INTERNATIONAL PROCEEDING



ELISANIC GNIVESIA ELISANI KALIJACA YOLGYAKARA



PROCEEDING INTERNATIONAL SEMINAR

"OPTIMIZING OF MULTIPLE INTELLIGENCES TO EXAGGERATE HUMAN POTENTIAL TOWARDS VIRTUOUS CHARACTER"

Editors:

Saedah Siraj

W. Allan Bush

Jainatul Halida Jaidin

Fitri Yuliawati



Teacher Education "Madrasah Ibtidaiyah"
Faculty Islamic Education and Teacher Training
Islamic State University Sunan Kalijaga
Yogyakarta
December, 19th 2013



PROCEEDING INTERNATIONAL SEMINAR

ON THE 1st SUMMIT MEETING ON EDUCATION, THE END OF THE YEAR 2013

"OPTIMIZING OF MULTIPLE INTELLIGENCES TO EXAGGERATE HUMAN POTENTIAL TOWARDS VIRTUOUS CHARACTER"

SUNAN KALIJAGA

YOGYAKARTA

Hak Cipta Dilindungi Undang-undang

Copyright @ 2013 xii, 337; 21 x 35 cm

ISBN: 978-602-14483-2-8

Editors:

Saedah Siraj

W. Allan Bush

Jainatul Halida Jaidin

Fitri Yuliawati

Penerbit:

BUKU BAIK

Ngringinan, Palbapang, Bantul, Bantul, Yogyakarta, 55713

E-mail: penerbitbukubaik@yahoo.com

DAFTAR ISI

KATA PENGANTARx
CAPACITY BUILDING BASED ON MULTIPLE INTELLIGENCES THROUGH
EDUCATION(SOCIOLOGY PERSPECTIVE: CHARACTER AND DIGNITY)
ISTINGSIH
THE IMPORTANCE OF EDUCATING CHILDREN
SAEDAH SIRAJ9
PENERAPAN NILAI MURNI MELALUI PEMBELAJARAN SAINS: PENGALAMAN
MALAYSIA
LILIA HALIM13
LEADING BASED ON THE HUMAN RESOURCES COMPETENCE AND
COMMITMENT
W. ALLAN BUSH21
CHILDREN'S CONCEPTIONS OF LEARNING
JAINATUL HALIDA JAIDIN25
ASSESSMENT INSTRUMENTS DEVELOPMENT OF SPIRITUAL
INTELLIGENCE AS A CHARACTER-FORMING ALTERNATIVE LEARNERS
ANINDITYA SRI NUGRAHENI
ANINDII IA SIU NOGIAILENI
IMPLEMENTATION OF PORTFOLIO ASSESSMENT MODEL ON THE CHARACTEI
OF RESPONSIBILITY AND INDEPENDENT LEARNING
JAMIL SUPRIHATININGRUM41
JAMIL SOI MIMININGNOM1
DEVELOPMENT OF TEACHING MATERIALS WITH INDONESIAN COOPERATIVI
MODEL FOR IMPROVING INTERPERSONAL AND INTRAPERSONAL
INTELLIGENCE CHILDREN AT ELEMENTARY
SCHOOL FIFTH GRADE
ALFI LAILA & MOH. BASORI47

OPTIMIZING MULTIPLE INTELLIGENCE THROUGH THEMATIC
LEARNING IN EARLY GRADE STUDENTS OF ELEMENTARY SCHOOL
AMALIYAH ULFAH & M. TOLKHAH ADITYAS117
THE BASIC MOTIVATION IN FORMING BEHAVIOR ABSTRACT
MOCH. FATKHURONJI125
ALTERNATIVE OF LEARNING MODEL
WITH SOCIAL LEARNING BANDURA
INDRYA MULYANINGSIH133
THE MODEL OF IMPLEMENTATION OF EDUCATION FOR SUSTAINABLE
DEVELOPMENT (ESD) IN THE ISLAMIC ELEMENTARY SCHOOL
ZAINAL ARIFIN143 V
CREATING POSITIVE LEARNING ENVIRONMENT IN ELEMENTARY SCHOOL/
ISLAMIC ELEMENTARY SCHOOL BASED ON INTEGRATIVE-THEMATIC
APPROACH IN INCLUSION CLASS
ZIDNIYATI149
INDONESIAN RELISTICS MATHEMATICS EDUCATION THROUGH MULTIPLE
INTELEGENCE AT ELEMENTARY SCHOOL
IDA NURMILA ISANDESPHA & DILA NURROHMAH159
BUILDING ISLAMIC-SCIENTIFIC INTEGRATION BASED LEARNING
TOOLS FOR MI 5TH GRADER ON KEY SUBJECT
"OW LIVING THINGS ADAPT" ORIENTED TO GUIDED DISCOVERY APPROACH
FITRI YULIAWATI165
DUALISM AND INTEGRATION ISLAMIC EDUCATION AND GENERAL EDUCATION
IN INDONESIA
SITI JOHARIYAH175 V
FAMILY EDUCATIONAL INSTITUTION IN THE FRAME OF ISLAMIC
RELATION AND SCIENCE TECHNOLOGY
NADLIFAH

