

Integration of MITA into Education: A Study of Implications on Pedagogical Shift in Nepalese Institutions

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1. Introduction

Teaching is becoming one of the most challenging professions in our borderless society. It is rather alarming in developing countries like Nepal where knowledge is expanding rapidly and modern technologies are demanding teachers to learn how to use these technologies in their classes. Nonetheless most teachers still enjoy chalk and talk tradition. Recent technological advancement has created a digital divide that has touched the lives of a certain segment of the world's population and at the same time the lives of the vast majority of people have yet to be touched by this advancement. Teaching and learning approaches cannot remain away from this reality. To engage diverse students actively in their classes effectively and efficiently is a major challenge of educators around the globe and in Nepal too. To involve varieties of students in learning process at a time, stimulate their inquisitive thirst and make them understand the depth of the subject matter is to enter into their unique world, understand their hidden caliber, encourage to explore their competencies and teach them in their desired way.

Every individual is bestowed with different intelligence by birth. Traditional schools, colleges and universities tend to neglect active involvement of students and so fail to tap their rich wells of diversity in classrooms. When lessons and approaches do not accommodate students' interests

and abilities as tools to achieve, learners lose interest and feel detached from learning chain. A teacher's prime challenge at this juncture is to understand the diverse intelligences of the students. This necessity propelled to develop an approach in teaching which can easily help to explore, implement and accommodate the hidden intelligences of the learners in learning process. As a result, Multiple Intelligence approach emerged in the domain of education. **Multiple Intelligence Teaching Approach (MITA)** as such is an educational theory put forth by **Professor Howard Gardner** at Harvard University in 1983, which suggests that an array of different kinds of "intelligence" exists in human beings (Gardner, 1983). According to him, each individual manifests varying levels of these different intelligences and thus each person has a unique "cognitive" profile. It suggests that the traditional notion of intelligence, based on IQ testing, is far too limited. Instead, Dr. Gardner proposes eight different intelligences (later revised to ten) to account for a broader range of human potential in children and adults.

2. Significance of the Study

The developing countries of the world face many major social challenges – education as being one of them. It seems that the tendency would merely be to transport current educational pedagogy to these developing nations without making adequate arrangement of infrastructure, skills and the accessories for the pragmatic application of these approaches. Nevertheless, the existing pedagogy in these countries primarily fosters the development of ruled-based thinking, which will not suffice given the demands of the current day. Thus, a new model for education is in demand that will address the need: for life-long learning, for learning-how-to-learn, and for being able to apply knowledge to unfamiliar circumstances. Developing nations like Nepal, as many nations of the world do, need new educational pedagogies to foster change and to meet

new challenges. However developing nations need more than this, they need to build, not just rebuild the infrastructure. This creates a situation where bold ideas need to be spawned since old ideas, in many cases, do not exist. Therefore, in developing nations there is a unique opportunity to:

- build an infrastructure from the ground up, and
- deploy a novel educational pedagogy without having to confront a well established, well entrenched, infrastructure.

Hence, a through analysis and evaluation of the latest teaching pedagogy, its easiness of application and fitting in the Nepalese scenarios provide a good insight for all educational institutions, educators, students, government and other stakeholders alike.

3. Objectives of the Study

The main objective of this project work was to explore and analyze the impacts and implications of multiple intelligence approach on education. However, the following specific objectives had also been devised to breakdown the study for in-depth understanding and effective analysis.

- a. Understand the concept of Multiple Intelligence
- b. Techniques of MI approach in classrooms
- c. Trend of the use of MI in Nepalese institutions
- d. Role of Information Technology on MI Approach
- e. MI's impacts and implications on learners while learning in Nepalese context

4. Study Framework and Limitations

Howard Gardner's theory of multiple intelligences has not yet readily accepted within academic psychology. However, it has met with a strongly positive response from many educators. Ranges of educational theorists, teachers and policymakers have begun to embrace it and have significantly applied to solve the problems of schooling these days. A number of schools in first world countries have looked to structure curricula according to the intelligences, and to design classrooms and even whole schools to reflect the understandings that Howard Gardner develops. The theory can also be found in use within pre-school, higher, vocational and adult education initiatives in these countries. But it happens to be a latest phenomena for Nepalese educators. Since MI approach has direct relationship with technology inducted by the institution and positive perception about pedagogical changes, the study was limited to some privately run colleges, schools and Montessori centers which are technologically better off institutions in and around Pokhara Valley only.

