

# The Impact of the Application of Multiple Intelligence Theory on Classroom Communication

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**Abstract:** This paper explores the impact of applying the Multiple Intelligence (MI) theory on classroom communication. Introduced by Howard Gardner in 1983, the MI theory posits that individuals possess various forms of intelligence, beyond the traditional linguistic and mathematical domains. The paper mainly reviews current studies on the application of MI theory in education, highlighting its significance in enhancing student engagement and learning outcomes. It discusses how educators can leverage the MI theory to cater to diverse learning styles and intelligence among students, fostering a more inclusive and effective learning environment. Additionally, the paper examines the role of technology, such as e-learning platforms, in facilitating the application of MI theory in classrooms. Despite the theory's widespread recognition, there remains a need for further research and implementation, particularly in exploring its implications across different educational settings and cultural contexts. Overall, the paper underscores the importance of incorporating MI theory into pedagogical practices to promote personalized and holistic learning experiences for students.

**Keywords:** multiple intelligence theory, classroom communication

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## Introduction

Multiple Intelligence which also called MI is a term of educational psychology introduced by Howard Gardner in 1983. According to MI theory, Gardner (1983) described seven different intelligence, and each of them can represent the different ways which people can be intelligent. However, since it had been published, two additional intelligence were introduced and bringing it to nine totally.

As they are separately verbal-linguistic, logical-mathematical, musical, visual-spatial, bodily-kinesthetic, interpersonal, intrapersonal, naturalist, and existential. In addition to this, there were some spiritual considered as the tenth intelligence. The MI theory indicate that “students should be suggested to listen in various ways which based on their individual area of such different intelligence.” By the way, the MI theory also represent the best method to communicate and cultivate most of students during the diverse environment of modern class.

Due to the MI theory has far-reaching influences on educational communication, it should receive deep consideration and research. To be noticed that, not each of students do learning in same ways, and each of teachers present different teaching styles. It is also because that students themselves have individual group of learning intelligence, classrooms for all-aged have various samples possibly. And this topic should be studied as all-level educators should think about different methods to improve the engagement of students to learning. Additionally, educators must own skills to find variety of

intelligence from students in order to encourage students to participate in learning process as more as they can.

## 1. Current studies about multiple intelligence

Despite the MI theory was presented by Howard Gardner since 1983, less studies which put focus on the improvement for classroom communication via the MI theory. Although few research existed specially on the application of the MI theory in the communication in classroom, more information and suggestions can be found in different resources related to the MI theory. Some reviews on current studies on the MI theory indicate its influence and meaning to the communication in classroom.

According to Sword (2007), the using of MI theory in education was likened as a person who wears a pair of glasses for the first time, and she called such model which applied the MI theory in education as “the Teaching in Color.”<sup>[17]</sup> Sword’s studies indicated that the applying of the MI theory into a literature classroom during the last decade. To be noticed that, she realized that lower-grade students show more engagement in lessons and communication which based on the MI theory than higher-grade students. And such phenomena will be going to disappear during the high-school or even university learning. Sword gave more discussion about specific application of the MI theory into her literature lessons and useful ways to put creativity in teaching, therefore to find more students’ intelligence and improve students’ enthusiasm for her class. Sword also concluded with a reminder that the process of teaching and learning can be somewhat in chaos and several errors will be existed, however, via revising class and communication to attract more of intelligence from students can help a generation, “. . . begin their transformation into the risk takers and ground breakers of tomorrow. ”

Gouws mentioned the application of the MI theory in the classroom in the South Africa. Similar with some schools in the United States, his articles began with the discussion about current education situation in the South Africa.<sup>[8]</sup> The South Africa started to apply OBE standard as the full name was Outcomes Based Education in 2005. Gouws suggested that educators in the South Africa should put focus on students to ensure them can engage in learning process after the change, and the MI theory can be considered as a solution to this issue. Gouws made a conclusion to the MI theory and notes that there was no “ absolute right way” to apply the MI theory in the classroom via searching for available relative resources. After the review of OBE standard, Gouws put attention to explore the relationship between the MI theory and the OBE standard. The advantages of the application of the MI theory in the classroom was considered firstly, and then followed by the discussion about the specific method to put the MI theory in the teaching lessons. In terms of the plan for curriculum, and the evaluation and assessment of teaching, Gouws gave confidence to the application of the MI theory in educational communicating activities. At the end of Gouws’s article, he asked educators must change their teaching models to suit for the new OBE standard, and the MI theory should be the best choice.

