermore, it will open the gates for a range of activities that can help teacher develop the neglected intelligence, activate retarded or crippled intelligence, and bring the development intelligences to a higher level of proficiency (Armstrong, 2013:29 -31).

Fourth is the emotional capacity. This skill supports the creation of instructional strategy, atmosphere, and classroom management of multiple intelligences-based class in the following points. First, the teacher must be able to create a learning environment where individual needs (students) are identified and considered in all day. The teacher should provide a comfortable and safe environment, and does not need to make a rule of discipline that sometimes even spoils the atmosphere of the class itself (Arsmstrong, 2013:127). In other side, Armstrong also describes in the segment 'The teaching strategies of interpersonal intelligence'. He points out that all children have different interpersonal one level or another. Every teacher should be aware of the teaching approaches that combine interaction with and among the people (Armstrong, 2013: 127). In this interaction, an awaited teacher in multiple intelligence class is a person who has emotional skill. It means that the interaction of humanist and educational learning are created if the teacher has a good emotional skill.

D. CLOSING

From the elaboration above, it can be concluded that multiple intelligences as a new learning approach in elementary school has brought a lot of changes in the learning activities and classroom management. The teacher is no longer a central figure who dominates the information and learning resources, but the role changes as a facilitator and generator. Students are no longer subjects who receive the information and knowledge provided by the teacher, but the students actively construct their own knowledge. Each student has all the intelligences. The intelligences are logical-mathematical, linguistic or language, spatial or visual, kinesthetic or body movement, or rhythm musical, intrapersonal, interpersonal, naturalist or nature, and existential intelligence. Many students can develop each intelligence to an adequate level of competence. Meanwhile, intelligences usually work together in complex ways. There are many ways to be intelligent within every category.

Second, a holistic-integralistic teacher is a professional figure in Islamic education in Islamic elementary school which is built from four main characteristics which are intact and interrelated, including intellectual and research capacity, spiritual capacity, moral and ethical capacity, and emotional capacity.

Third, the relevance of the concept of holistic-integralistic teacher and the necessity of teacher profile for teaching in multiple intelligences-based class of Islamic elementary school lies in some of the followings: intellectual and research capacity which is able to accommodate and provide stimulus to develop linguistic or language intelligence, logical or mathematical intelligence, even or visual spatial intelligence; spiritual capacity which has an important role in the development of existential intelligence; moral and ethical capacity which can help in activating the intelligence

of the students; and emotional capacity which helps to create humanist and educative learning interaction in the multiple intelligences class.

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METAPHORICAL ITEMS ARE QUITE NECESSARY TO LEARN

Written by:
Na'imah
Sunan Kalijaga State Islamic University Yogyakarta Indonesia

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Metaphorical forms of speech happened because the symbols are still very limited, while the objects that are surrounding human beings in the world are unlimited. The most common types of metaphors are live and dead metaphors. It was said by Lakoff (1980) that "A common definition of a metaphor can be described as a comparison that shows how two things that are not alike in most ways are similar in another important way".[1] They explain how a metaphor is simply understanding and experiencing one kind of thing in terms of another.

A.Introducing

A metaphor is one of figurative languages that is created by human creative power in applying sense, and through the creativities of the language, one gives new sense to the symbols of the words (referenes) that have already been existed. It mush be understood that the metaphorical forms of speech happened because the symbols are still very limited, while the objects that are surrounding human beings are unlimited. One of the most prominent examples of a metaphor in English literature is the All the world's a stage monologue from As You Like It. A common definition of a metaphor can be described as a comparison that shows how two things that are not alike in most ways are similar in another important way. Newmark (1988) said: "The puspose of metaphor is basically twofold: its referensial purpose is to describe a mental process or state, a concept, a person, an object, a quality or an action more comprehensively and concisely than is possible in literal or physical language".[2] its pragmatic purpose, which is simultaneous, is to appeal to the senses, to interest, to clarify 'graphically', to please, to delight, to surprise.

B. Metaphors

1. The Conseptual of Metaphor

Metaphor is the concept of understanding one thing in terms of another. Generally, one knows that "a metaphor is a figure of speech that describes a subject by asserting that it is, on some point of comparison, the same as another otherwise unrelated object"[3].

There are many explanations of how metaphors work but a common idea is that metaphor is somewhat like simile, in that it involves the identification of resemblances, but that metaphor goes further by causing a transference, where properties are transfered from one concept to another. The two concepts involved in a metaphor are...the described concept...is often called the target

1 Lakoff, George &. Johnson, Mark 1980. *Metaphors We Live By* . Chicago & London: The University of Chicago Press. p.7.

2 Newmark. 1988. *A Textbook of Translation.* Singapore: Prentice Hall International (UK) Ltd.p.104

3 http://en.wikipedia.org/wiki/Metaphor

domain,...and the comparison concept or the analogy...is called the source domain. Lakoff and Johnson (1980) greatly contributed to establishing the importance of conceptual metaphor as a framework for thinking in language. In recent years many scholars have investigated the original ways in which writers use novel metaphors and question the fundamental frameworks of thinking implicit in conceptual metaphors.

2. Grammatical structure of a metaphor

Each metaphor has always a complex grammatical structure

a. *The syntactic structure of a metaphor is able to be in the form of a sentence, clause, or phrase.*
b. *In the basic structure of the metaphor, there are always two terms, namely 'topic' and 'vehicle'.*
c. *The notional classes of metaphor included four image projections. They are:*
   ** an abstract with the concrete*
   ** something that is not animate with the inanimate,*
   **something about the human characteristics to nonhuman, and*
   ** one of the five senses with something else*

2. There are four classes of metaphor, they are:

- *1).The **Concretive Metaphor**, which attributes concreteness or physical existence to an abstraction: 'a vicious circle', 'room of negotiation'.*
- *2).The **Animistic Metaphor**, which attributes animate Scharacteristics to the inanimate: 'an angry sky', 'the shoulder of the hill'.*
- *3).The **Humanizing ('Anthropomorphic') Metaphor**, which attributes characteristics of humanity to what is not human: 'This friendly river', 'laughing valleys'.*
- *4).The **Synaesthetic Metaphor**, which transfers meaning from one domain of sensory perception to an other: 'dull sound', 'loud perfume' (Leech, 1969)[4].*

In this case, each metaphor must be in one of the classes of metaphor, and other metaphors can be in other classes of it. The class of metaphor depends on relationship of its tenor and vehicle.

3. *The Position of Metaphor*

Metaphor is in the highest level among the figure of speech (Metaphor, Metonymy, Synecdoche, Irony). Such as it is described by Daniel (2002)[5]. The position of metaphor can be described as the following tables

Table 1: The Four 'Master Tropes'

The Four 'Master Tropes'			
Trope	*Basis*	Linguistic Examples	*Intended Meaning*
Metaphor	*Similarity despite difference (explicit in the case of simile)*	*I work at the coal fare*	*I work at the coal fare*

4 Leech, Geoffrey N. 1969. *A Linguistics Guide to English Poetry.* Hong Kong: Longman Group Ltd.p.158.
5 Daniel, Chandler. 2002. *The Basics Semiotics.* London: Routledge.p.136.

Metonymy	*Relatedness through direct association*	*I`m one of the suits*	*I`m one of the managers*
Synecdoche	*Relatedness through categorical hierarchy*	*I hate working here*	*I deal with customers*
Irony	*Inexplicit direct oppocite (more explicit in sarcasm)*	*I love working here*	*I hate working here*

Table 2: Tropes, genres, workviews, and Ideologies.

"Tropes, genres, workviews, and ideologies"[1]			
Trope	*Genre (mode of emplotment)*	Worldview (mode of argument)	*Ideology (mode of ideological implication)*
Metaphor	*romance*	*formism*	*Anarchism*
Metonymy	*comedy*	*organism*	*Conservatism*
Synecdoche	*tragedy*	*mechanism*	*Radicalism*
Irony	*satire*	*contextualism*	*Liberalism*

With the 2 table above, we can see the various systems ofclassi f cation as structurally homologous with one another about the metaphors.

Table 3: The Positions of Metaphor and Metonymy

Metaphor* and *Metonymy
metaphor !
paradigm !
similarity !
substitution !
*selection !*_____
metonymy
syntagm
contiguity
context
combination

This table 3 is the clearest described than the table 1 and 2 above. The phenomena are seldom as tidy as our system of classi f cation. Systems always leak and it is for the individual reader to asses how interpretatively useful the application.

4. "Metaphors assert similarities".

*The aims of similarities are: physical similarities, characteristic similarities, conceptual similarities or cultural similarities. Sterm, Josef, "Metaphor in Context", (*Stern, 2000).[6] *For a metaphor is a figure of speech that describes a subject by asserting that it is, on some point of comparison, the same as another otherwise unrelated object.*

In simpler terms, a metaphor compares two objects/things without using the words "like" or "as". In order to understand the meaning the metaphor is not so easy, becouse we should pay attention the four steps carefully.These are the four parts for having the meaning of a metaphor.

5. A metaphor has four parts, they are

a. *image-the second proposition (figurative), i.e. what is being compared with.*
b. *topic-the first proposition (nonfigurative), i.e. the thing really being talked about.*
c. *point of similarity-found in the comments of both of the proposition involved or the comment of an event proposition which has the image as topic.*
d. *nonfigurative equivalent- when the proposition containing the topic as an event proposition, the comment is the nonfigurative equivalent (Larson, 1984)*[7].

We can not directly to think to the last step for having the meaning of a metaphor. A metaphor is a figure of speech that describes a subject by asserting that it is, on some point of comparison, the same as another otherwise unrelated object. Metaphor is a type of analogy and is closely related to other rhetorical figures of speech that achieve their effects via association, comparison or resemblance including allegory, hyperbole, and simile.

