



EXPLORING THE CHALLENGES OF APPLICATION OF MULTIPLE INTELLIGENCES THEORY IN TEACHING LEARNING PROCESS AT PRIMARY LEVEL IN BANGLADESH

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Abstract

The present primary education context in Bangladesh is traditional and problem surrounded. The equal right and opportunity of every child from the point of experiencing quality education that would enable them to explore and enhance their level of intelligences and skills seems underestimated. This article presents the actual scenario of the application of Multiple Intelligences Theory (MIT) in the context of Bangladesh and tries to find out the challenges for its effective implementation. The study followed a mixed method research design and data has been collected from 10 primary schools and 20 teachers of Dhaka city. Results of this study showed not only the poor application of MIT but also the impassiveness of present teaching learning process (TLP) towards establishing student centered and joyful learning environment. Sample schools have resource crisis which remains as a very strong barrier in implementing MIT. In addition, teachers' training and motivation, lack of administrative support were also found as major challenges of MIT oriented classroom. The study suggests modification of teachers' training and adequate supply of MI resources for successful application of MIT in the classroom.

Keywords: *Multiple Intelligences Theory (MIT), Multiple Intelligences (MI), Teaching Learning Process (TLP), Multiple Ways of Teaching and Learning (MWTL).*

Background and Significance of the study

Bangladesh has one of the largest primary education systems in the world with an estimated 18 million primary school aged children (6 to 10 years) and 320,000 teachers in more than 78,000 schools (UNICEF, n. d.). Bangladesh Government has always given precedence to primary education sector as a weapon to fight against poverty and to improve the quality of life for children. But Primary education of Bangladesh is failing to meet the learning needs of its mixed ability students. Besides, lack of infrastructural facilities, the traditional TLP also remains as a great barrier in providing child centered and joyful teaching learning. In order to ensure the quality and effectiveness of primary education, Bangladesh needs to emphasize on identifying and

valuing these students' variety of intelligences, interests and preferred learning styles.

Application of psychological theories has always guided and enriched the way of educational instruction specially the process of teaching learning. Among the various learning theories contributed by Psychology, MIT introduced by Howard Gardner (in his most celebrated book, frames of mind, in 1993) is mentionable because of its great contribution in categorizing the enormous human cognition and in understanding the multifaceted cognitive strengths and contrasting cognitive styles, as Campbell (2000) addressed it, MIT offers a revolutionary, multi-faceted model of human intelligence. This theory proposes individuals' capability at eight relatively autonomous forms of intellectual accomplishments:





verbal-linguistic, musical-rhythmical, logical-mathematical, visual-spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalist (Checkley, 1997).

IDEAL project (1996-2004), under PEDP-I, is considered as a significant event for Primary education of Bangladesh for introducing Multiple Ways of Teaching Learning (MWTL), the innovative teaching approach adopting the MIT. One of the major objectives of this project was to practice improved classroom teaching and learning methods to increase primary school quality. To attain this objective, MWTL was applied as a strategy for making teaching more child-centered, participatory and joyful; and for increasing the competencies of the children at different areas of learning. (Khan, 2000).

Based on individuals' level of strength in different intelligence areas, profile of intelligences is composed, which reflects individual's learning needs and styles, ways of responding to different tasks and situations as well as, pace and possibilities of progressing in different domains, etc. Application of MIT in TLP suggests the differentiation of instruction understanding students' individualized learning styles for provoking their active participation and exploration of intelligences. To improve sustainably in the quality issues of primary education, Bangladesh really needs to integrate these positive aspects of the MIT in the TLP at primary level.

To figure the nature of MIT based TLP, Armstrong (2009) suggested that teachers needs to be trained and motivated to deliver their lessons in a wide variety of ways incorporating different intelligences. To do that he named using music, cooperative learning, art activities, role play, multimedia, field trips, inner reflection, and much more. According to Armstrong (2009 & 1987) to integrate the mi in tlp the traditional practice by the schools must be transformed and teachers, school administrators, and others who work with children, should take the challenge of doing that for providing each child the opportunity to learn in such ways which seem harmonious with its unique mind. Cited in Campbell (1997), admitted that each student is smart and has a kind of genius that should be discovered. In order to discover it, teachers should teach their students in an amusing

way that appeals to them. This is the core of the educational implications of MIT.