Furthermore, the time limitation is one of the major constraints of this study only to select a few institutions in the valley. Similarly, there are various criticisms of, and problems around, Howard Gardner's conceptualization of multiple intelligences. John White (1998) has argued that there are significant issues around the criteria that Howard Gardner employs. There are questions around the individual criteria, for example, do all intelligences involve symbol systems; how the criteria to be applied; and why these particular criteria are relevant. In respect of the last, and fundamental question, White states that he has not been able to find any answer in Gardner's writings (*ibid.*: 19). Indeed, Howard Gardner himself has admitted that there is an element of subjective judgment involved.

For those researchers and scholars who have traditionally viewed intelligence as, effectively, what is measured by intelligence tests - Howard Gardner's work will always be problematic. They can still point to a substantial tradition of research that demonstrates correlation between different abilities and argue for the existence of a general intelligence factor. Howard Gardner (1993: xxiv) disputes much of the evidence and argues that it is not possible, as yet, to know how far intelligences actually correlate. More recent developments in thinking around intelligence such as Robert Sternberg's advancement of a 'triarchic model' have shared Gardner's dislike of such standard intelligence theory. However, in contrast to Howard Gardner, Robert Sternberg does not look strongly at the particular material that the person is processing. Instead he looks to what he calls the componential, experiential and contextual facets of intelligence. A further set of criticisms centre around the specific intelligences that Howard Gardner identified. For example, it can be argued that musical intelligence and bodily-kinesthetic intelligence are better approached as talents (they do not normally need to adapt to life demands). A common criticism made of Howard Gardner's work is that his theories derive rather more strongly from his own intuitions and reasoning than from a comprehensive and full grounding in empirical research. For the moment there is not a properly worked-through set of tests to identify and measure the different intelligences.

Fundamentally, it is important here to highlight that the study is exploratory in nature. Because of its limited sample size and the above-mentioned limitations, it is not possible to claim that the findings obtained in this study are representatives of the entire education sector or that they are applicable elsewhere. However, it is believed that this study will generate further hypotheses so that higher levels of study and research may be encouraged in this context.

5. A Theoretical Review of Teaching Approaches

Due to globalization, the approaches adopted in education in one corner of the globe spreads the other corner immediately. Traditional ineffective approaches are being replaced by latest constructive learner-centric approaches. Among them, a few approaches are reviewed here.

5.1. Multiple Intelligence (MI) Approach: Concept

In 1983, Howard Gardner mentioned his concept of Multiple Intelligences in a book named “*Frames of Mind: Theory of Multiple Intelligences*”(Gardner,1983). Mr. Gardner, as a professor in the Harvard Graduate School of Education and a psychologist, suggested that intelligence is not a single attribute that can be measured and given a number. He pointed out that IQ tests measure primarily verbal, logical-mathematical, and some spatial intelligence only. According to him, there are many other kinds of intelligences, which are important aspects of human capabilities. These capabilities also include visual/spatial, bodily/kinesthetic, musical, interpersonal, and intrapersonal intelligences. More recently he added naturalist intelligence to this list and suggested that there may be other possibilities including spiritual and existential intelligences as well. Professor Howard Gardner’s theory of multiple intelligences has wide spread currency in education. This is due to the appeal of its suggestion that there is a range of intelligences rather than a single IQ that is based on abstract mathematic/logical deductive thinking.

Gardner has questioned the idea that intelligence is a single entity, that it results from a single factor, and that it can be measured simply via IQ tests. Some children are for instance

intuitively brilliant at acting but cannot add up. A pupil might be a master of a musical instrument and a good sight to read music at astonishing speed but be weak at expressing himself or herself on paper. Another child might have highly developed interpersonal skills, make friends easily but be a hopeless sportsman. The multiple intelligences set out by Gardner represent a broad range of culturally valued achievement recognized in the outcomes of schooling. Gardner's multiple intelligences have therefore been utilized to justify the development of broader curriculum opportunities and increased differentiation in teaching.