Cassidy claimed that the MI theory can be put with philosophy education together. According to great philosophy writing written by Plato -- the Meno which presents how Socrates teach a slave boy via the MI theory, and this can be a classic sample for the MI theory in education.<sup>[4]</sup> Cassidy analyzed the MI theory used in the Meno, and summarized the five intelligence of that. After this, she introduced how to explain confused philosophical concepts via simple stick-painting, and these stick-painting can attract students to participate in serious philosophy learning. In addition to this, humorous explanations were introduced during the boring learning process except stick-paintings. If such methods can be used properly, the improvement can be seen as for students’ learning and the influences on subject itself can be decreased. At the end of Cassidy’s article, she summarized the suggestions for applying the MI theory in the classroom and also asked the MI theory can be included in lesson communication.

Lewis focused on the educational change from the Texas model, which was a standard that students only be evaluated by single-standard test.<sup>[9]</sup> Such shift was considered as an reflection of the report about OBE change happened in the South Africa. To be noticed that, Lewis also indicated the Gardner’s assertion that encouraging any form of standardized test of individual intelligence can be thought as one part of issue among the educational system at the moment, just like what Gardner said “. . . the quest for the perfect test . . . a fool’s errand. ”

Schrand discussed that how to promote active learning via the MI theory. Especially the using of interactive media

was mentioned, and Schrand also claimed that how to correctly use modern technology to ensure students to engage the MI during the classroom environment.<sup>[15]</sup> Schrand's article presented detailed how communication can attract students' special MI mix-group via interactive media by transferring the basic slides presentation to animations or even other forms of attractive technological methods. To be noticed that, Schrand also mentioned that most of professors in universities can also learn to put multimedia animation design with the learning of using slides which also called the PowerPoint at the same time. As the significance of helping students to study actively and effectively can not be ignored, Schrand considered that the meaning of the MI theory can be presented during the lessons in universities via multimedia animation which can ensure students' active learning instead of passive learning.

Farnan (2009) especially focused on economics education, she explored the transition from traditional cram-feeding teaching method to the MI theory. In Farnan's article, Gardner's MI theory was mentioned and also the current stage of intelligent study was discussed, and then she indicated that the MI theory was most suitable for economics education.<sup>[7]</sup> Farnan makes a similar claim with Gouws made that an official multiple intelligence teaching method can be found. Within a table that Farnan mentioned, different forms of intelligence with general characteristics and learning clues were listed. Additionally, suggested general activities, possible career paths, and specific economic activities designed for such intelligence were also included. It was very useful for educators to understand students' intelligence better, and to know how to communicate with students properly. In total, Farnan's article adds greatly to the basic structure of knowledge of the MI theory and the MI theory's application in the classroom, although it focus more on economics education.

According to Chakraborty (2010), a film called Taare Zameen Par which means just like stars on earth was mentioned.<sup>[6]</sup> The story was about a teacher discovered a poor student with reading barriers and amazing artist talent, and he spent much time to confirm the reason why this students perform poorly in the classroom. Chakraborty focused on education MI theory via this film, and he describes the MI theory can be applied in literacy lesson especially. And he also suggests to apply the MI theory in teaching under the Shakespeare play education background, coming along with methods changed for communicating with students about significant information. In addition to this, mix-learning which means the mixed learning environment was mentioned, and he also discusses the combination of Face-to Face teaching and Computer Assistant Education. Especially Chakraborty indicates that the meaning for applying the MI theory in mixed learning environment, and also students and teachers who have mixed ability and intelligence. The educational gap between the first and the developing world bring challenges to educators in the developing world especially in the MI theory field. At the end of Chakraborty's article, he suggests that educators should use technology to improve the application of the MI theory in mixed learning environment.

Shahzada introduced the study on the MI theory for students' understanding, and it aimed to explore the advantages of multiple intelligence of students. According to the author's findings, self-perceived bodily/kinesthetic, intrapersonal, interpersonal, naturalistic, and verbal/linguistic intelligence were the most significant intelligence of students.<sup>[16]</sup> This study improved the knowledge system of the application of the MI theory in the classroom for educators, because five kinds of multiple intelligence were confirmed and thus suggestions to educators to put more effort to the convey of content in the MI theory field were presented. This can help all-level teachers to build differentiated teaching to get better use of students' mix group of unique intelligence.