Considering the importance of integrating MIT in improving the context of the quality constraint and other issues prevailing in the primary level in Bangladesh, "Exploring the challenges of application of Multiple Intelligences Theory in Teaching Learning process at primary level in Bangladesh" was selected as the problem of this study.

Objectives of the study

The focus of this study is to reveal the challenges of applying MIT in TLP at primary education in Bangladesh. In the direction of conducting this research the following specific objectives were set:

- To identify the barriers in the application of MI in TLP at primary schools
- To determine the availability of MIT suggested resources to apply MI in TLP at primary schools

Methodology

This study followed the **mixed method** of research. A combination of both quantitative and qualitative approach of research was employed here to obtain the advantages and overcome the limitations of both of the approaches.

Participants

Dhaka city was selected as the area of this study. All primary schools of Dhaka city as well as the teachers of those schools were considered as the population. To gather pertinent information 10 primary schools of Dhaka city and 20 teachers, 2 from each school were selected as the sample. 10 sample schools were carefully inspected to survey the availability of necessary resources in providing intelligence provoking TLP.

This study followed a combination of both purposive and accidental sampling techniques. Sample primary schools were selected purposively and accidental sampling were followed to select sample from teachers.





Instruments

Interview Schedule

Interview Schedule was designed to explore the views of the teachers of the selected primary schools. The interview aimed to find out respondents' knowledge about MIT; tendency of considering MI in TLP; feasibility of applying MIT in the present context as well as the existing barriers in doing so, etc. The interview session were conducted at the workplace of the interviewee and lasted for 30-40 minutes.

MI resources' availability checklist

Incorporation of MI in daily lesson requires the availability of some school resources. It was very important to determine if the schools' present situation of practicing MI in TLP is connected with the availability and application factors of required school resources. From this insight, the study composed and applied the 'MI resources' availability checklist' which was used in identifying 25 mostly

needed physical and environmental school resources' availability and application in the category of-Available and used, Available but not used and Not available.

Data processing and analysis

After completing necessary editing of raw data, coding was performed. Descriptive statistical techniques were used to analyze the data obtained from MI resources' availability checklist. The interview transcripts were categorized into several themes and analyzed in a narrative way based on those themes.

Analysis and findings

Availability of school resources in implementing MI in TLP

Mi based TLP demands special preparation and arrangement. MI resources availability checklist demonstrated the present scenario of available resources and their use in the sample schools.

Table-1: MI resources' availability checklists' measurement

Intelligence area	List of tools	Available & used		Available but not used		Not available	
		f	(%)	f	(%)	f	(%)
Verbal - linguistic	Library	6	60%	0	0%	4	40%
	School magazine	6	60%	0	0%	4	40%
	Debate & discussion club	1	10%	2	20%	7	70%
Logical - Math	Geometrical instrument set	6	60%	2	20%	2	20%
	Science laboratory	0	0%	6	60%	4	40%
	Science project & workshop	0	0%	4	40%	6	60%
Musical	Musical instrument	0	0%	2	20%	8	80%
	Music class	0	0%	0	0%	10	100%
	Memorizing through music	0	0%	0	0%	10	100%
	Cultural program	6	60%	0	0%	4	40%
Interpersonal	Student counseling	0	0%	0	0%	10	100%
	Group work	4	40%	2	20%	4	40%
	Group game	6	60%	0	0%	4	40%
Intrapersonal	Self project	10	100%	0	0%	0	0%
	Positive reinforcement & learning environment	4	40%	2	20%	4	40%
	Self evaluation	0	0%	0	0%	10	100%
Bodily -Kinesthetic	Playground	6	60%	4	40%	0	0%





	Indoor gaming facility	1	10%	2	20%	7	70%
	Outdoor gaming facility	4	40%	2	20%	4	40%
	Drama club	0	0%	2	20%	8	80%
Visual – Spatial	Visual learning tools	2	20%	7	70%	1	10%
	Electronic technology(Multimedia projector, computer, OHP)	1	10%	3	30%	6	60%
	Art class	4	40%	0	0%	6	60%
	Illustrated book	8	80%	0	0%	2	20%
Naturalistic	School garden	3	30%	2	20%	5	50%
	Posters on nature	1	10%	8	80%	1	10%
	Study tour	7	70%	0	0%	3	30%
	Open classroom	1	10%	6	60%	3	30%

According to the analysis of data accumulated from the MI resources' checklist, significant use of library and school magazines is noticed in 60% sample school, whereas the rest 40% don't have these facilities. Only 30% of the sample schools have debate & discussion clubs. 10% out of this 30% schools utilize the clubs and the rest 20% schools' clubs remain unutilized.