HUMANIST-RELIGIOUS EDUCATION	
(The Concept and the Implementation of the Humane Education	
MIN 1 Vogralante en Science Learning)	
MOH. AGUNG ROKHIMAWAN	197
THE OPTIMIZING OF MULTIPLE INTELLIGENCES FOR INCREASING	
THE POTENTIAL TOWARDS HUMAN VIRTUOUS CHARACTER SUMMIT	
MEETING ON EDUCATION THE END OF THE YEAR 2013 YOGYAKARTA	207
FAUZAN & ASEP EDIANA LATIP	20 /
MAINSTREAMING MULTICULTURAL STUDIES FOR RADICAL ISLAMIC	
MOVEMENT IN YOGYAKARTA	
NUR HIDAYAT	219//
THE DEVELOPMENT OF MATHEMATICS LEARNING PRODUCTS BASED	
MULTIPLE INTELLIGENCES	/
LULUK MAULUAH	229 🗸
A REFLECTION OF A BASED ON CHARACTER BUILDING	
EDUCATION	220 / /
MAEMONAH	239
THE ANALYSIS OF ERROR IN ANSWERING MATHEMATICS QUESTION I	V
CLASS OF SD/MI IN YOGYAKARTA CITY	
ENDANG SULISTYOWATI	247 🗸
STATE ISLAMIC UNIVERSITY	•
THE IMPORTANCE OF VALUES CHARACTER EDUCATION FOR 2013	
H. SEDYO SANTOSA	265 L
II. SEDIO SANTOSA	
OPTIMIZATION OF MULTIPLE INTELLEGENCES THROUGH SCIENCE	
LEARNING FOR SD/MI (ELEMENTARY SCHOOL) STUDENTS	
SIGIT PRASETYO	281
THE REFORM OF LEARNING SCIENCE THROUGH MULTIPLE	
INTELEGENT PARADIGM TO AGAINST CURRICULUM	
IMPLEMENTATION 2013 IN SD/MI	
DIAN NOVIAR	291

HOLISTIC-INTEGRALISTIC TEACHER "THE NECESSITY AND THE
NEEDS FOR MULTIPLE INTELLIGENCES-BASED LEARNING
PROCESS IN THE ISLAMIC ELEMENTARY SCHOOL"
ANDI PRASTOWO301
METAPHORICAL ITEMS ARE QUITE NECESSARY TO LEARN
<i>NA'IMAH</i> 311 \square \square \qquare \qquare \qquare \qquare \qquare \qquare \qqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq
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
JUBAEDAH319
DEVELOPING A PROCESS-BASED IN SCIENCE LEARNING
THROUGH PROBLEM BASED LEARNING TO WELCOME THE IMPLEMENTATION
OF CURRICULUM 2013
RUNTUT PRIH UTAMI331





STATE ISLAMIC UNIVERSITY
SUNAN KALIJAGA
Y O G Y A K A R T A

KATA PENGANTAR

Bismillahirrohmanirrohiim, Assalamu'alaikum warahmatullaahi wabara-kaatuh. Alhamdulillahirabbil'alamin. Wabihi nasta'in 'ala umuridunnya waddin. Wash-sholawatu wassalamu'ala asrofil anbiya'I walmursalin. Wa'ala alihi wa ashabihi ajmain. Amma ba'du. Robbisrohli shodri wayassirli amri, wahlul 'uqdatan millisani, yafqohu qauli. Segala puji bagi Allah SWT, shalawat serta salam semoga senantiasa tercurah kepada Nabi Muhammad SAW, beserta para sahabat dan umatnya yang senantiasa mengikuti sunahnya.