There are main types of metaphors that are often used in our communication. They are live and dead metaphors. Between the two metaphors, the live metaphor is much more expressive. Follow the explanation below:

6. *The Types of Metaphors (**Live and Dead Metaphors*****).**

a. *"A live metaphor is one which is understood only after paying special attention to the comparison which is being made*" (*Larson* 1984).[8] *The live metaphors are constructed on the spot by the author or speaker to teach or illustrate.* Example, *He is* ***a rock****. It has the tenor of 'He', and the vehicle of* ***'a rock'*** *as a metaphorical term. In the relationship among the two terms, there is a point of similarity, such as the character of 'hard'.*

b. Dead Metaphor

- *"Dead metaphors are those which are a part of the idiomatic constructions of the lexicon of the language".* [9]*We can pay attention when a dead metaphor is used, the person listening or reading does not thing about the primary sense of the words, but only about the idiomatic sense directly. An idiom is a dead metaphor.One can understand the dead metaphor easily, for the dead metaphor is one which is understood directly without paying attention to the comparison. Example: 'the leg of table'.*

7. *In general, there are five ways that metaphors may be translated*

a. *The metaphor may be kept if the receptor language permits (that is, if it sounds natural and is understood correctly by the readers)*

6 Stern, Josef. 2000. *Metaphor in Context*. Hongkong: Massachusetts Institute of Technology.p.147.

7 Larson, L. Mildred. 1980. "*Meaning Based Translation", (England: University Press of America.p.147.*

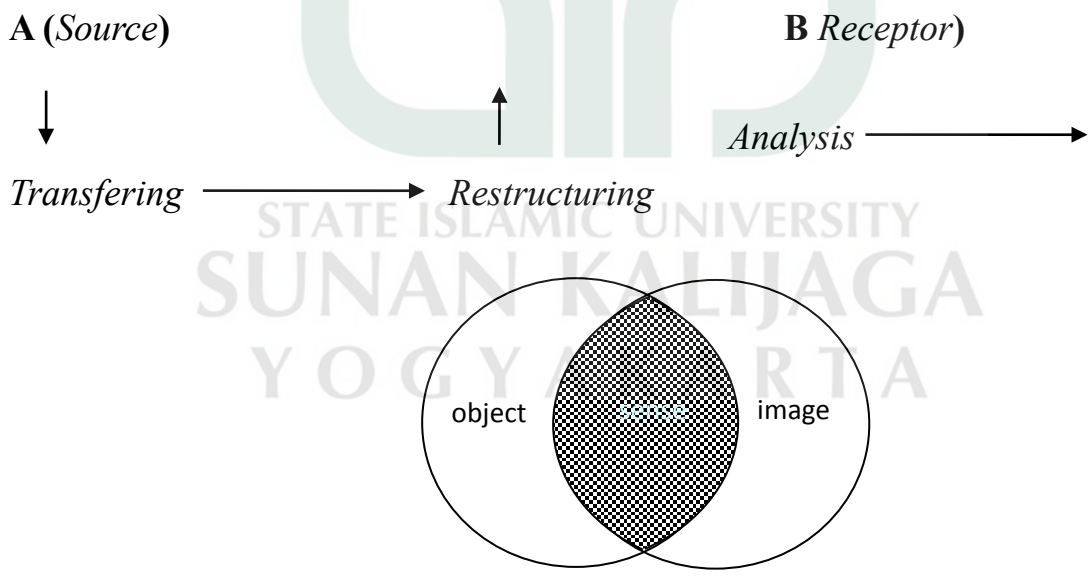
8 Ibid. 249.

9 Ibid. 250.

b. *A metaphor may be translated (as a simile, adding 'like', or 'as') by shifting*
c. *A metaphor of the receptor language which has the same meaning may be substituted;*
d. *The metaphor may be kept and the meaning explained (that is, the topic and/or point of similarity may be added); and*
e. *The meaning of the metaphor may be translated without keeping the metaphorical imagery.*

Some theorists have suggested that metaphors are not merely stylistic, but that they are cognitively important as well. In Metaphors We Live By George Lakoff and Mark Johnson argue that metaphors are pervasive in everyday life, not just in language, but also in thought and action. A common de f nition of a metaphor can be described as a comparison that shows how two things that are not alike in most ways are similar in another important way. They explain how a metaphor is simply understanding and experiencing one kind of thing in terms of another. The authors call this concept a "conduit metaphor". By this they meant that a speaker can put ideas or objects into words or containers, and then send them along a channel, or conduit, to a listener who takes that idea or object out of the container and makes meaning of it. In other words, communication is something that ideas go into. The container is separate from the ideas themselves. Lakoff and Johnson (1980) give several examples of daily metaphors we use, such as "argument is war" and "time is money". [10]Metaphors are widely used in context to describe personal meaning. The authors also suggest that communication can be viewed as a machine: "Communication is not what one does with the machine, but is the machine itself." (Johnson, Lakoff, 1980).[9]

Concerning to translation, Brislin (1976) said: "*Translation is the general term refering to the transfer of thoughts and ideas from one language (source) to another (target)".*[11] Nida &Taber (1969: 33) described the three stages process of translation in as the following picture 4.



Picture 1: The Process of Translation by Nida & Taber (1969).[12]

1. *Analysis, in which the surface structure (the message as given in source language is analized in*

10 Lakoff, George & Johnson, Mark. 1980. *Metaphors We Live By.* Chicago & London: The University of Chicago Press.p. 18.
11 Brislin, Richard W. (ed). 1976. *Translation Applications and Research.* New York: Gardener Press, Inc. P.1.
12 Nida, Eugene and Charles, R. Taber. 1969. *The Theory and Practice of Translation*. Leiden: Published for the United Bible Societies.p.33.

terms of (a) the grammatical relationship and (b) the meanings of the words and combinations of words,

2. *Yransfer,in which the analyzedmaterial is transferred in the mind of the traslator from source language to recepter language, and*
3. *restructuring, in which the translated material is restructured in order to make the final message fully exeptable in the receptor language.*

The process of translation, then can be used to translate a metaphor with the special treatment of translation of metaphor. as described below:

Stern, Josef. 2000. *Metaphor in Context*. Hongkong: Massachusetts Institute of Teknology.p.147.

. Larson, L. Mildred. 1980. "*Meaning Based Translation", (England: University Press of America.p.147.*

The translation of metaphor

Object what is described or quali f ed by the metaphor

Sense : the literal meaning of the metaphor; the resemblance or the semantic area overlapping object and emage, usually this consists of more than one sense component – otherwise literal language would do

Image : the picture conjured up by the metaphor, which may be universal,

(Newmark:1980).[13]

C. CONCLUSION:

It is necessary for linguists to understand well about metaphors. A metaphor is the imaginative use of a word or phrase to describe somebody or something as an other object in order to show that they have the same qualities and to make the description more forceful. It is clear enough that **metaphor is the concept of understanding one thing in terms of another. A metaphor has grammatical structures, classes and types of metaphor. Each has temor and vehicle, it has non-literal meaning.**

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http://en.wikipedia.org/wiki/Metaphor

IMPROVING THE STUDENTS' SKILLS IN WRITING DESCRIPTIVE TEXTS THROUGH DIGITAL IMAGES AT THE EIGHTH GRADE OF SMP ALI MAKSUM PONDOK PESANTREN KRAPYAK BANTUL IN THE ACADEMIC YEAR OF 2013/2014

Author
Jubaedah
wahidin8282@gmail.com

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ABSTRACT

The objective of the research was to improve the students' skills in writing descriptive texts through digital images at the eighth grade of SMP Ali Maksum Krapyak Yogyakarta in the academic year 2013/2014. It consisted of two main actions and one additional action: 1) giving a model of descriptive text and asking the students to list the difficult words, 2) using digital images in the class, and 3) giving rewards and brainstorming to motivate the students.

The research was action research. The members of the research consisted of the researcher, the collaborator, the English teacher, and the students of Grade VIIID. The research was carried out in two cycles. The steps involved reconnaissance, planning, action and observation, and reflection. The data of the research were qualitative in nature supported by quantitative data. The qualitative data were obtained by observing the teaching and learning process and interviewing the English teacher and the students of VIIID. The qualitative data were in the forms of field notes and interview transcripts were analyzed based on the qualitative data analysis. The pre-test and post-test were conducted to gain the quantitative data. A gain score of pre-test and the post-test was used to analyze the quantitative data that were in the forms of students' writing scores.

The findings showed that digital images have three important points. They are practicality, novelty, and clarity. The use of digital images in the research evidently improved the students' skills in writing descriptive texts. The improvements covered: 1) the students consider writing as an easy and interesting lesson, indicated by their enthusiasm to write, 2) students generated their ideas easier into paragraph, 3) and digital images improved the students' skills in writing descriptive texts in terms of grammatical, vocabulary, and sentence structure. The improvement of the students' writing skills can be seen from the result of the gain score. The gain score of the means was 6.65, it could be concluded that there was improvement in the students' skills in writing descriptive texts after the digital images were used in the class.

Keywords: *improving, skills in writing descriptive texts, digital images*

INTRODUCTION

English, as one of the subjects in all the educational levels, is given a greater attention in every educational level since it becomes a compulsory subject needed by the students to face the globalization and free market era. In the School-Based Curriculum, the English lesson especially

writing for junior high schools (SMP/MTs) is aimed to develop the communicative competences in spoken and/or written language to reach the functional level. When the students reach the functional level, they can fulfll their needs like writing the letters, comprehending the procedure texts well, and describing something.

Some of the junior high school students, however, have not reached the functional level well. They still have difficulties in the writing lesson. When the English teacher asked them to write a descriptive text, only a few of them understood the descriptive text. The result of their assignment of writing descriptive text is not satisfying. Some of them still have difficulties in using structure and grammar of the writing of a descriptive text. It can be concluded that the students still have difficulty in writing descriptive texts.

When I observed SMP Ali Maksum Krapyak, Bantul, Yogyakarta, more than half of the students of VIII D in the first semester of 2013/2014 academic year still had difficulties in writing descriptive texts. The major problem that the students faced was how to get an idea and develop it. The problems might be because of the teaching method, the technique, the materials, the media or the combination of them. In order to generate students' active participation in class, teachers must be both communicative and creative. Teachers have to encourage all students to participate actively during the lesson, so that not only some students are actively involved in class activities. Besides, the materials and learning media should be educational, attractive, and up to date.

LITERATURE REVIEW

There are some literature reviews and theoretical background as the description of the theories and relevant definitions related to the research. The theories include the English language teaching and learning, teaching and learning writing, the characteristics of the students of junior high schools, text types in English, and the role of media in teaching and learning process.

Writing is one of the important skills that students need to develop. The ability to write is very important for the academic context, business and personal relation in the global community (Weigle, 2002:1). Writing and speaking are productive skills. It means that the writers and speakers go through producing a language (Harmer, 2007:7). Furthermore, Rivers (1981:291) states that writing is more difficult than speaking as writing is 'communicating into space'. In face-to-face communication, there is little time to think and produce it. The writing process is the stage that the writer goes through in order to produce something in his final written form (Harmer, 2004:11). Still, he states that there are four-steps in the writing process. They are planning, drafting, editing and final draft.

According to Feez and Joyce (1998: 4), a text is any stretch of language which is held together cohesively through meaning. Whether a stretch of language is a text or not has nothing to do with its size or form. It has to do with the meanings of the stretch of language working together as a unified whole. Anderson and Anderson (1997:1) state that texts are divided into two main categories, literature texts and factual texts. According to Anderson and Anderson (1998: 26) a description text describes a particular person, place or thing. Its purpose is to tell about the subject by describing its features without including personal opinions. Description differs from an information report because it describes a specific subject rather than a general group. The description text has three main parts, a general opening statement in the first paragraph, a series of paragraphs about the subject, and a concluding paragraph.

Harmer (2004:177) states that media such as a range of objects, pictures, cards and other things can be used for presenting and manipulating language. It lets the students to be active in all

activities in the class. Vernon (1996) states that there are six kinds of media, drawing or teacher mode drawings, pictures, audio recording, motion picture and TV, real object, simulation, and models, and programmed and computer-assisted instruction. Of all types of media, visual media are more preferable because most people learn more easily by their sight than other sensory perception (Corder, 1966: ix, in Ratnasari, 2010). Digital image is still picture in electronic file format in any form and of any subject including those derived from analog images such as scanned photographs and slides (Kandiuk: 2011). Considering that a digital image is still a picture, I elaborate the definition. A picture is a photograph, drawing, and painting. According to Wright (1989:193), the appropriate picture in a descriptive text is a single object picture. It is because, describing means imagining something or someone focusly. Thus, to describe something or someone, students need a single object. Harmer (2001:134) states that all kinds of pictures can be used in the multiplicity of ways. They are drill, communication games, understanding, ornamentation, prediction and discussion. Harmer (2007:330) also states that pictures can provide stimulation for writing habitual activities. According to Wright (1989:2), specifically, pictures contribute to interest and motivation, a sense of the context of the language, a specific reference point or stimulate.