As said by the data analysis, Geometrical instrument set is available and well used in 60% of the sample schools, while in 20% of the schools this resource remain unused despite availability and in 20% of the schools, it is not available. 60% of the sample schools do not utilize science laboratory to facilitate the learning of primary level students despite having this facilities whereas 40% of the sample schools do not have this facility. There is no arrangement for science project & workshop in 60% of the sample schools. Though 40% of the schools have this facility, those are not utilized to facilitate the learning of primary level students.

As indicated by the analysis of the data extracted from MI resources' checklist, musical instruments were unavailable in 80% of the sample schools whereas 20% schools don't utilize this inspite of having this facility. Besides, none of the sample schools were found facilitating music classes. 60% school arrange cultural program whereas 40% do not have this provision.

Table 1 represents that 100% of the sample schools do not arrange student counseling program to develop students' interpersonal intelligence. The data analysis reveals that 40% of the sample schools arrange group activities in classrooms where 20%

schools never arrange this. The rest 40% schools environment and resource position indicate the unavailability of this facility. In case of group games, 60% of the sample schools utilize their available resources whereas 40% schools don't have this facility.

The analysis of accumulated data indicates, 100% of the sample schools have the facility and practice to assigning self projects on different learned concepts and evaluating those properly. 40% of the sample schools have the resource capacity to create a positively reinforced learning environment. Despite having the resource capacity, 20% of the schools remain inactive to utilize that. The data analysis reveals that none of the sample schools have any arrangements for self evaluation for their primary level students.

As interpreted by the data analysis it can be concluded that 60% of the sample schools have playground which are well utilized by the students and 40% schools do not utilize their playgrounds. In regard to the availability of sports instruments, 70% of the sample schools are running without having these resources while 10% schools are utilizing their available resources and 20% are not doing so despite having this facility.

In accordance with the data analysis of the MI resources' checklist, visual learning tools were found available and well utilized in 20% of the sample schools. Despite having the resources 70% schools don't apply those tools in classroom teaching learning process. 10% of the schools do not have any collection of visual learning tools. Only 10% of the schools utilize technology based instructional



resources in classroom practice, while 30% of the schools don't apply so in spite of having these resources and 60% schools do not have these resources. 40% of the sample schools arrange art class to nourish students' visual-spatial intelligence. In accordance with the data analysis of the MI resources' checklist, 30% of the sample schools use their gardens often to facilitate the learning of primary students while 20% of the schools do not utilizing this resource. There is no garden in 50% of the schools. Only 70% of the sample schools arrange study tour for their students while 30% of the schools do not do so. For arranging open classroom, 10% of the sample schools have space which they utilize often, 60% of the schools do not have any provision for arranging open class despite having adequate space and 30% schools do not have any space to arrange such class.

When teachers were asked if the resources to apply MIT in TLP are available in the primary schools, most of the respondents agreed about the inadequacy of resources necessary for applying MI in TLP. As one of interviewed teacher stated,

"Developing the four skills of language is equally important. But we do not have tape recorder, language laboratory and proper library facility for our students. Though this school has a library but only secondary students have access there."

They also said that their schools do not have the capacity to arrange necessary technological resources to support MI based TLP.

Teachers' limited knowledge and misconception about MIT

All of the respondents demonstrated more or less familiarity with the idea of MI's implication in education. The majority's knowledge about MI is limited within the scope of recalling the name of the intelligences. The service training, that most of them attended either from PTI, BASIC or both, were not much effective in informing a detail of MI's application in education and the worldwide practice of it.

Teachers' limitation of knowledge concerning the theory and its application in education lead them to a

huge misconception as well as threatening. They are unaware of the fact that, MI based teaching learning process doesn't instruct to deliver a lesson implying all the intelligences areas, but it tells to identify and understand the individuality of every student in intelligence areas and then to organize the activities efficiently to serve the lessons integrating those dominant intelligence areas of students.