Kegiatan ini terselenggara atas dasar perlunya perubahan demi perubahan, inovasi-inovasi pembelajaran senantiasa menjadi perhatian kalian akademik dan praktisi pendidikan.

DalamhaliniprodiPGMIakanberusahasemaksimalmungkinuntuksenantiasamengembangkan kegiatan yang mendukung peningkatan mutu tersebut, baik untuk dosen, mahasiswa, bahkan bagi alumni dari PGMI itu sendiri, serta masyarakat luas pada umumnya sebagai pengguna dari alumni PGMI Fakultas Ilmu Tarbiyah dan Keguruan UIN Sunan Kalijaga. Peningkatan mutu tersebut di antaranya dilakukan dalam bentuk pelaksanaan 'seminar internasional'. Seminar internasional akan menetapkan tema "Summit Meeting on Education The End of The Year 2013" dan Penandatanganan MOU dengan University Kebangsaan Malaysia (UKM).

Adapun kegiatan yang diselenggarakan meliputi kegiatan Seminar Internasional dengan tema Optimalisasi kecerdasan majemuk untuk melejitkan potensi menuju manusia berbudi pekerti. Dilanjutkan Fashion show Tarbiyah Fashion Week 2015 yang bertajuk "Islami, Trendy and Syar'i". Kegiatan berikutnya adalah Seminar Nasional dengan tema Kurikulum 2013 "Realisasi dan Refleksi Kurikulum 2013". Berikutnya Seminar Peringatan hari Ibu dengan "Peran keluarga dalam pendidikan anak (Kolaborasi catur pusat pendidikan)". Dilanjutkan dengan acara Bedah buku yang bertema "Merajut pendidikan di kota Yogyakarta" karya: Bp. Zainal Abidin, M.Pd. Selanjutnya Seminar Edupreneurship dengan tema "Membangun kreatifitas melalui edupreneurship"

Adapun narasumber dari kegiatan ini dari berbagai negara, yaitu: dari negara Malaysia, Australia, Brunei Darussalam, dan Indonesia. Adapun nama-nama narasumber sebagai berikut: Prof. Dr. Lilia Halim (University Kebangsaan Malaysia), Bapak Setiyo Iswoyo, Drs. HD. Iriyanto, M.M., Dr. Slamet Suyanto (Dosen Pendidikan Biologi, UNY), Hj. Dyah Suminar (SE istri mantan walikota Yogyakarta), Prof. Dr. Taufik Ahmad Dardiri, SU (Dosen Fakultas Adab dan Ilmu Budaya, UIN Sunan kalijaga)., M Arief Budiman, S.Sn., Managing Director PT. Petakumpet Yogyakarta. Adapun peserta dari kegiatan ini dari berbagai negara yaitu Turki, Rusia, Thailand, Malaysia.

Dalam hal ini dosen atau pendidik pada umumnya adalah perintis pembangunan di segala bidang kehidupan dalam masyarakat. Seorang dosen atau pendidik yang benar-benar sadar akan tugas dan tanggung jawabnya, tentulah akan selalu mawas diri, mengadakan introspeksi, berusaha selalu ingin berkembang maju, agar bisa menunaikan tugasnya lebih baik, dengan selalu menambah pengetahuan, memperkaya pengalaman, menambah kualitas dirinya melalui membaca bukubuku perpustakaan, mengikuti seminar loka-karya, kursus-kursus penataran, dan sebagainya agar selalu bisa mengikuti gejolak perubahan sosiokultural dalam masyarakat serta kemajuan ilmu dan teknologi modern dewasa ini. Melaui kegiatan *international Summi Meetng* ini diharapkan dosen, guru, dan mahasiswa menjadi lebih profesional, khususnya terkait dengan kompetensi profesional.