RESEARCH METHODS

The research is an action research. It focused on the efforts to improve students' skills in writing descriptive texts by using digital images. It is categorized as an action research since there was a self-reflective, critical, systematic approach that was done to identify the problematic situation as a way of improvement and changes in educational practice. McNiff and Whitehead (2006: 7) state that action research is a form of study that enables practitioners to investigate and evaluate their work.

The research data are qualitative and are also supported by the quantitative data. The qualitative data were obtained through interviews and observation. Tests were used to attain the quantitative data. I used pre-test before implementing the actions and post-test after implementing the actions. The scores from pre-test and post-test would be compared to acquire the data. After getting the data, I continued to the next step to analyze the data. Based on Miles & Huberman (1994: 26), there are three steps to analyze the data: reducing data, displaying data, and drawing and verifying conclusions. In addition to that, to analyze the quantitative data which were in the form of students' writing performance task scores, I used a writing rubric adapted from Jacobs et al. in Weigle (2002: 116). The rubric provides four aspects of writing namely content, organization, vocabulary, and language use in which each of them is scaled from 1 to 4. Hence, the maximum score is 16, while the minimum score is 4.

Scoring Rubric for Writing Production
(adapted from Jacobs *et al* ; 1981)

CONTENT	4	Excellent to very good	Knowledgeable, thorough development of thesis, relevant to the topic
	3	Good to average	Some knowledge of subject, limited development of thesis, mostly relevant to topic, but lacks detail
	2	Fair to poor	Limited knowledge of subject, inadequate development of topic
	1	Very poor	Does not show knowledge of subject, not enough to evaluate
ORGANIZATION	4	Excellent to very good	Fluent expression, ideas clearle stated, well-organized, logical sequencing, cohesive
	3	Good to average	Loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	2	Fair to poor	Non-fuent, ideas confused or disconnected, lacks logical sequencing and development
	1	Very poor	Does not communicate, no organization, not enough to evaluate
VOCABULARY	4	Excellent to very good	Sophisticated range, effective word choice, word form mastery
	3	Good to average	Adequate range, sometimes errors of word choice, usage but meaning not obscured
	2	Fair to poor	Limited range, frequent errors of word choice, usage but meaning confused or obscured
	1	Very poor	Essentially translation, little knowledge of English vocabulary, not enough to evaluate
LANGUAGE USE	4	Excellent to very good	Effective complex constructions, few errors of agreement, tense, number, word order, articles, pronouns and preposition
	3	Good to average	Effective but simple constructions, minor problems in complex constructions, several errors of agreement, tense, number, word order, articles, pronouns and preposition
	2	Fair to poor	Major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order, articles, pronouns and preposition, meaning confused or obscured.
	1	Very poor	Almost no mastery of sentence construction rules, dominated by errors, does not communicative, not enough to evaluate.

RESEARCH PARTICIPANTS

The participants of the research were the English teacher, the students of the VIIID of SMP Ali Maksum Krapyak and me. The English teacher and I were the collaborators of the research, and the students were the object of the research.

The school is an Islamic-Based school. There were many lessons that support Arabic skills. It was inversely proportional to English lesson. The school gave less attention to English. The class had 37 students. They live in an Islamic boarding house near the school. It is about 100 meters from the school. They were in the age of 14 years old and they had attended English lesson since they were at Elementary school.

The class was chosen by the English teacher because almost all of the students in the class still had difficulty in writing, especially in some aspects in writing, like vocabulary, grammatical structure, and how to generate their ideas to write more.

RESEARCH SETTING

The research was held from October to November 2013. The following is the time schedule of the research. The research was conducted in SMP Ali Maksum Krapyak Sewon Bantul. SMP Ali Maksum Krapyak is located in Jl. Cuwiri Komplek Pondok Pesantren Krapyak, Krapyak Panggung Harjo, Sewon, Bantul, Yogyakarta 55011.

FINDINGS

Based on the classroom observation, I presented a vignette which explains the process of English teaching and learning below:

The English Teaching-Learning Process in Class VIIID of SMP Ali Maksum

It has 27 students and all of them are female students. They made a lot of noise before the teacher came, then the teacher greeted the students in English. Later, she asked them to pray together. She asked them who was absent that day. She opened the lesson in Indonesian. She asked them to open the LKS entitles "*Kejar*" page 20. She began to explain about expressions how to ***describe your idol***. I observed that the students made a lot of noise by talking to each other.

Then, the teacher read the expressions; she asked them to repeat after her. Only a number of students paid attention to the teacher's instruction. Most of the students did not give responses to the teacher. Moreover, when the teacher explained the materials many students still made a lot of noises by talking to each other and doing something to disturb other students. However, the teacher did not use any media to make students interested in joining the lesson. Also, the teacher did not make any class discussions in explaining the materials. The students only kept silent while the teacher explained the materials. There were two students who slept in the middle of teaching learning process. If the teacher tried to ask a question to the students, the students gave a few responses to the teacher. When the teacher asked any problem with the material? The students only said "no". Meanwhile, some students still made a lot of noises in the classroom. The teacher only said in Indonesian, ***"coba yang dibelakang tolong perhatikan. Nanti kalo ditanya pada gak tau lagi"*** (Hei you in the back, pay attention to me please. If you don't pay attention to me, you can't answer if I give you a question)"

After the teacher explained the materials, she gave exercises related to the materials. The exercises given by the teacher were taken only from the students' worksheet (LKS). The students were asked to describe some idols in the worksheet (LKS). Then, she prepared the answer column in the whiteboard. She asked the students to write the answers in the whiteboard randomly and then describe it in the book. The students seemed confused on how to describe the idol. It can be seen from the situation and the result of students' work. There were many students asked their friends and cheated their friends' work. Some students got bad mark on their writing task. Then, she asked them to do the other exercises in LKS. She asked them to match the antonym words. The time finished; she asked them to do the other exercises as

From the vignette, it can be implied that the process of English teaching and learning did not run very well. The students were noisy during the lesson. Besides, they also had difficulties in mastering English, especially writing. It can also be seen from the result of the interview done after observing the teaching and learning process. The following are some interview transcripts which show students' difficulties:

R	: "*kesulitannya dimana*?" **(Which part is difficult?)**
S19	: "*Kadang banyak yang sama (cara bacanya) tapi gak tau artinya… gitu*" : **("sometimes, there are some words that have almost the same pronunciation, and I don't understand the meaning")**
R	: "*terus ada lagi ga?*" **(Anything else?)**

S19	: "*Ya banyak*" **("Sure, there's so many")**
R	: "*ya banyaknya apa lagi? Biar saya tahu.* **(Yes I see, what else? Can you mention it? Tell me.")**
S19	: "menyusun kata-katanya gitulah" **(how to arrange the words correctly, something like that)"**
	R: Researcher S: Student (Interview 2, November 25th, 2013)

R	: "*Kesulitannya kira-kira dimana?"* **("Which part is difficult for you?")**
S33	: "*di kosakata, menyusun kalimatnya, tensesnya, ya banyak lagi pokoe.* **("I have difficulties in learning the vocabulary, arranging words, tense, and so many things")**
	R: Researcher S: Student (Interview 3, November 25th, 2013)

R	: *"dari SD sampai sekarang kesulitannya belajar bahasa inggris dimana?"* **"From elementary school till now, what is the difficult in learning English?"**
S5	: *"mmm… apa ya?dari kosakata, terus dari pengucapan, penulisan.. ya banyaak laah."* **("mmm... the vocabulary, then the pronunciation, the process of writing, and the like").**
R	: "*sesulit apa sih menurut kamu*?" **("How difficult is it for you?")**
S5	: *"sulit banget"* **("It's very difficult")**
	R: Researcher S: Student (Interview 4, November 25th, 2013)

I realized that in the first time the action was implemented, there were only a few students were enthusiastic in comprehending the text, but in the next time, there were more students were enthusiastic in comprehending the text. They felt that it was not difficult to comprehend the text if we wanted to try. The students' opinion can be seen in the interview transcript below:

R	: "Oke. *By the way*, kalo nulisnya gimana? Ada kesulitan nggak?" ("okay, by the way, what about the writing process, is there any difficulties?
S13	: "*Alhamdulillah* ga terlalu sulit. Lumayan terbantu sama gambarnya bu. **(Alhamdulillah it's not so difficult. The images were helping me enough.)**
R	: **"**Oke, jadi untuk menuangkan ide udah bisa ya?" **(okay, so now, you're already able to generate your idea, aren't you?**
S13	: "Iya, bu" **("yes ma'am")**
R	: "oiya tadi kamu bilang gambarnya membantu, membantunya gimana tuh?" **(you said that the images were helping you in the writing process, how did they help you?)**
S13	: "itu bu, lebih gampang gitu mau nulis apa kan ada yang dilihat, ada bentuknya, dari gambarnya kan bisa ngebayangin juga apa nantinya yang mau ditulis" **(it made me more easy to write because I can see the image with exact visual and shaped. From the images, I also can imagine what will I write.)**

R: Researcher S: Student (Interview 11, November 25nd, 2013)

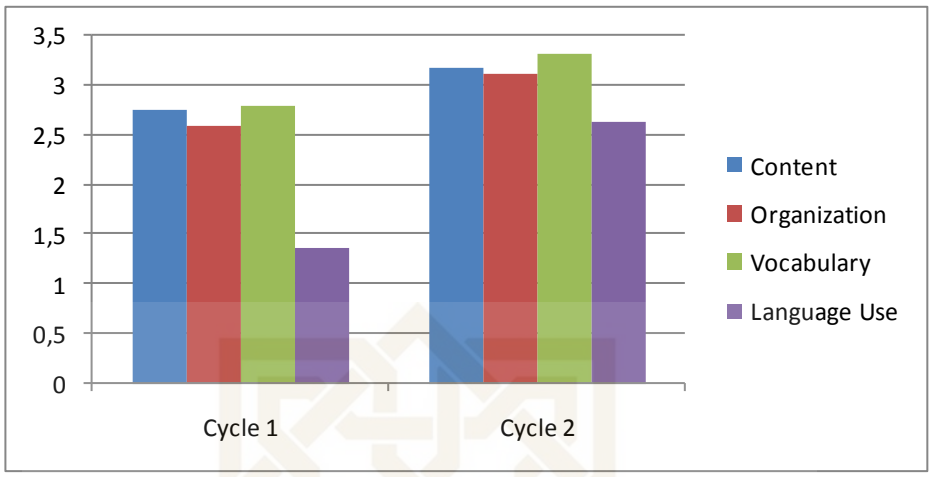
Most of the students enjoyed the material and gave positive responses. They liked to learn English with the new materials which is given by me. I showed the whole improvement of the actions that had been done in every cycle.

