

Multiple Intelligences Based Learning: Concepts and Applications in Elementary Schools (Case study in Unggulan Permatajingga Elementary School Malang)

Jamal Abdul Naser,¹ M. Saunan Al Faruq²

¹ Gajayana University, Malang, Indonesia, jamal@unigamalang.ac.id

² State University of Malang, Indonesia, faruqsae@gmail.com

Abstract

Multiple Intelligences (MI) is a learning concept that is based on diversity of intelligences. This research using the qualitative method i.e. case study in Permatajingga Primary School. The results showed that the school's commitment to facilitate the development of students according to their intelligences potential was used as the foundation of learning. The primary school in this study decided to apply the concept of MI-based-learning since the beginning of the founding of the school. The concept is then used as a basis for programming and managing learning in schools.

Keywords: Application, Learning, Multiple Intelligences, Elementary School

Introduction

As a psychologist, Gardner has done a substantial research on the development of human cognitive capacity. His study then produced eight different intelligences. Multiple Intelligences (MI)-based-learning is a learning process based on the diversity of human intelligence which is grouped into eight parts including: (1) verbal-linguistic, (2) mathematical-logical, (3) visual-spatial, (4) musical, (5) kinesthetic, (6) naturalistic, (7) intrapersonal, and (8) interpersonal (Gardner, 2003). This concept indirectly provides antithesis for Intelligence Quotient (IQ) learning concept which is only grouped into three parts i.e. verbal, language, and mathematics.

Gardner's research reveals that human intelligences is broader than previously believed and offers a pragmatic definition of intelligences. Instead of seeing "intelligence" in scores from standardized tests, in his first book, Gardner defines intelligence as the ability to (1) solve problems encountered in real life, (2) find new problems to solve, and (3) make something or alternative solutions which is valued in a culture (Campbell, et al, 2004). In line with it, Suyono dan Hariyanto (2016) also argues that learning is an activity or a process to acquire and strengthen knowledges, improve skills, behavior and attitudes.

Multiple Intelligences (MI)-based-learning involves students to learn through activities which become important pillars in constructing knowledges, feelings, volition, and skills. This means that MI consistent with the definition of education as an effort to advance the growth of a child's character (inner strength), mind (intellectual), and body to gain the perfection of life and harmony within his world (Dewantoro, 1977).

Qualified education is determined by several interrelated components, ranging from inputs, processes and outputs, along with a good management. However, practitioners of education often focus on input, assuming that a good input will produce a good output as well. The effect of this assumption is the existence of a series of tests for new students in several schools whereas the quality of the output can be improved by a good process.

To change this, learning process has to be made not only able to improve competence but also facilitate other potential possessed by students. Chatib (2015) argues that if these potential can be detected from the beginning, it can be developed further automatically and become the student's potential intelligences. Therefore, schools should accept their new students under any circumstances then it is the duty of the school to examine the psychological potential of students by knowing their intelligence inclinations.

The function of the primary education is strategic as it become the basis for the next education or even further. Article 17 of Law Number 20 Year 2003 states that primary education is a stepladder that forms the basis for secondary education. According to Sonhadji (2014), the practice of the primary education is divided into two domains, i.e. *observe* and *unobserve practice*. On this basis, the aim of the study is to observe the learning process in elementary schools relating to the application of multiple intelligences-based-learning. The observation includes aspects: content, context (related to physical and interpersonal conditions), pedagogy (regarding methods of learning and organizing students).

Permatajingga Primary School is one of the elementary school in Malang which is applied the multiple intelligences-based-learning. Some things that indicate this i.e. there is intention to facilitate student's development according to their abilities and intelligences. In addition, the learning management is done through student's mapping based on the multiple intelligences concept. As a new school, Permatajingga Primary School has challenges, yet opportunities, to provide a new way to learn which is differs from other elementary schools.

Method

The design of this research is qualitative using case study. As Bogdan dan Biklen (1982) Bogdan and Biklen (1982) stated, case study is one of qualitative research design that can be used to develop theories raised from a research setting. Permatajingga Primary School is a private school under Permatajingga Foundation. This school is located in a residential at Kapi Subali street number 28 in Sawojajar, Malang. Established in 2014, this school has a vision of "growing with personality" which is then translated into missions i.e.: (1) creating a child-friendly learning environment, so that children can develop their potential talents and interests, (2) guiding children to recognize their potential in all forms of intelligences so they can develop optimally, and (3) working together with parents to maximize the potential and interests of their children.