Pekerjaan mengajar memang tidak selalu harus diartikan sebagai kegiatan menyajikan materi pelajaran. Meskipun penyajian materi pelajaran memang merupakan bagian dari kegiatan pembelajaran, tetapi bukanlah satu-satunya. Masih banyak cara lain yang dapat dilakukan guru untuk membuat siswa belajar. Peran yang seharusnya dilakukan guru adalah mengusahakan agar setiap siswa dapat berinteraksi secara aktif dengan berbagai sumber balajar yang ada. Guru pun sangat erat kaitannya dengan pendidikan karakter.

Pendidikan karakter yang semakin hangat sering menimbulkan kekhawatiran para guru. Namun sebenarnya hal itu tidak perlu khawatir, masih banyak tugas guru yang lain seperti: memberikan perhatian dan bimbingan secara individual kepada siswa yang selama ini kurang mendapat perhatian. Kondisi ini akan terus terjadi selama guru menganggap dirinya merupakan sumber belajar satu-satunya bagi siswa. Jika guru memanfaatkan berbagai setrategi pembelajaran secara baik, guru dapat berbagi peran dengan setrategi. Peran guru akan lebih mengarah sebagai manajer pembelajaran dan bertanggung jawab menciptakan kondisi sedemikian rupa agar siswa dapat belajar. Untuk itu guru lebih berfungsi sebagai penasehat, pembimbing, motivator dan fasilitator dalam Kegiatan Belajar Mengajar.

Upaya Pemerintah terhadap tenaga guru sebenarnya telah dilakukan oleh Pemerintah Republik Indonesia, melalui berbagai bentuk kebijakan. Ditetapkannya Undang Undang nomor 14 tahun 2005 tentang guru dan dosen merupakan dasar kebijakan untuk memperkuat eksistensi tenaga kependidikan sebagai tenaga profesional, seperti profesi-profesi yang lainnya. Kualitas profesi tenaga guru selalu diupayakan, baik melalui ketentuan kualifikasi pendidikannya maupun kegiatan in-service training, dengan berbagai bentuknya, seperti: pendidikan dan latihan (diklat), penataran dan pelibatan dalam berbagai seminar untuk memperbarui wawasannya dalam kompetensi pedagogi dan akademik.

Pemerintah mulai menyadari betapa strategisnya peran tenaga guru dalam mengantarkan generasi muda untuk menjadi sumber daya manusia (SDM) yang berkualitas dan kompetitif sehingga mampu mewujudkan suatu kesejahteraan bersama. Sejarah peradaban dan kemajuan bangsa-bangsa di dunia membelajarkan pada kita bahwa bukan sumber daya alam (SDA) melimpah yang dominan mengantarkan bangsa tersebut menuju pada kemakmuran, tetapi ketangguhan daya saing dan keunggulan ilmu pengetahuan dan penguasaan teknologi (ipteks) bangsa tersebutlah yang berperanan untuk meraup kesejahteraan. Bahkan SDM yang menguasai ipteks cenderung memanfaatkan teknologinya untuk menguasai SDA bangsa lain. Dalam hal ini pemerintah ingin mengejar ketertinggalan dengan menyempurnakan kurikulum KTSP menjadi Kurikulum 2013.

Kurikulum 2013 yang telah diimplementasikan pada tahun ajaran 2013/2014 menimbulkan pro dan kontra atas kurikulum tersebut masih terus terdengar. Banyak pihak yang mempertanyakan kesiapan implementasinya, pengembangan bahan ajarnya, evaluasinya, dan proses pembelajarannya di kelas. Perwakilan guru di Kota Kupang menilai implementasi kurikulum pendidikan 2013 akan menjadikan guru-guru seperti robot. Alasannya, semua Rencana Pelaksanaan Pembelajaran (RPP) dan Silabus disusun oleh pemerintah pusat. Sedangkan guru hanya siap untuk mengajar dengan RPP yang ada. Pada tahun ajaran 2013/2014, kurikulum baru akan diberlakukan untuk siswa kelas 1 dan 4, sedang siswa kelas 2,3,5, dan 6 masih menggunakan kurikulum lama. Beberapa pendapat pro dan kontra masih terus berlanjut, tapi mau tak mau kurikulum baru akan segera diimplementasikan secara bertahap. Seminar ini memperbincangkan masalah tersebut dari sisi pembuat kebijakan, ahli kurikulum, dan praktisi pendidikan/pengajaran.