The Improvement of each cycle

Cycle	Actions	Meeting 1	Meeting 2	Meeting 3	Meeting 4
1	a. Giving a model of descriptive texts and asking the students to list the difficult words.	NS	S	-	S
	b. Implementing pictures in the class.	S	NS	-	S
	c. Giving rewards to motivate the students.	NS	S	-	S
2	a. Giving modeling texts and asking the students to list the difficult words.	S	S	S	S
	b. Implementing pictures in the class.	S	S	S	S
	c. Giving rewards to motivate the stidents.	S	S	S	S

Note:
NS: not successful S: successful

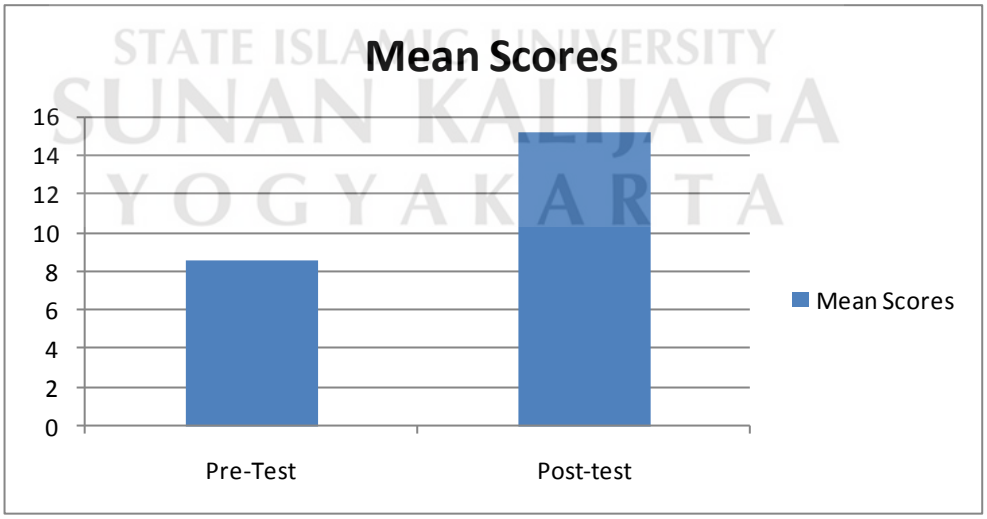
The Mean Scores of Students' Skills in Writing Descriptive texts



In Cycle 1, the average between meetings 1 and 2 was 2.76 for the content, 2.59 for the organization, 2.79 for the vocabulary, and 1.33 for the language use. It can be implied that the actions implemented in Cycle 1 were successful to improve students' skills in writing descriptive text in term of ideas generation. However, there were still some problems occurred dealing with the teaching-learning process and the students' grammatical features mastery. Consequently, the English teacher and I continued the cycle.

In Cycle 2, the average between meeting 3 and 4 was 3.18 for the content, 3.12 for the organization, 3.31 for the vocabulary, and 2.63 for the language use. It can be implied that the actions implemented in Cycle 2 were successful to improve students' skills writing descriptive texts in term of ideas generation and grammatical features mastery. Therefore, the English teacher and I decided to stop the cycle.

The Mean Scores of the Pre-test and the Post-test



The mean score of the pre-test was 8.54. The mean score of the post-test was 15.19. The gain score of the pre-test and the post-test was 6.65. It could be concluded that there was improvement in the students' skills in writing descriptive texts after the digital images were used in the class.

The findings showed that digital images have three important points. They are practicality, novelty, and clarity. Practicality means that digital images were easy to operate, to find and even to make. Novelty means that digital images were something new and it is in line with the students' condition nowadays who live in the digital era. Clarity means that digital images were colorful and natural. The more colorful the images the better the students could generate their ideas.

The use of digital images in the research evidently improved the students' skills in writing descriptive texts. The improvements covered: 1) the students consider writing as an easy and interesting lesson, indicated by their enthusiasm to write, 2) students generated their ideas easier into paragraph, 3) and digital images improved the students' skills in writing descriptive texts in terms of grammatical, vocabulary, and sentence structure.

The improvement of the students' writing skills can be seen from the result of the gain score. The gain score of the means was 6.65, it could be concluded that there was improvement in the students' skills in writing descriptive texts after the digital images were used in the class.

DISCUSSION

As the final reflection, the English teacher and I as the collaborator discussed the result of the research. They drew a conclusion that digital images can be the effective tools to help students in doing the writing project. In other words, digital images can improve students' skills in writing descriptive texts. Therefore, after the result of the last cycle had shown a good improvement in students' writing skills, the English teacher and I decided to stop the cycle. It can be seen from these data:

1) Qualitative Data

The sources of the qualitative data were acquired from the observation in the form of field notes, interview transcripts, photographs, and samples of students' works. Those data gave the significant result of the research. From the observation and interview at the reconnaissance stage, it can be implied that students assumed English as a difficult subject, especially writing. Since those problems occurred, the researcher and the English teacher decided to solve the problems by applying some strategic solutions. The solutions were by using digital images in combination with brainstorming, and also by group activities from the easier to more difficult level or from guided to free practice. The aim of the solution is to motivate students to do their writing well with enjoyment. They could change their assumption that writing was difficult. Besides, the students had difficulties in using appropriate vocabulary, punctuation, and capitalization. They also had difficulties in generating ideas and organizing them into good paragraphs. Moreover, they had low grammatical features mastery. Therefore, the English teacher and I agreed to use digital images combined with group work and brainstorming. The aim of the solution is to solve the writing problems in terms of ideas, grammatical features, and organization.

2) Quantitative Data

The quantitative data were acquired from the gain scores of the four writing aspects. However, to ease the interpretation, I present a conversion table consisting of six categories namely "very poor", "poor", "fair", "good", "very good", and "excellent". The table is presented as follows:

Conversion table of students' writing scores

No.	Class Interval	Categorization	Cycle 1		Cycle 2	
			1	2	3	4
1.	14.1 – 16.0	Excellent	-	-	-	12
2.	12.1 – 14.0	Very Good	-	-	2	12
3.	10.1 – 12.0	Good	-	13	34	13
4.	8.1 – 10.0	Fair	24	24	1	-
5.	6.1 – 8.0	Poor	13	-	-	-
6.	4.0 – 6.0	Very poor	-	-	-	-

Based on the table above, it can be interpreted that in the first meeting, there were still some students who were in the "poor" and "fair" categories, while in the second meeting, none of them were in poor category. In the third meeting, there is only 1 student who was in the "fair" category. Finally, in the fourth meeting, none of them were in very poor to fair categories. All of them improved their skills in writing descriptive texts.

CONCLUSIONS

Based on results of the research, it can be concluded that digital images could evidently improve the students' skills in writing descriptive texts. The improvement could be seen from some points. The first, the students did not consider writing as a boring and difficult lesson, indicated by their enthusiasm to write. The second, the students were able to generate their ideas into paragraph. The third, digital images improved the students' skills in writing descriptive texts in terms of grammar, vocabulary, and sentence structure. Moreover, digital images created interesting atmosphere in the classroom. It is because digital images have three important points. They are practicality, novelty, and clarity. Because of those three points, the students showed positive progress in writing skills. It was shown from the scores in the first and second cycles. They improved in constructing sentences, choosing appropriate vocabulary, organizing the generic structure, using correct grammar and integrating ideas. The improvement of the students' writing skills can be seen from the result of the tests. The mean score of the pre test was 8.54, while the mean score of the post test was 15.19. The gain score of the means is 6.65, it could be concluded that there was improvement in the students' skills in writing descriptive texts after the digital images were used to teach.

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DEVELOPING A PROCESS-BASED IN SCIENCE LEARNING THROUGH PROBLEM BASED LEARNING TO WELCOME THE IMPLEMENTATION OF CURRICULUM 2013

Runtut Prih Utami
(Prodi Pendidikan Biologi, UIN Sunan Kalijaga, Yogyakarta)
E-mail : runtutfalihah_bioedu@yahoo.co.id

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ABSTRACT

Science learning essentially consists of the process aspect, product, and attitude. Nowadays, science learning tends to emphasize the only process aspect. Generally, teachers teach science concepts as transfer of knowledge and lack of activity involving students in the science learning process. Consequently, science learning solely sharpens the remembering and understanding aspects which are a low order of thinking. These conditions give less opportunity for students to construct knowledge from their learning experiences. Therefore, the reform of learning science from low order of thinking into higher order thinking needs to be done. One of the reform in science learnings that leads to higher order thinking is applying process-based in science learning. One of the alternative ways to realize the science learning that emphasizes the scientific process aspects and inquiry can be done with the Problem-Based Learning (PBL). PBL is not designed to help teachers convey as much as information to the students. It is designed primarily to assist students in developing thinking skills, problem solving and intellectual skills; to learn about a variety of adult roles by involving students in real or simulated experiences, and to create autonomous and independent learners.

Keywords: *process-based in science learning, problem-based learning*

A. PREFACE

Education has a considerable contribution to the intellectual life of the nation and qualified human resources preparation. Therefore, reform in education should always be done to improve the quality of education. The quality of a nation can be identified from the quality of education. History shows a good nation has a good education. Indonesia as a developing country must work hard to improve the quality of education to be more superior and competitive in globalization era.

In the context of educational reform, there are three main issues that need to be highlighted, namely the renewal of the curriculum, improving the teaching quality and learning effectiveness. Education curriculum should be comprehensive and responsive to social dynamics, relevant, do not overload, and accommodate the diversity of needs and technological advances. The quality of learning should be enhanced to improve the quality of educational outcomes. Specifically, it should be found a strategy or approach for effective learning in the classroom and empowering students potential. They are the focus of education reform in Indonesia (Nurhadi Senduk and Gerrard, 2003).

Renewal and improvement of the quality of education in Indonesia are done continually.

Government, through regulation no.19 of 2005 on National Education Standards, improves education in Indonesia to meet national education quality. In the national education standards there are eight standards that must be realized, i.e. content, process, competency, teachers and educators, facilities and infrastructure, management, financial, and assessment. They serve as a basis for planning, implementation, and monitoring of education in order to realize the quality of national education.

First and urgent step to realize the educational standards is realization standards of quality processes in science learning. Essentially, learning science consists of process, product, and attitude aspects. Nowadays, learning science tends to emphasize the process aspects. Generally, teachers teach science concepts as transfer of knowledge and lack of activity involving students in the science learning process. Consequently, science learning solely sharpens the remembering and understanding aspects which are a low order of thinking. These conditions give less opportunity for students to construct knowledge from their learning experiences. Therefore, the reform of learning science from low order of thinking into higher order thinking needs to be done. One of the ways is applying process-based in science learning.

B. DEVELOPING A PROCESS-BASED LEARNING IN SCIENCE

According to Gagne, learning is a process which enables organisms change their behavior due to experiences. Learning is a set of cognitive processes that change the nature of stimulation from the environment into a number of stages of information processing required to acquire new capabilities (Gagne and Margaret E. Bell Brigss in Gredler, 1994). The capabilities include intellectual skill, cognitive strategies, verbal information, attitudes and motor skills. These can be predicted as a result of learning. Those kinds of learning capabilities describe different actions or performance.

It can be concluded that learning is a process of change in a person's behavior due to experience in order to acquire the knowledge, skills and abilities gained from the process of cognitive and environmental stimuli. In order for learning outcomes as expected, the learning process should be effective.

Learning how to teach is a valuable educational activity. Educative value colors teachers and students interaction. Educative interaction occurs because the learning activities are carried out to achieve certain goals that have been formulated before (Syaiful, 1995). To achieve teaching objectives or competencies that have determined need the right classroom management.