Respondents consider the presence of school playground and garden enough to facilitate the bodily- kinesthetic and naturalistic intelligences of students. They are unaware of the fact, MI based education depends on the effective utilization of available resources.

All of the respondents incorrectly limited the application of visual-spatial intelligence in using blackboard for writing and drawings, and showing posters. Two-third of them was confused to identify the intelligence which is represented by teaching models. Besides, all of them wrongly considered group discussion as the only activity in delivering interpersonal intelligence.

Naturalist intelligence was also limitedly interpreted by almost respondents. The idea of this intelligence only includes plants, animals and biological objects, and excludes nature's balance, change, consequences, ecology, geography, astronomy etc.

Reasons for less practice in different intelligences area

All the respondents expressed that the verbal-linguistic, logical-mathematical and visual-spatial intelligences are dominating the TLP in primary education in Bangladesh whereas kinesthetic, musical, intrapersonal and naturalistic are the rarely practiced intelligences in the TLP.

As said by the teachers, traditional classroom setting, high teacher-student ratio and limited school resources are unable to facilitate students' interpersonal and intrapersonal intelligences. A respondent acknowledged,

"We are here only 9 teachers to facilitate at least 1250 students. Classrooms are so crowded that it is very difficult for a teacher to maintain even classroom discipline."





All the teachers agreed that sports arrangement is a necessity for any primary school, not only because it provides students with healthy recreation of body and mind but also for facilitating teachers with more scope to implement diversified TLP. But unfortunately most of the respondents informed that adequate playground and sports facilities are not available in their schools.

The practice of musical intelligence was recognized fully absent in primary education. All the respondents recognized their hesitance to deliver any lesson using musical technique except practicing this intelligence limitedly by using rhythmic expressions in teaching rhyming vocabulary, rhymes and multiplication tables etc.

A few of the interviewees argued that though they have music teachers and instrument facilities but those are not used in instructing other subjects' lessons. Besides, one of the respondents commented,

"My schools' administration would find it worthless to emphasize on either learning music or learning through music."

Respondents don't have the practice of integrating natural intelligence into the lesson. As said by a respondent,

"While teaching about plant's anatomy I usually bring plant pot in the classroom to show students. But most of the time my teaching about nature mostly rely on indicating and describing the illustrations in textbook."

Influence of traditional evaluation system on classroom TLP

All of the respondents have agreed that the traditional evaluation system is not capable to measure all the skills that the students are able to perform as there is little scope assembles varied stems rather than knowledge based stems. The influence of this evaluation process guided them to follow the traditional approaches of education especially in conducting classroom teaching. More so, as there is no clear and specific direction in curriculum about nurturing all the high skill areas, the teachers may informally practice MWTL in their classrooms.

Minimum tendency to integrate MI principles in TLP

Teachers demonstrated a poor level effort in integrating students' strength in intelligence areas, individuality in learning needs and styles, principles and other indications of MIT reflected TLP in their practice. For judging students' scholastic aptitude teachers rely on the scores obtained in traditional assessment procedure, which only reflects short-term gains. Teachers seem reluctant not only in discovering the students' intelligence factors but also in maintaining the standard child friendly, progressive and interactive classroom environment. Almost lessons are delivered without proper planning, concentration, experimentation, teaching aids and attractive techniques.

.Discussion

The findings of the study clearly reveal a poor level of consideration of MI in the TLP of primary level in Dhaka city. The situation of application is quite imbalanced as most of the focus of the process is given to the partial implementation of only two of the intelligences, verbal and mathematical, and the rest of the intelligences are heavily undermined and are rarely practiced in classrooms as the system recommends those as not useful in formal education. The TLP typically focuses on the syllabus based time target and academic score. Though group and individual tasks are often assigned to students, those are rarely problem solving or activity based.

Most of the teachers do not consider planning and implementing instruction considering the individualized learning styles of students. Most of the time strong intelligence areas of students remain unrecognized.

In UNICEF's online corner for teachers to share their new ideas and opinions about teaching and learning, Shikha Chanda (2001), a Bangladeshi teacher from IDEAL school Dhaka, shared her experience regarding some teachers' reluctance in applying MIT in practice,

"However, many teachers are still hesitant to take the bold steps to transform their classes from the old "spoon fed" system of teaching to the dynamic





application of MI principles. The reason for this is that it involves more work on their part.”