Demikian yang dapat kami sampaikan terkait dengan esensi dari penyelenggaraan kegiatan "Summit Meeting on Education The End of The Year 2013". Kami mengucapkan terima kasih banyak atas partisipasi dan dukungan dari berbagai pihak yang tidak dapat kami sebutkan satu per satu. Tanpa bantuan dan partisipasi rekan-rekan semua kegiatan ini tidak dapat terlaksana dengan baik. Semoga kegiatan ini dapat menambah kontribusi pada khasanah keilmuan khususnya pada Pendidikan Dasar dan memberi manfaat kepada para peserta dan pembaca. Amiin

Yogyakarta, 19 Desember 2013 Ketua Panitia

Dr. Aninditya Sri Nugraheni, M.Pd.



THE OPTIMIZING OF MULTIPLE INTELLIGENCES FOR INCREASING THE POTENTIAL TOWARDS HUMAN VIRTUOUS CHARACTER

Written by:
Fauzan
Asep Ediana Latip

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 clarification, value analysis, moral awareness, commitment approach and the union approach.

Keywords: Multiple Intelligences, Optimizing Factors and Human Potential Virtuous Character

OGYAKARTA

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 fighting 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 flat 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 field, for example in making music composition but he/she rather has an average ability in other science fields. 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 difficulties, especially in the field of language, while the others may have difficulty 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) identifies 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 fluency)
- 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 figural 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 classification/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 deficiency
Under 70	Deficiency feeble-mindedness

In educational developing intelligence standards in the classification 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 $IQ = MA \times 100$

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 significant 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 first 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 influence 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, finding 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 influence 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 influence 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 influence. 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 influence.

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) classifies 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, sacrifice, and patriotic spirit.
- b. The characters that come from thought manner include: intelligent, critical, creative, innovative, curious, productive, science and technology oriented, and reflective.
- 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) identifies 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 identifies 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 fluency, 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 clarification, value analysis, moral awareness, commitment approach and union approach.

REFERENCES

Desmita, (2007) Psikologi Perkembangan, Bandung: PT. Remaja Rosdakarya.

Gunawan, Heri (2012) Pendidikan Karakter: Konsep dan Implementasinya. Bandung: Alfabeta

Hambali & Q-Anees (2009) *Pendidikan Karakter Berbasis Al Qur'an*. Bandung: Simbiosa Rekatama Media.

Hurlock, B. Elizabeth (tt) *Development Psycology: A Life-Span Approach, Fift Edition*; Alih Bahasa: Istiwdayanti et.al., Jakarta: Erlangga.

Jamaris, Martini (2010) Oreintasi Baru dalam Psikologi Pendidikan, Jakarta: Penamas Murni.

Koesoema, A. Doni (2010) *Pendidikan Karakter: Strategi Mendidik Anak di Zaman Global.* Jakarta: P.T Grasindo.

Khan, Yahya (2010) Pendidikan Karakter berbasis Potensi Diri: Mendongkrak Kualitas Pendidikan. Yogyakarta: Pelangi Publishing.

Khalid, Amru (2005) Al Akhlaq al Mu'min, alih bahasa: Narulita: *Menjadi Mukmin yang Berakhlak*. Jakarta: Qisthi Press.

Mulyasa, (2012) Manajemen Pendidikan Karakter, Jakarta: Bumi Akasara.

Muslich, Masnur (2011) *Pendidikan Karakter: Menjawab Tantangan Krisis Multidimensional.*Jakarta: Bumi Aksara.

Ormrod, Jene Ellis (2008) Educational Psycology Developing Learners: Sixt Edition. Alih Bahasa Indianti, et.al., Jakarta: Erlangga.

Santrock, John W (2007) *Child Development, Elevent Edition*; Alih Bahasa Mila Rahcmawati dkk., Perkembangan Anak. Jakarta: Erlangga.

Zubaedi, (2011). Desain Pendidikan Karakter: Konsepsi dan Aplikasinya dalam Lembaga Pendidikan. Jakarta: Prenada Media Group.