A Good classroom management generates good teaching and learning interactions as well. Learning is a complex process, so it needs the right strategy in teaching to understand the characteristics of students. Student is a unique individual, so that not only cognitive aspects need to be developed, but also affective and psychomotor ones.

Wahidin (2006:9) states that in learning process students should not only have the scientific aspects, but also the skills and attitudes that can be used to solve problems in their life. This is relevant to the four pillars of UNESCO for education, i.e learning to know, learning to do, learning to be, and learning to live together.

Science learning activities can't be separated from a variety of constraints. Hopes that never fade away and always demanded is complete understanding of students in lessons that teachers delivered. But, how to realize an active and interesting learning is still a problem. To overcome these problems require innovative learning.

Innovation in the classroom needs to be done to realize the active, creative, attractive, and

effective learning. Therefore teaching paradigm of teacher must be changed, namely:

- From teacher centered into learner centered
- From competency-based learning into content-based learning
- From the product of learning into a process of learning
- From the summative evaluation into formative evaluation.

From that explanation, it can be concluded that process aspects need to get attention in learning process. Teachers should not only transfer knowledge to students, but also involve students' activities on how to construct or build the knowledge through the experience of learning.

Process based learning is a necessity to develop learning activities. Students must be trained how to construct knowledge and make it be more meaningful and stored in long term memory. This is in line with the opinion of Thomas M. Duffy and David H. Jonassen (1992), "Learning is active. Learning is an active process in which meaning is developed on the basis of experience".

In the view of constructivism, a human constructs or creates knowledge by trying to give meaning to the knowledge itself as appropriate experiences. That knowledge is a human construction and human gets new experiences constantly, so that is not stable. The understanding will be deeper and stronger after tested through new experiences. In this case the students need to be taught to solve problems, find useful thing, and express ideas that are useful for them.

Process-based science learning helps students store knowledge in long-term memory. Involving actively in learning process, students will get understanding easier. This is in line with the theory of information processing by Seifelt & Hufnung (1994) in Desmita (2005) shown in Figure 1.

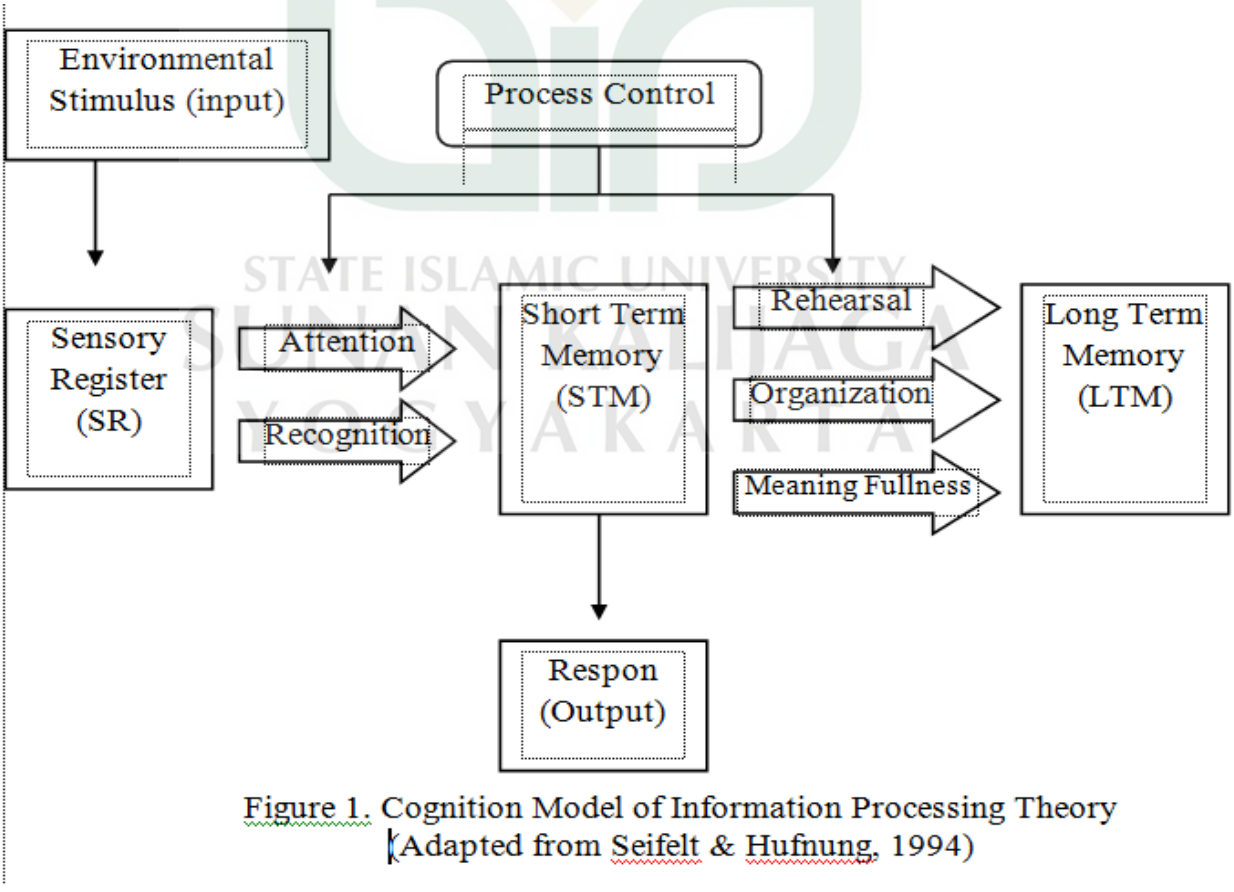

Figure 1. Cognition Model of Information Processing Theory
(Adapted from Seifelt & Hufnung, 1994)

From the information processing model, there are several main components: an environmental stimulus (input) Sensory Register (SR), Short Term Memory (STM), Long Term Memory (LTM) and response (output). When a student receives lessons (information) from the teacher (Environmental stimuli/input) through the senses, it will be stored temporarily in the Sensory Register (SR), a first storage memory. Sensory Registers record the information as what is received initially, but the information will disappear or not appear in two small sections. Information which gets special attention, such as demonstrations, observation, interesting and innovative learning media will be transferred to Short Term Memory (STM), the second storage memory, but the ability of STM accommodate only limited information, so that there is some information lost, the information can be captured then moves to the LTM, as a third storage memory. Information stored will be more permanent in LTM because it has an unlimited capacity, which can be invoked any time.

With the concept of process-based in science learning, it is expected to be a meaningful learning. Students are actively involved in knowledge construction and their thinking skills are more honed.

C. A PROCESS-BASED LEARNING IMPLEMENTATION THROUGH PROBLEM BASED LEARNING TO WELCOME THE IMPLEMENTATION OF CURRICULUM 2013

Science learning in curriculum 2013 is more emphasis on inquiry and scientific approach. One of alternative ways realizing the science learning that emphasizes the aspects of the scientific process and inquiry can be done through problem based learning.

Problem-Based Learning (PBL) is a learning model that is oriented towards problem solving developed from John Dewey's theory. To be able to solve the problem is required thinking process. Arends (1997:156) states that "Problem based learning is used in promoting higher-level thinking in problem oriented situations, including learning how to learn". According to Arends, Problem-based learning is a learning model that is used to increase the level of thinking oriented towards problems, including learning how to learn.

Nurhadi and Agus Gerrard Senduk (200:55) argues that "The Problem-Based Learning (PBL) is a teaching approach that uses real-world problems for students to learn about critical thinking and problem solving skills and to acquire the knowledge and the essential concepts of the subject matter". In PBL learning, students are required to be more active (student center), able to think critically, and solve problems. Teachers only present the issues, ask questions, facilitate the investigation, and do dialogue. Nevertheless, PBL teaching can't be implemented without developing a classroom environment that allows the exchange of ideas openly by teachers. Generally, Problem-Based Learning (PBL) presents to students authentic and meaningful problems that provide convenience to the students to conduct the investigation and discovery.

PBL is not designed to help teachers convey as much as information to the students. It is designed primarily to assist students in developing thinking skills, problem solving and intellectual skills; to learn about a variety of adult roles by involving students in real or simulated experiences, and to create autonomous and independent learners. According to Arends (2001:350), an illustration purposes PBL shows in the image below:

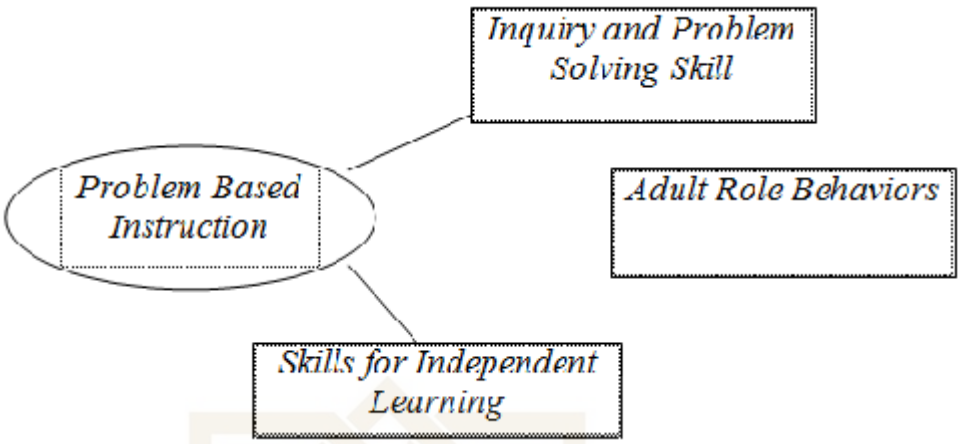

Figure 2. Learner Outcomes for Problem-Based Instruction

There are 5 special characteristics of problem-based instruction or problem-based learning (Krajcik, et al, 1994; Slavin, et al, 1992, in Arends, 1997:157): (1) Driving question or problems, (2) Interdisciplinary focus, (3) Authentic investigation, (4) Production of artifacts and exhibit, and (5) Collaboration.

PBL characteristics can be described in detail in the following description: Driving question or problems, PBL organizes around the questions or issues that are important socially and personally rather than on a certain academic principles. PBL is addressed to the real situation, avoids simple answers, in which there is a wide range of solutions with a variety of interests.

Interdisciplinary focus, PBL is selected on issues involving multiple disciplines, such as pollution problems due to the use of fertilizers by farmers which will involve biological, economic, social, tourism and government.

Authentic investigation, PBL requires following authentic investigation and looking for a real solution of real problems. Students must analyze and de f ne problems, develop hypotheses and make predictions, collect and analyze information, do an experiment (if necessary), and make conclusions.

Production of artifacts and exhibit, in the PBL students are required to construct a product in an artifact and exhibit that explains or shows the solution. Product could be a report, a physical model, or a computer program. This product was prepared by the students to be demonstrated to the others.

Collaboration, like the cooperative model, PBL is characterized by working with other people, in pairs or small groups. It occur the development of thinking and social skills.