Based on those vision and mission, the design of the school is adopting an education system based on multiple intelligences which is emphasizes the strengths of each student's ability to develop their potential. The school is committed for being a child-friendly learning environment so that they can develop according to their talents and interests.

The preliminary study conducted as the beginning step of the research before determining the location or setting of the study. Furthermore, researchers used interview, observation and documentation study techniques that supported the research findings. Based on the descriptions, this study will be discussing the learning in primary schools that apply the concept of multiple intelligences.

Results and Discussion

Data findings in Permatajingga Primary Schools showed that the application of multiple intelligences-based-learning started since school was established. The multiple intelligences concepts apply in 1st grade until 3rd grade by classified the students into 4 categories (*small groups*). In 4th and 5th grade, students were grouped into 2 study groups (*big groups*). This group is also termed as *rombongan belajar (rombel)*. The data of students is summarized in the table as follows:

Table 1: Students Grouping Based on the Ability and Learning Readiness

Grade	Classification (Small Groups)	Total
1 st	A	20
	B	11
	C	8
	D	3

2 nd	A	17
	B	11
	C	9
	D	4
3 rd	A	12
	B	11
	C	11
	D	3

As the school want to be a distinguished school that focusses on the process, the principal of the school, assisted by vice principal, proposed the MI-based-learning concepts to the school foundation for approval. Moreover, Permatajingga Primary School sees that every child has at least one intelligence out of nine intelligences according to the concept of MI: (a) linguistic, (b) mathematical, (c) visual, (d) musical, (e) kinesthetic, (f) naturalistic, (g) interpersonal, (h) intrapersonal, and (i) existential. Therefore, the application of this concepts can be one solution to the problem of education in Indonesia that often generalize the benchmark of intelligences. Last but not least, Permatajingga Primary School wants to try to facilitate all students with proper education.

The concept of MI-based-learning in Permatajingga Primary School is define as a method to facilitate students to evolve according to their abilities. The application of MI-based learning in this school is described as follows:

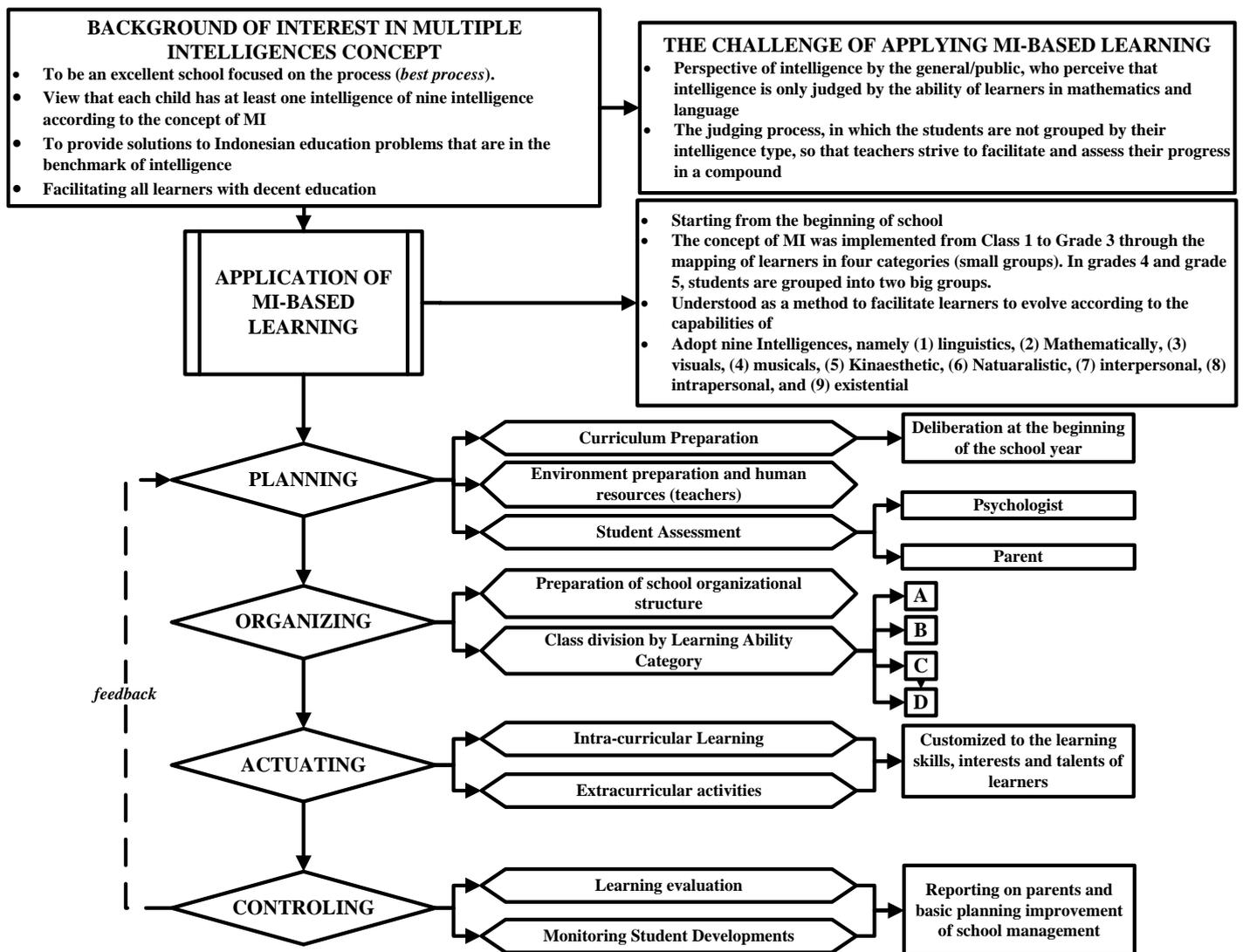


Figure 1: Implementation of MI-based learning at Unggulan Permatajingga Elementary School

The foundation of the multiple intelligences concept is a paradigm how to value individual's intelligence. The meaning of intelligence can be the basis for an educational program preparation (Chatib, 2015) so the background MI-based-learning application is based on how to value and facilitate the development of intelligence of each students. As stated by Gardner (1983), "*one of the most important purposes of school is to develop multiple intelligences, thus helping people reach vocational goals that are appropriate to their particular spectrum of intelligences*". Meanwhile Haley (2001) also argues that MI concepts is a respectful compound view that values differences in cognitive abilities and shows students' cognitive style.

Primary or elementary school is part of basic education which has a strategic function in equipping students by optimizing the intelligence they have with the result that students have the ability for continuing their further education. This is in accordance with Law Number 20 Year 2003 Article 17 which states that primary education is the one of the education stepladder that forms the basis of secondary education. The primary school as the object of this study aims to apply MI-based-learning since the beginning with confidence that there are nine types of intelligence possessed by students. The concept is then used as a basis for preparing learning programs in school. Although implemented in different ways, the school management is committed to providing appropriate education and focusing learning programs on the development of their students (student centered learning).

The concept adopted by the school management shows a belief that students have nine intelligences, namely: linguistic, mathematical, visual, musical, kinesthetic, naturalistic, interpersonal, intrapersonal, and existential. The addition of this type of intelligence was mentioned by Gardner in his book titled *Intelligence Reframed*, which considers the potential of new intelligence, including existential, moral and spiritual intelligence (Campbell et al., 2004). Existential intelligence includes the ability to contemplate the meaning of life and death, but Gardner is still unable to determine the origin of its location in the human brain. Moral intelligence involves understanding values. Since values have such broad scope Gardner does not include this capacity as intelligence. Likewise spiritual intelligence makes it possible to understand the origin and importance of truth, but in the end it all depends on one's affective capacity. So Gardner believes that the eight intelligences that have been identified have provided a more accurate picture related to human capacity compared to previous theories.

Science and knowledge that continue to develop along with technological and information developments require education to adjust into these developments. One alternative that can be done is the need for changes starting from how to make learning that not only can improve competence, but also facilitate the advantages possessed by students. Research conducted by Gamar et al. (2018) states that the application of MI-based-learning in primary schools is one of the strategy that is able to facilitate the development of the potential possessed by students.

The findings in the research case show that the application of MI-based-learning is applied from the beginning from grade 1 to grade 3. The logical consequences for applying MI-based-learning is the need for more human resources (teachers) compared to the schools in general. This is because students in one class might be divided into several study groups so that more teachers are needed to assist each study group.

The identification process used in student mapping is done through Multiple Intelligence Research (MIR) and assessment at the beginning of the school year. The identification is used as a basis for grouping students according to the type of intelligence and learning ability, as well as the preparation needed by the school management to facilitate the development of the potential of the students, including the preparation of resources owned by the school. Armstrong (1993) states that the purpose of this identification is to increase the awareness of students and teachers related to multiple intelligences. For students, this identification is an introduction and an opportunity to learn more about their learning preferences. As for the teacher, this identification produces valuable information about students as an individual and provides preferences in learning planning.