The study shows that the primary TLP lacks the essential motivational factors derived from recent educational knowledge and technology. Most classrooms are aided by only chalkboards and textbooks. Available resources are neither adequate nor effective in facilitating students’ MI. CAMPE (2006) revealed the fact that, *“children do not like their schools for its physical provisions, they are not happy with the curriculum and hardly satisfied with the manners of teachers in the classroom and outside are clear indications of what the schools need.”*

This study accords with the comment of the Evaluation Report (2000) on the IDEAL Project that, poor qualifications and a lack of motivation for teachers are crucial issues at the primary education sector of Bangladesh. With nearly one teacher for 70 students and less than 590 hours annual contact time (UNICEF, 2007) it is a tough challenge for the teachers to serve students’ MI in TLP, especially when most of them lack the skill.

During teachers’ training, teachers learn to prepare lesson plans, create interactive classroom activities, implement teaching aids and introduced to different educational theories and practices. But due to the resource crisis and monitoring policy that becomes useless in real life practice. As CAMPE (2006) stated that, *“Teachers are supposed to provide complete teaching to the students but it is found that only one-tenth of them are capable of doing that.”*

The findings of the current study are consistent with another previous study’s findings (BANBEIS, 2005) that, achievement and competency levels of most of the children at primary level in Bangladesh are very low. This study believes that the poor achievement rate of our students cannot reliably indicate their lack of merit. But the reason behind the primary students’ low level performance and incompetency is the traditional TLP which fails to coordinate between the learning goals and the preferred learning styles of students.

Necessary school resources in ensuring Multiple Intelligences were either unavailable or underutilized. In respect of the theory, learning can be diversified and intelligence based through the creative use and

reformation of available resources. Children always love beautiful and joyful school environment which according to most of them are absent in their school (CAMPE, 2006). The current study found that, besides resource crisis, most of the schools act inefficiently in locating and utilizing the available resources (playground, art classes and library) to facilitate students’ intelligences due to the lack of knowledge and awareness. Besides, schools are inattentive in employing resources to diversify instructions to assisting musical-rhythmical, naturalistic and intrapersonal intelligences. Most of the schools do not give emphasis equally on the resources’ collection and application. Consequently, students’ soul rights to be treated equally is also violated as the students are discriminated to experience and appreciate the multiple ways of associated to the intelligences.

Recommendations

- Teachers get acquainted with the theoretical aspects of MWTL through different training. During simulation session in teacher training, MWTL needs to be practiced to make teachers confident in using it in actual classroom situation.
- Teachers need to be motivated to identify different intelligences area of students and individualized their instruction to support better learning.
- Assessment system should be intelligence fair to apply MIT effectively
- The theory suggests some materials for ensuring the integration of MI in TLP. School administration should give emphasis on accumulating these resources as well as utilizing those efficiently.
- Teachers’ training need to be designed in such a way which enables them to identify resources with a view to utilizing those effectively in the classroom.

Conclusion

Howard Gardner’s Multiple Intelligences Theory allows students to realize their strengths in learning and gives teachers the opportunity to understand the dynamics of the classroom. This theory involves the use of intelligences in students’ learning to





emphasize their strengths and aid success. When classroom TLP is MI based students get opportunity to use their strongest intelligence in order to understand the content and learn best. In Bangladesh, the teaching learning process is still traditional and teacher centered. Teachers mostly follow their own perception instead of their training on different teaching learning approaches. This study reveals inadequate supply of MI resources which create difficulties for teachers in planning different teaching learning styles. Moreover, implementation of MIT is largely hindered due to the misconception about the core ideas of MIT among the teachers. Besides, teachers' low level motivation, large class size, traditional evaluation system work as barriers in implementing MIT in classroom which leads students not to be interested in the classroom. Weaknesses involved in the implementation of MIT required to be eradicated as far as possible with a view to achieving goals of MIT as well as education of Bangladesh. Therefore, our existing circumstances of education demand the concern and intervention for strengthening the capacity of society, government and other associates in stimulating necessary policy reforms, ensure sufficient resource allocation and endorse programs that would support applying MIT at primary level TLP nationwide.

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