Implementation of Problem Based Instruction (PBL) follows these phases (Arends, 2001:362):

Table 1. Phase (syntax) Problem Based Learning

Phases	Teacher activities
Phase 1: Orienting the issues to students	Teachers explain purposes of learning and all that needs to prepare, motivate the students to choose their own problem solving activities.
Phase 2: Organizing students to learn	Teachers help students determine and organize learning tasks related to the problem.
Phase 3: Guiding independent and group inquiry	Teachers encourage students to collect appropriate information, to conduct experiments and to seek explanations and solutions
Phase 4: Developing and presenting the artifacts and exhibits	Teachers guide students in planning and making a worthy artifact such as reports, videos, models, and help them work with other friends.
Phase 5: Analyzing and evaluating the process of problem solving	Teachers assist students in re f ecting the investigation and the processes they use.

From that explanation, it shows that the students have the opportunity to engage actively in the learning process. Therefore, Problem-based learning (PBL) could be an alternative way for science teachers to develop students' skills to higher order thinking.

D. CONCLUSION

Innovation in learning needs to be done to improve the quality of education. Process based learning is an active learning oriented on engaging students actively in constructing knowledge from a series of learning experiences. A process-based learning will make learning will not just be learning or transfer knowledge. It will make learning process be more meaningful. This implementation will ultimately enhance student competence, so it will contribute to the achievement of process standards and national education standards.

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MULTIPLE INTELEGENCY KEY TO SUCCESS FUTURE CHILD PRELIMINARY

By:
Sari Hernawati, S.Ag., M.Pd[1]

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ABSTRACT

The condition of the Indonesian nation after the Reformation, there was a massive change in the order of all aspects of life, both from the aspect of economy, politics and culture. These changes resulted in the Indonesian culture which began to shifted toward the pragmatic, hedonist and a liberal. All of which will impact on the morals and manners of the citizen began to shrink it rushes after materealis.

Education directed at how to create staffs are ready to fll in the spaces that are increasingly more competitive employment, which in the end values of moral education from neglected. The students, with all its potential is not developed to its full potential according to talent and intelligence, therefore the very essence of sublime values education is getting washed out. The condition of the Indonesian nation after the Reformation, there was a massive change in the order of all aspects of life, both from the aspect of economy, politics and culture. These changes resulted in the Indonesian culture which began to shifted toward the pragmatic, hedonist and a liberal. All of which will impact on the morals and manners of the citizen began to shrink it rushes after materealis.

A person's success in life is not enough to just set by the intellectual intelligence alone. Or in other words intellectually intelligent people not yet guarantee to be able to face any challenge and issues as well as the dynamics of a very complex life. One of them was Howard Gardner (1983) which offer what he named multiple intelligences (multiple intelligences).Education directed at how to create staffs are ready to fll in the spaces that are increasingly more competitive employment, which in the end values of moral education from neglected. The students, with all its potential is not developed to its full potential according to talent and intelligence, therefore the very essence of sublime values education is getting washed out. The condition of the Indonesian nation after the Reformation, there was a massive change in the order of all aspects of life, both from the aspect of economy, politics and culture. The intelligence of this compound will have a very powerful force, when maximized to form the students ' intelligence to ft the talents and interests of students. Students will develop with the force that exists in potential himself, so the educators in charge of guiding and directing students to achieve maximum potential in order to achieve the manners of noble. Success in life one doesn't quite simply determined by the intellectual intelligence alone. Or in other words intellectually intelligent people not yet guarantee to be able to face any challenge and issues as well as the dynamics of a very complex life. One of them was Howard Gardner (1983) which offer what he named multiple intelligences (multiple intelligences).

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1 Wahid Hasyim University, Semarang.

force that exists in potential himself, so the educators in charge of guiding and directing students to achieve maximum potential in order to achieve a sublime character.

A. Background

The value of morals, morals and a sublime for all citizens may not need to be challenged. A country or a nation could collapse because some people behave of f cials and unscrupulous. Unscrupulous behavior will bring up the riots, not serve Inari, perversion and others which led to the destruction of a people. They do not have a handle in the life of a country and nation. Therefore, the values need to be taught in order for the current generation and future are able to behave in accordance with the expected moral. The intelligence of this compound will have a very powerful force, when maximized to form the students ' intelligence to f t the talents and interests of students. Students will develop with the force that exists in potential himself, so the educators in charge of guiding and directing students to achieve maximum potential in order to achieve the manners of sublime to success in life one is not enough.

Attainment of the immoral, Indonesia human character, noble character and lofty ethical goal of human development is Indonesia which are then implemented into the national education goals. Indonesia is fully human is a human who has manners. Manners are a mix of results ratio and taste which manifests in human behavior and intention. Character meaning good behavior, wise and humane. Background of the important the value of morals, morals and a noble for all citizens may not need to be challenged. A country or a nation could collapse because some people behave of f cials and unscrupulous. Unscrupulous behavior will bring up the riots, not serve Inari, perversion and others which led to the destruction of a people. They do not have a handle in the life of a country and nation. Therefore, the values need to be taught in order for the current generation and future capable Council.

Education is a very important thing for kids or acquired adult. Education became one of the capital for a person in order to be successful and able to succeed him. Through the educational potential of children as well as adults can be developed, because essentially every student has the potential and characteristics of intelligence itself. The potential of living become potential, will not be useful if not developed. Potential student who has developed and has become the ability to face the question of life, that's called intelligence. Attainment of the immoral, Indonesia human character, noble character and lofty ethical goal of human development is Indonesia which are then implemented into the national education goals. Indonesia is fully human is a human who has manners. Manners are a mix of results ratio and taste which manifests in human behavior and intention.

Potential students are not maximized through education that will be experienced by the children of the nation will cause human resources wasted. The nation's resources and will be the country that useless as it will only damage the order of development capital is citizens themselves, hence this article will elaborate on the importance of education to maximize the intelligence compound in education. That will determine whether or not the excellence of the superior resources of a nation in charge of life. Education is a very important thing for kids or acquired adult. Education became one of the capital for a person in order to be successful and able to succeed him. Through the educational potential of children as well as adults can be developed, because essentially every student has the potential and characteristics of intelligence itself. The potential of living become potential, will not be useful if not developed. Potential students who have developed.

B. Discussion

1. Develop intelligence compound

The success of someone in life is not enough just determined by artificce intellectual course. Or in other words a smart man in an intellectual manner not guarantee to be able to face all challenge and controversies as well as the dynamics of life are extremely complex. One of them is Howard Gardner (1983) that offers what a called of multiple intelligences (intelligence compound). He criticized way of measuring one's intelligence only in terms of intellectual course. He noted that the success of someone determined by some intelligence. In his book the frame of mind: the theory of multiple intelligences says that there are eight different types of intelligence, namely intelligence linguistics mathematically-logical, spatial, corporeal-kinesthetic manner, musical interpersonal, intrapersonal and naturalist (Efendi, 2005: 135-160).

Gardner said that intelligence is a series of skills (a set of skills) in problem solving a someone able to break back problems he faced, or difficulties are creating products effective and shall include potential discover or solving a problem (Efendi, 2005: 93). Briefy to be said that intelligence is capability of someone to be able to face all the problem and challenge life with setting (the idea of) that different. Intellegence lingustics is the ability to use a word effectively, either spoken and written. Besides intelligence is also includes ability to manipulate, the structure of a language phonology or sound of language, semantic, or of language meaning a pragmatic dimension or practical use language, rote, eksplanasi and metalanguge. Intellegence of mathematically-logical is the ability to use the points with good and doing correct reasoning. Intelligence is also includes sensibility in a pattern and a logical relation.

Intelligence of mathematically-logical is the ability to use the points with good and doing correct reasoning. Intelligence is also included in a pattern of sensitivity, and a logical relation a statement and a postulate, the function of logic and ability of abstract. Intelligence is capability spatial expressing the world spacial-visual of accurately and the ability to transform the perception of the spatial-visual meant in all aspects of life. Besides intelligence is also includes sensitivity to color, a line, the shape and the relationship between the elements of explanation and metalanguage. Intellegence of mathematically-logical is the ability to use the points with good and doing correct reasoning. Intelligence is also includes sensibility in a pattern and a logical relation

The ability to imagine, presented an idea visually or spatial, and orienting themselves in spatial matrik practices accurately. Intelligence of physical-kinestatik is using the whole body of expertise to express ideas and feelings, skill use of the hands to create something, and physical performance specif, such as: power, pliability; the speed and those things which pertain to the touch. Intelligence is capability of musicals appreciate the lands of a musical form, distinguishing, composes and to expressing. Intelligence is also includes sensitivity to rhythm, a pattern of tone or melody, and color tinge or shade of the sound of a song.

Intelligence intrapersonal is the ability understand yourself and acted on the understanding. Besides intelligence is also includes the awareness of mood, mean, motivation, temperament, desires, discipline themselves, and the ability to appreciate self. Intelligence naturalist is the ability to recognize and categorizing species of fora and fauna in an environment around. Intelligence is also includes sensitivity to other natural phenomena, and the ability to discern objects not live with objects of other living. Gardner said that any person to achieve success in life living must have some intelligence. It does not mean should be all (8 intelligence) is on a person. Perhaps 2-4 intelligence, but one that stands out.

Later in his invention of the next, he is still add more one intelligence that is the existential

(Suparno, intelligence et.al, 2002: 46). The concept of intelligence compound is a concept that uninspiring and challenge to become study theoretical or the implementation of emperical in the world of education and teaching.

Develop intelligence compound child is the major key to the success of future children. As an old man the present time we often pressing for a child with high achievement in academic in school become a champion. Develop intelligence compound child is the major key to the success of future children. The role of an old man in giving training and environmentalists who support is far more important in making intelligence a child.

The success of future front of the kids nation will be a source of power, the state of being superior because intelligence compound will require tough personal the son to have life in the face of challenges that big ego and pragmatic. Life being balanced is to be formed on the self children nation through the ability to optimize the use, intelligence compound with compound of intellegence will bring into a personal success. With personal success will make a person ' s executive whose success as well.

John Wareham (1992), said there were 10 years and basic element to become executive whose success as follows: 1. The ability to display a charm self proper. 2. The ability to manage energy self good. 3. The clarity and health value system personal and contracts inner. 4. Clarity of life target is expressed or implied 5. Intelligence that adequate (in the sense of reasoning) 6. The habit of good working. 7. Skill between humans good. 8. Capability of adaptation and maturity emotional. 9. Patterns of personality which precise with demands work. 10. Conformity stage and direction of expectatian of life style.

Dale Carnegie (1889-1955), don't even mention intelligence explicitly (in a general sense) as element of success he said that to succeed needed 10 (ten quality) is: 1. Con fdence based on self-concept a healthy, 2. Skill communicate good 3. The skill of a good, between humans 4. The ability to govern themselves and others, 5. Attitude toward the person, positive test and the self, work 6. Skill sell the idea, and the idea 7. The ability to recall good 8. The ability to solve the problems, stress and feeze, 9. Enthusiasm ferce and 10. Insight living broad.

So it is obvious that intelligence, which is usually measured by a scale iq, is not a single element or ticket to success. John wareham, conclude of the above and when she was interviewed tens of thousands of would-be executive and supplies thousands of executive to a lot of company in its role as "head hunter". So also Dale Carnegie arrived at the conclusion after he interviewed many fgure successful contemporary at the time and after reading thousands of a biography and his autobiographical the success of all sorts of the feld of life.