Opreescu introduced an evaluation on the current information of the traditional teaching and the teaching which based on the MI theory.<sup>[13]</sup> It aims to put the MI theory in literature learning, and to prove former studies which focus on the MI theory. Similar with Shahzada's finding, this study improved the belief that teachers should focus on the communication of the MI theory and the thinking ways of education based on the MI list. In addition to this, Opreescu indicated that nearly 10% of students misjudged their kind of intelligence, and therefore it continued to enhance the importance of teachers' searching for clues just like what Farnan mentioned.

According to Cerruti, the identification of students' unique intelligence can not explain the thinking and learning ways of students, or specific steps should be designed for the application of the MI theory in the classroom.<sup>[5]</sup> And such problem was ignored by most of educators who want to apply the information related to the MI theory in learning environment. A

term or theory called the functional MI introduced by Cerruti, which put attention to structural patterns of connectivity of the MI methods. Cerruti also described that such FMI theory can provide a predication of that any two intelligence can be combined based on any one of three kinds of basic ways, as they are or together, or competitive, or indifferent. Except this, such kind of information was considered as useful for educational intervention. The goal of the FMI theory was to improve the qualitative and the quantitative studies, so that information about how the MI in the brain works can be found which can be applied for the creation of application based on research designed for educators.

Ayesha and Khurshid indicated that the relationship between the MI and the achievement of schooling.<sup>[3]</sup> The research showed that the academic achievement and the MI present a positive interaction with each other, and also shows that the top MI in various programs in colleges and universities. Additionally, although the MI score private students received was less higher than that public students received, but the academic achievement of private students was better than that of public students in average. This research adds to the information system based on using the MI theory to lead the communication in the classroom, as it helps educators to better understand what will be the MI presented in specific research filed, and then to apply teaching methods in that specific MI.

Moheb and Bagheri examined connections between the MI and the writing methods of students who use English as a foreign language.<sup>[12]</sup> According to this study, five specific MI can be considered as related to general writing methods, and especially four MI linked with former writing methods. To be noticed that, by analyzing previous data and evidence, the MI have positive connection with writing methods was confirmed. What was interesting that no any single MI can predict the writing method, but the mixed MI group can. Moheb and Bagheri's research can notice researchers, managers, material designers, and educators about the mechanism of how the MI affect the writing method which learners used, it can also help to design suitable teaching method and communication way target to specific MI.

Ahanbor and Sadighi focused on the linking between the MI, learning method, and sex, especially target to high school students.<sup>[2]</sup> According to this research, all kinds of learning method were existed, but there was no sex similarity among these methods. However, it was noticeable that the MI have interactions with learning method, and significance can not be ignored. Because it indicates that teachers need to change their styles and strategies of teaching via various MI and learning method presented during the lesson. According to Ahanbor and Sadighi, the MI of students should be bounded with their learning method as one part of schooling record files, in order to all-level teachers can recognize the MI makeup of each class and design specific teaching strategies to be suitable for different student mixed MI groups.

According one study produced by Menevis and Ozad, attention was put in the relationship between the MI and sex among high school students.<sup>[11]</sup> The finding was that girls perform better in intelligence test than boys totally, especially six kinds of MI show obvious gap and girls received preference. This study improves the knowledge of educators and suggests that different teaching strategies were needed for boys and girls. Additionally, Menevis and Ozad indicate that teachers must learn how to communicate with students differently based on the MI, probably be gender factor.

Tai introduced what and how many MI happen more frequently, and how different kinds of MI to be suitable with English School in universities.<sup>[18]</sup> The result of study was that linguistic intelligence show dominant position, while kinesthetic and musical intelligence presented less. Except that, this study also indicated that there was no significant difference between students from English School and adult or students returning from abroad. An interesting part of this study was that, according to Tai, despite secondary intelligence of linguistic was relative to students from English School, but differences between secondary intelligence existed. It also means that even students in groups show off similar primary MI, teachers still need to confirm students' secondary MI and to design curriculum and communication based on the characteristics of secondary MI, for the reflection of various MI mixed groups in the classroom.

Adcock focused on the lasting of the MI theory during the educational fields. Compared with the MI theory, the Direct Instruction (DI) theory was highlighted.<sup>[1]</sup> Normally when teacher design class activities, different experience of every child for engagement need to be kept in mind due to differences between children's learning methods presented. Despite most of children perform well via the DI theory, but more children will learn better via the MI theory. Adcock concluded that the long lasting of the MI theory, using the MI theory can meet learners' requirements for various learning

effectively, at least during the lesson.