The process of identifying the type of intelligence and learning ability in the research case not only involves students but also involves parents as informants. Parents provide the psychological condition of children, the tendency of learning styles at home and some special notes that need to be considered by school management. This part of process are intended to facilitate students so they may fit to the real conditions. In the interview process, between the school and the parents, the principal and the teacher are in charge to communicate the educational program plan that will be implemented in schools including several mutually agreed policies. In line with these findings, the research results of Sumarsono, et al. (2016) also showed that parental participation is needed in order to improve the quality of education. The study further stated that parental participation was manifested in aspects of learning, everything related to students, facilities and infrastructure, community relations, education costs, and school personnel.

Research conducted by Haley (2001) Haley (2001) states that students show an interest in the concept of MI, as well as giving a positive response to the variation of learning strategies used by teachers. Furthermore, research conducted by Kornhaber, et al. (2004) shows that educators use the concept of MI so that children can understand lessons, master how to think, express themselves in various forms, and understand community life.

Schools that implement MI-based learning provide opportunities for students to show higher thinking skills than memorizing or retelling, or what is known as Higher Order Thinking Skills (HOTS), and provide examples relating to the content of lessons that can be applied in different situations (Campbell, 1997). Other findings in the research case show that the application of MI-based learning is able to accommodate various types of intelligence, and form emotional closeness between teachers and students so as to create fun learning. This is supported by Armstrong (2009) explaining that MI is a "powerful lens" that transforms the traditional perspective of intelligence by recognizing and respecting the talents of each individual who enriches social life.

Conclusions

The application of MI-based-learning is aimed at the school's commitment to facilitate the development of students according to their intelligence potential. In addition, the meaning of intelligence is also an important point in considering the concept of learning that will be applied in schools.

Primary schools in the case of this study adopted the concept of MI which believes that there are nine types of intelligence possessed by students. This concept is then used as a basis for the learning programs preparation in school. Although implemented in different ways, the school management is committed to providing appropriate education and focusing learning programs on the development of their students (student centered learning).

Elementary school is part of basic education which has a strategic function in equipping students by optimizing the potential of intelligence possessed by students so they have the ability to continuing further education. The concept of multiple intelligences applied in primary schools provides solutions through assessment or identification of talents and interests, as well as intelligence of students, so that school management can facilitate their development in accordance with their abilities and learning styles.

Acknowledgments

Thanks to the management of Unggulan Permatajingga Elementary School Malang, mentor lecturers, as well as college friends of Education Management at the State University of Malang. Some researchers in learning studies, multiple intelligences, and teachers who have been willing to visit and provide information related to the learning process in the classroom.

References

1. Armstrong, T. (1993). *Seven Kinds of Smart: identifying and developing your many intelligences*. New York: Plume, Penguin Group.
2. Armstrong, T. (2009). *Multiple intelligences in the classroom* (Third Edit). Virginia USA: Alexandria.
3. Campbell, L., Campbell, B., & Dickinson, D. (2004). *Teaching and Learning Through Multiple Intelligences*. New Jersey: Pearson Education, Inc.
4. Chatib, M. (2015). *Sekolahnya Manusia; Sekolah Berbasis Multiple Intelelegences di Indonesia*. Bandung: Kaifa Learning.
5. Dewantoro. K. H. (1977). *Pendidikan*. Yogyakarta: Majelis Luhur Persatuan Taman Siswa.
6. Gamar, M. M., Al Faruq, M. S., & Lina. (2018). *Challenging the Indonesian Primary Education in Industrial Revolution 4.0 Era*. 269(CoEMA), 46–48. <https://doi.org/10.2991/coema-18.2018.12>
7. Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.
8. Gardner, H. (2003). *Kecerdasan Majemuk (Multiple Intelelegences): Teori dan Praktik*. Batam: Interaksara.
9. Haley, M. H. (2001). Understanding Learner Centered Instruction from Perspective of Multiple Intelligences. *Foreign Language Annals*, 34(4).
10. Kornhaber, M. L., Fierros, E. & Veenema, S. (2004). *Multiple Intelligences: Best Ideas from Theory and Practice*. Needham Heights: Allyn & Bacon.
11. Sonhadji, A. (2014). *Manusia, Teknologi, dan Pendidikan*. Malang: UM Press.
12. Sumarsono, R. B., Imron, A., Wiyono, B. B., & Arifin, I. (2016). Parents' Participation in Improving the Quality of Elementary School in the City of Malang, East Java, Indonesia. *International Education Studies*, 9(10), 256. <https://doi.org/10.5539/ies.v9n10p256>
13. Suyono, & Hariyanto. (2016). *Belajar dan pembelajaran*. Bandung: PT Remaja Rosdakarya.