2. Implication intelligence Compund in Manners

The challenge different lives on each individual, requiring mentally tough, intellectual adequate, and strength spiritual agency, high the intellectual ability, spiritual man and emotional balanced will create human really tough. Readiness of man be able to stand in life the era of hedonism, materalism requires of strong behavior. So human need the manners, because the manners of this is needed, containing the meaning of good behavior wise, and humane. The manners of was supported by the power of spiritual man that is, the ratio, taste, and intention which eventually came into behavior that can be measured and becomes a reality in life.

Education is a very important thing to be procured children or adults. Education became one of capital for someone so as to be successful and able to achieve success in her life. Remember

the importance of education and the government must be articulated programs of compulsory nine years. To change our curriculum and to try to accommodate the needs of the students.

Intelligence intellectual not only includes intelligence logic and verbs, but also to be seen of the aspect of kinetic, musical, visual-spartial, interpersonal, intrapersonal, and naturalist.

We tend to only respect a person who is expert in the ability of logic and language. We need to give attention being balanced against people who are having talents (a) in the intelligence that others. See how important the learning process for humans, despite few or many role of teacher is very important. The teacher as fgures of personal, human of "monopluralis" having many weakness and excess. However, weakness possessed a teacher should not block of for a learning process itself.

Considering man is a human of "monopluralism", the man having many sides natures (plural), but, it is one unifed whole. If viewed from his place, the arrangement of, and by its very nature, human nature is "monodualis".

As creatures of the lord and as creatures of individual comprising the soul and body. The teacher in the process of learning also be looking at students as creatures of "monopluralis". Thus then all potentials owned by students can thrive with optimal.dan all potential they shall inherit it can be used to humanize human in the process of learning.

C. Cover Conclusion

1. Drawing Conclusions

The state requires a source of human resources development, who excels in flling superior human resource determined by a citizen who has intelligence and magnanimity a noble mind. Intelligence a child not only determined by artifce intellectual, or intelligence in mathematical.

Human born with talent and bring interest diverse, therefore it is not fair when as parents and educator, society demanding someone to have uniformity in intelligence mononton, therefore intelligence compounded of optimized will form of private men it as a person who has the manners which is sublime and independently. Required by the nation to embody nation prosperous and dignifed.

2. Suggestions And Recommendations

In giving of learning, we can use the framework of intelligence compound in carrying out the process of teaching widely. Activity that can be done as drawing, created the song, listening to music, and saw the can into the entrance of a vital into the learning process. Even students who his less good at learning process using patterns of traditional (emphasizing language and logic). If this activity performed would bring them to the spirit of them to learn.

With wit compound, then we will provide an opportunity for a student to study in accordance with their needs, interest, and his talent. The role of the old man and society will increase in support of learning process. This could happen because every activity students in learning process will involve a member of society. Students will be able to show and tobe share abaout excess fle. Build excess that they will give a motivation to make students as a specialist.

By the time you teach to understand students will get learning experience a positive and improve its ability to fnd a solution in solving the problem that it faces. Intelligence compound give the view that there are nine kinds of intelligence that is shared by everyone. That differentiates between one to the other is a composition or domination of intelligence.

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DEVELOPING STUDENT'S ADVERSITY QUOTIENT (AQ) THROUGH INSPIRATIONAL STORIES

By: Sri Sumarni
Major of Islamic Education
The Faculty of Tarbiyah Science and Education
STATE ISLAMIC UNIVERSITY SUNAN KALIJAGA

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Abstract

Adversity Quotient (AQ) is the intelligence in struggling to overcome difficulties. A climber type student has a high AQ. This type of student is persevere, tenacious and tough in facing difficulties. They always strive to find the way out when facing difficulties. They never let anything get in their way to their dreams, that is why AQ is really needed in learning process, whether it is at home or at school. With that said, student's Adversity Qoutient needs to be cultivated continuously and to be applied in any learning, i.e through inspirational stories that touch and awaken student's conscience to be able to change and improve. With their imagination and high ability to imitate, school children will easily copy the struggling of children around the world. The stories may be taken from many sources, such as stories of great people who went through hardships during their childhood, like Rasulullah SAW and his friends, story of the president of South Korea, president of South Africa and other stories of children who became heroes to their families and friends.

Keywords: ***Adversity Quotient, Quitter, Camper, Climber, and inspirational stories***

A. Introduction

The ranking system applied to students is good in a way, to develop their spirit of competition, but on the other side is defled when the ranking was only based on student's cognitive skills and ignores other aspects (like psychomotor and affective skills). Moreover, ranking system could have a potential to create a level gap in class, a proud for those achieving first rank, second or third, and made student whose position was at the bottom feels inconfident. Ranking system could also drives students to do whatever it takes (by cheating) for them to achieve the top rank (Sudarman, 2012).

The fact is, there are many parents still hold that achievement and intelligence of their children were laid only on written test, especially for certain subject; like science and math. Parents get disappointed in an instant when their children got unexpectedly low scores on those two subjects even if scores on other subjects or morals were fne. As did parents when their children got high scores on those two subject, while underestimating other subjects or moral values. There are even parents who force their children to take major science class eventhough their children obviously were not qualifed enough for that. Most of the reason they do it was no other than for the sake of dignity.

It would be better if every single students and parents were given the representation of each children's achievements or ability as mentioned in the theory of multiple intelligence by Howard

Gardner. It is said that being clever/smart is not only happened when children shine for math and science subjects. There are many intelligences every students have (for example, mathematics, literatures, science, musics, interpersonal intelligence, kinesthetics, spatial, et cetera). A student may be good in math but they should be noticed that they have other abilities and intelligences that their friends do not have, for example kinesthetic or intrapersonal intelligence. It could be a better thing because it develops confidence in students as well as parents.

Something author think was important is how a teacher is able to engraft values and skill for students to face the reality in life. In other words, it is how students could develop their intelligence in overcoming every problems they were facing in life, in order to be an independent person and able to survive in all kind of situations and conditions. It means that real experiences are more useful than just mastery of strict theories attached to students, which in author's opinion relevance is very far from the real life. Thus, simulation, role playing, problem solving, brain storming and inspirative story telling related to reality these days, in author's opinion, are more helpful than constraining students to answer closed questions with textual answers from books they read, that only rely on student's memory.

This fact at the same time shows that intelligence can be contextual. The problem students facing or the context are important factors when considering to put citation of intelligence. As Stoltz (2000) said, it is not only IQ or EQ that determine one's success, but another one factor which has incredible influence to one's success, that is intelligence in overcoming a trouble also known as adversity quotient (AQ). AQ can be improved, hence student with low AQ may improve to be one with higher AQ.

Someone whose AQ is high would not give up easily in facing a challenge. They are the philosopher as well as warrior who always consider and fight for every possibilities, also they would never let anything get in their way to their dreams. Student with AQ never give up hopes in going through education, including in working on assignments given by their teachers. This potentital, of course, will be very useful when applied at school. The problem is how to integrate the AQ to learning process. This paper tries to integrate AQ to learning. Integrating AQ to learning in this case is not in the form of learning model development, but at the level of concept study.

B. Definiton of Adversity Quotient

Adversity Quotient (AQ) is an intelligence in facing difficulties (Stoltz, 2000). There are other widely used terms that are similar to that, such as AQ is the potential to be persistent (Subiyanto, 2006), AQ is them mental reliability (Laksmono, 2006), and AQ is the intelligence of being tough (Effendi, 2005). Assad (2012) stated that AQ is an intelligence gained by people after having difficulty and misery of life. As Stoltz (2000) claimed, htere are three forms of AQ: (1) AQ is a new conceptual frame to understand and improve all features of success, (2) AQ is a measure to know one's respond to handle difficulties, (3) AQ is a series of tools which have sciential basic to improve people's respond on difficulties. Moreover Stoltz (2000) stated that AQ may predict these features: outcome, motivation, empowerment, creativity, happiness, vitality and excitement, emotional health, physical health, diligence, productivity, knowledge, energy, hope, endurance, behavior, long life and respond to change.

A kid with high adversity intelligence is able to process information from their suroundings effectively, thus they face challenges easily and creatively in finding various alternatives of solutions, managing their behaviour properly, able to protect themselves from any bad influences, and learning from their experiences.

Most of the time, children are friendly and be familiar with their environment easily. They also creative, innovative, confident dan hold strong motivation. They are able to find positive source of happiness, believe in their skills to overcome various challenges and obstacles, also having high fighting spirits and never give up. These children usually appear as healthy children, rarely fell ill, rarely have indigestion, do not experience insomnia, and do not have behavioral disorder like biting nails, pulling hair, being angry or sobbing for no reason, fussy, anti social, et cetera.

Children whose adversity intelligence are fine would not stressed easily, that the adrenalin produced in proper amount. Children who stressed easily will experience hormonal disorder, running out of vitamin and minerals, weakened imune system, hence will be easily fell ill.

One's success in work and life is highly influenced by AQ. People with high AQ would not blame other party for trouble they are facing but being responsible to fix the problem. They do not easily complain nor despair even in the worst condition. On the contrary, with all their limitations, they are capable to think, act and make strategies to move on. Otherwise, low AQ means dullness of life durability. One with low AQ complains all day when going through hardships and unable to see wisdom inside the problem they are facing.

Stoltz (2000) described this life as like climbing a mountain. When someone reach the top of the mountain, it means that they has overcome trouble. The term "mountain climbing" in the context of education means: passing an exam, achieve high scores on certain subjects, be a winner at some championship, mastering certain subject, being a leader in school organization, gaining scholarship, et cetera.

C. Components of Adversity Quotient

Four main component of AQ according to Stolz (2000) known as CO2RE consists of C = Control, O2 = Origin and Ownership, R = Reach, and E = Endurance. These four components really influence someone's success, because they may form one's mindset, which is how to see this life.

Control asks how much (strength) someone has over some event that cause hardships. The higher score in C dimension, the bigger possibility for someone to have a strong control over a problem which is met. On the contrary, the lower score in C dimension, the bigger possibility a person felt that the trouble was out of control. Stolz (2000) proposed the tendency of people whose score is low in C dimension. For example: that is beyond my reach, ther is nothing I can do, and it is impossible for you to fight, because they are board members. Furthermore, Stolz (2000) proposed some examples of expressions by people with high AQ: wow, this is hard, but I have seen harder, there must be something I can do, there is always a way, brave people will win, and I should find another way.

Origin and *Ownership* asks the origin of hardship and how far a person admit that hardship they are facing. The origin and ownership component known as O2. The higher O2 score the bigger possibility someone see that success was always there and main cause came from the outside. On the contrary, the lower O2 score, the bigger possibility of someone thought that the cause was themselves. When they make an achievement, they will think that the success came from luck which is caused by other people or factors.

According to Stolz (2000), those whose origin score is low tend to think: (a) it was all my fault; (b) I am really stupid; (c) I should have known that; (d) What was I thinking?; (e) I do not understand; (f) I have mess up everything; and (g) I am such a failure. Furthermore Stolz (2000)

proposed that people whose origin respon is high will think: (a) It was not the right time; (b) the whole industri is in pain; (c) everyone is having hard days lately, he/she is just not in a good mood; (d) some of team members did not contribute; (e) my kid was ill and I should stay up late to take care of him/her; (f) no one could predict this; (g) there are some factors in it; (h) the whole team members disappoint ore hopes; (i) after all consideration I knew I should not take this job or program.