Pekdemir and Akyol introduced the result of a study which focused on the MI of students in the fifth grade, especially to confirm whether the MI was influenced by drama education.<sup>[14]</sup> They asked a group of students to be volunteer for the MI intervention, despite there was no evidence show that obvious difference existed between the experimental and the control group. However, according to the result, visual-spatial, bodily-kinesthetic, musical-rhythmic, interpersonal-social, and naturalistic received influences from drama education. It also means that teacher can enhance some specific MI area via involving drama education from time to time, and but drama education has no influence on dominant MI of students.

Kaewkiriya started a research that to explore the meaning of the MI theory in e-learning system.<sup>[10]</sup> With the technology moving forward, the application of the MI theory in the classroom must keep on pace. According to Kaewkiriya's suggestion, there should be a rule or a system established based on the MI theory, it can match students' MI with specific content of teaching module which is matching with their capacity. As such rule or system can help teachers to satisfy each of students' unique learning requirements via e-learning, and it is also useful for teachers to design curriculum and communication of each of MI in the classroom.

## **2. Discussion**

The MI theory has already far beyond the primary seven kinds Gardner introduced. Currently, the list of the MI theory should have nine various intelligence, and individual mixed MI group need specific teaching strategies and communicating methods. The MI theory should be applied more frequently in the classroom not only in specific educational field.

With the development of Computer Assistant Education, despite it is unrealistic for one teacher of specific level to design specific teaching method for specific students MI, technology is going to help educators to touch the goal. It is more common than before to apply e-learning, long-distance learning, and individual teaching plan in the classroom. Even with the rapid development of technology, students have more opportunities to get access to same curriculum and supportive activities which use various MI.

Nowadays, more and more senior citizens back to schools and become one part of secondary education. Long-distance education offer more opportunities which means more kinds of mixed MI group existed in the classroom, and this also require educators have better understanding of how the MI theory influence students. With such of change, different and suitable teaching strategies must be considered, especially thinking about how the application of the MI theory in the offline and online classroom work. Excellent teachers should know how to figure out the mixed MI groups in the classroom, and use these information as leading to students' communication during the learning process.

To be noticed that, most of relative material about the application of the MI theory in the classroom come from all over the developing world except China. However, despite the western education should be a good sample for the others in the world, less representative studies about the MI theory and its application in education can be considered. In addition to this, for example, in the United States, curriculum in all-level of education system focus on linguistic and logical-mathematical intelligence. As most of famous subject competitions were held in the United States, and positions for such competitions are always one of goals for part of students. Similar with that in China, after the general recovery of education system in 1969, the government promote the students development should be in terms of “德, 智, 体, 美, 劳” five aspects, which five of that can be targeted to interpersonal, verbal-linguistic and logical-mathematical, bodily-kinesthetic, visual-spatial and musical, and basic living skills. However, due to the limitation of social development, it can be nearly total realized in recent years. And the reason for why China or western education is lack of relative studies on the MI application may be considered as too stubborn for traditional education methods. Besides, for the developed world and China recently leading to the most resources and development of the world, therefore the application of the MI theory in the classroom moving slowly. While it does not mean the only reason it that western world and China do not want to push forward the development of the MI application, there are still various other factors have influences on this.

## **3. Conclusion**

As Gardner mentioned, people can be smart via different methods. Because of differences of intelligence among

individuals, the extension of the MI theory is that learners to listen and learn differently in terms of personal dominant intelligence. While each student have unique mixed MI group, they have their personal learning strategies. Besides, the MI theory does not mean that all kind of information will be presented in such several kinds or in more special ways, students can learn via their specific mixed MI group.

Educators should use various teaching strategies to encourage students to engage in learning activities. Although it seems impossible for educators to come up with unique teaching ways for all of students according to the MI theory, however, the patters of MI emerge, especially as students' age increased and subjects more specialized, mentioned by Tai.<sup>[18]</sup> In early level education, for instance, in primary school, teachers develop various learning activities based on the MI theory while such model disappear in after learning due to it has benefits for competitions which prefer students' linguistic and logical-mathematical abilities. The MI theory can be involved in teaching strategies by teachers to develop communicating activities in the classroom, and it also provides a reason for the value of differentiated education existed.

With the more frequently consideration of the MI theory, the application of the MI theory in the classroom tends to be needed for educators to realize students' requirements. And with the application of the MI theory in the classroom, educators of any-level can develop a teaching style to improve the communication and learning in the classroom. Last but not least, when the MI theory can be realized via technological methods, and when all-level intelligence students can communicate based on the MI theory, it can be a positive way for most of learners to communicate and learn in any learning environment.

### **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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