Reach asks how far the hardship will reach other aspects of one's life. Low AQ will let the hardship seeps to other sides of someone's life. Meeting that did not go well will screw all activities on that day; conflict may ruin a relationship; negative assessment of outcome will slow down one's career, that will then cause a financial panic, sleep disorder, bitter, stay out of people, and bad decision making. The lower reach component score the bigger possibility of someone consider bad things happened as disaster and let it escalate. Of course this will hamper the way to success, and the worst is it is very dangerous because it will make damage when uncontrolled. Conversely, the higher one's R component score, the bigger possibility for people to limit problem's reach on the event they are facing.

*Enduran*ce asks two related things: how long the hardship will go and how long the cause will last. The lower a person's E score, the bigger possibility to consider that hardship and the cause will last long, or even forever. For example, frustated people commit suicide or get depressed. The higher E score, the bigger possibility to see a success as something that will last long, or even permanently. This kind of people consider a problem and its cause as something temporary, will be gone in a flash and seem to never be happened again. This will improve one's energy, optimism, and the change to act. These people is used to think positively, be grateful of what they have, having a good life, love to socialize, caring, and full of spirit.

D. Types of Adversity Quotient

Stoltz (2000) proposed three types of AQ: *quitter* (low AQ), *camper* (medium AQ and *climber* (high AQ). A quitter is someone who tries to get away of problem. Some characteristics of quitter are: minimum effort, backing off when seeing difficulties, and afraid to face their problems. They give up their dreams and take paths that are smooth and easier for them. They are tend to be cynical, gloomy and cold-hearted, or being grumpy and frustated, blaming people around them and hating people who strive to move forward. Quitters are also often became alcoholic, and drugs addicts. They seek escapement to find peace for their heart and mind, they run away from the effort to improve, which also means that they are ignoring potentials they have in this life. Quitters are those who think that math is complicated, hard, confusing, and such a pain. They are low motivated, thus giving up once they found some difficulties at finding solution on math problems and stop without any effort.

A *champer* type is a kind who do not take big risks and satisfed only with what they have or the condition of they are now. They often ignore possibilities they are going to get. This kind of people satisfed easily or feels okay just being at the middle. Champer ones feels good enough with their own illusion of what has been there, and sacrifce the possibility to see or experience something that probably be happened. They do not maximize their effort even if there is a chance and opportunity. There is no effort to study harder. When studying mathematics, champer students do not study as best as they can, they just study. They think high score is not necessary as long as they passed the exam, achieving top rank is not necessary as long as they make it to higher grade.

Climber type is the kid who has goals or target. To accomplish that goal, they are capable

to fght diligently and perseverly. Moreover, they are brave and discipline. Suppose that they are willing to climb to the top of the mountain, then they will keep trying until they are sure that they have made it to the top. This type of people have good AQ. Climber type students like studying math. Assignments given by their teacher are completed properly and on time. When they fnd mathematic problems that are hard to solve, they will try their best to solve the problems. They do not know the word giving up. They will try various ways and methods. They also brave and discipline. They are the participants of many olimpics, like mathematics, physics olimpics, robot designing contest, English contest, as well as participat of many sport championships like karate, badminton, athletics, cycling, also in art performance such as singing, drumband, poems, music performance, et cetera.

E. Improving Adversity Quotient for Primary School Students

Stoltz (2000) proposed that LEAD concept is very effective in helping people to create permanent improvements of AQ as well as in responding hardships. LEAD is L = listen (listen to your respond regarding hardship), E = explore (explore the origin and your ownership on the efect occurs), A = analize (analize the evidences) and D = Do (do something/act).

Cultivating children's AQ is not only teacher's responsibility, but also parents, who have a big role. It is often found that parents foster their children by spoiling them. Fostering and educating by spoiling children is defective, it makes children sappy. Seligman in Arswandi (2006) stated that, "spoiling children is a process to powerlessness or duping." Consequently, there are many adult children, even those who have been graduated cannot cope with problem even the simple ones and still have ask for other people's help, especially their parents.

Why many children get frustrated nowadays? That is the symptom seen when someone cannot overcome trouble they were facing. According to Barlianto (2007), parents tend to shower their children with facility or easiness, hence children's AQ is not developed. The fault lies on the easiness or facility that is not followed by giving a chance to children to try to solve the problem frst. Consequently children are accustomed to receive something with no effort, or even it could be children escaping when they see problems. For example, a child found diffculties in studying math. To help the kid, parents provide him/her with extra course on mathematics. That made the child dependent to teacher and not getting motivated to study math. If that has already happened, try to slowly change the foster pattern on children, so they have the opportunity to solve their own problems and grow to be "tough" children.

Furthermore, parents can cultivate children's AQ by: (a) not to grant children's wish easily, (b) tell stories of success of people who have overcome diffculties, (c) remind them to hold on when facing hardships, (d) persuate children to know themseleves, their weaknesses need to be removed and skills that have to be improved, (e) persuate children to pray earnestly and surrender all the efforts to God, (f) when they failed, explain that God will make it up with something better.

Do not grant children's wish easily. When children ask for something, fnd a way so they would make an effort. Do negotiate with the children. For example, when they ask for toys, tell them that they have to collect their pin money. Once the money is collected as much as needed for the toy that is wanted, the toy can be rewarded. Try to give reward in regard to efforts on changing bad behaviours. For example, buy them toys only if the kid confdently work on assignment before their friends in class, or wake up earlier. Observe for a month, if something is changed then the toy can be given. If nothing occurs, then delay buying toys for children until something is changed, even just a little.

F. Inspirational Stories to Improve AQ

Inspirational stories may touch and awaken children to change and improve. Lead by their high imagination and ability to imitate, primary school children will easily imitate stories that inspire them. The stories can be come from various sources. Their suroundings with many kinds of people and their characteristics could be awakening stories. Collected inspirational works may come in the form of books, movies, uploaded to the internet, or spread by the word of mouth. Stories which uplift children's spirit to perform kindness and build their intelligence to "fght" (AQ) are indeed veluable learning.

One of the inspirational stories is the story of pressident of South Korea, who also a former CEO of Hyundai, Lee Myung-Bak. Lee was born in Osaka, Japan on December 19th, 1941. He has been familar with poverty since his childhood as his father was a farmer while his mother sold vegetables, but because of his persistence and hard work for 22 years, he made it to the top position as CEO of Hyundai. After being a CEO of Hyundai, Lee stepped in to politics and elected as the mayor of Seoul. It was not all that. In 2005, Lee Myung-Bak was elected as the president of South Korea. How amazing! Son of a poor farmer eventually be the top person in industrial developed country like South Korea. That is why Lee Myung-Bak is called "Bulldozer" who strike all the obstacles in front of him with no mercy (Assad, 2012). Other stories are stories of 5 Incredible Kids written below **(**http://maskolis.blogspot.com/2011/11/inilah-5-bocah-cilik-yang-sangat-luar.html).

We might never thought of doing these kind of things in situations these kids were in when we were young. At that time, probably the most crucial moment was when our wishes were not granted by our parents. Here are some of the story about 5 incredible children who did something great eventhough people thought they are "small":

1. Nathan Thomson, a 9-years old kid who saved his mother from being stabbed by unknown man

The kid was stabbed at his face when he was fghting to save his mother from an unknown man. Nathan Thomson jumped to Hugh Clark's back, a drunk man who intended to stab Nathan's mother, Ena, while they were walking on the street at night. The drunk man turn into Nathan and unsheathe his knife to Nathan after stabbing Ena 8 times. Fortunately, both of them were safe and this event was handled by the authorities at the spot.

2. Charlie Simpson, a 7-years old child who cycle around the town to collect donation for earthquake survivors in Haiti

Charlie started his effort with simple message, "My name is Charlie Simpson, I am conducting a sponsored activity, cycling for Haiti, because was an earthquake and many people died. I want to collect money to buy foods, water and tends for Haitians." Charlie wished to collect 500 euros by cycling 15 miles around the city park. However his effort had touched many hearts and he succeeded collect 120.000 euros for Haitians.

3. Lin Hao, a boy who saved his classmates during an earthquake

Lin Hao was at 2nd grade at primary school and was a class leader for 30 of his friends. When an earthquake happened, the whole building collapsed and befell into Lin Hao and his friends. The entire class tried to safe their lives. However before he escaped from the disaster, he went back to the ruins and saved two of his friends who were stucked between debrises. Being asked why he would risk his life for his friendsm he simply answered, "I am the class leader and I should be responsible for my friends."

4. Alexis Goggin, a 7-years old kid who made her body as a shield to save his mother's life

Alexis Goggin, the 1st grader girl at primary school was cited as "an angel from heaven" after jumping in front of an armed man and made her body as a shield against 6 bullets aimed to her mother. The mother, Selietha Parker, 30, was shot at her left temple and arm by her raging boyfriend. Before he shot another bullet to Selietha, Alexis jumped in fornt of the man and plead not to kill her mother. Fortunately, both of them were safe.

5. Ibrahim Ouaida, a 8-years old boy drowned after saving his sister's life

It happened when Ibrahim swam at Sandridge beach, Melbourne with his 10-years old elder sister, Sarah. A big wave came at once and swiped them to the sea. His sister kept asking for help. Ibrahim came and screamed, "I'm coming, Sis, I'm coming!" Ibrahim pulled his sister's head to the surface and kept them afoat shile saying, "I love you, you will be okay." When a lifeguard came, Ibrahim asked to safe his unconsious sister and said, "Please safe her, my mother needs her, she is so precious." After the lifeguard brought Sarah to the beach and look for Ibrahim, he had gone. For his bravery, he was given a "Bravery medal" by local government.

G. Conclusion

According to the expalanation stated above, it can be concluded:

1. Adversity Quotient (AQ) is an intelligence in fghting against hardship. Three types of AQ according to Stoltz (200): the Quitter (low AQ), Champer (medium AQ) and Climber (high AQ). Characteristics of a Quitter includes: minimum effort, step back as they see diffculties and afraid to face problems. Champer types are the ones who would not take big risks and being satisfed with conditions they already have or position they achieved. They also ignore possibilites they might get. Children with fne adversity intelligence love challenges, do not get stressed easily, so adrenaline are produced properly.

2. Students with high AQ or Climbers are tenacious, diligent and tough when facing troubles, always think positively, keep moving and fghting to reach the top. They always strive to fnd solutions for their problems. They never let something block their way to their dreams. Thus, AQ is necessary for student in their learning process, whether it was at home or school. In real life, these people keep moving forward adn see challenges as opportunities. An obstacle may be disaster to someone, but it is a gift for them because it will take them to the top. These are the people who will succeed in fulflling their dreams.

3. Therefore, Adversity Quotient need to be cultivated for children and to be integrated into every learning. One of the way to do that is by telling inspirational stories which touch and awaken children's conscience to change and improve to be a better person. Having high imagination and ability to imitate, primary school students will easily imitate stories of struggle of children around the world. Those stories may come from various sources, stories of great people who overcame hardship during their childhoods, such as Rasulullah SAW and friends, the president of South Korean lee Myung-Bak, the president of South Africa Nelson Mandela, and aforementioned stories of children who became heroes for their families and friends.

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