Gardner defines intelligence as “the capacity to solve problems or to fashion products that are valued in one or more cultural setting” (Hatch & Gardner, 1993). Using biological as well as cultural research, he formulated a list of seven key intelligences. This new outlook on intelligence differs greatly from the traditional view, which usually recognizes only two intelligences, verbal and computational. The seven intelligences were initially mentioned by Gardner in his book ‘*Frames of Mind: Theory of Multiple Intelligences*’ (Gardner, 1983) and later he added another intelligence (Weber, 1997). According to him, these intelligences (Pokhrel, 22 May, 2010 - Slide Presentation) are as explained below:

1. **Logical-Mathematical Intelligence (Number Smart):** The ability to detect patterns, reason deductively and think logically comes under this intelligence. Most often

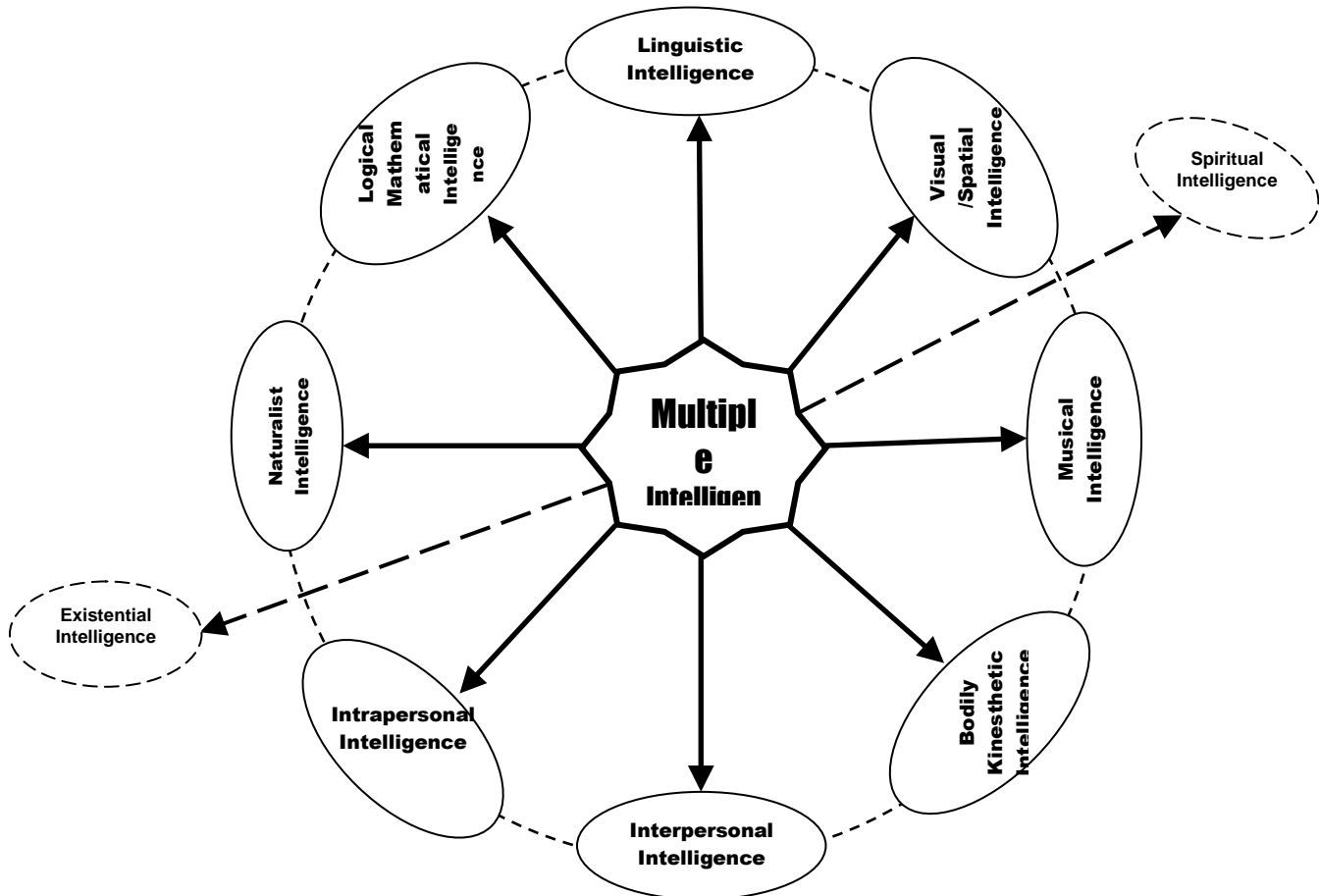


Figure 1: Gardner's Multiple Intelligences

it is associated with scientific and mathematical thinking. This area has to do with logic, abstractions, inductive and deductive reasoning, and numbers. While it is often assumed that those with this intelligence naturally excel in mathematics, chess, computer programming, and other logical or numerical activities. A more accurate definition places less emphasis on traditional mathematical ability and more on reasoning capabilities, abstract pattern recognition, scientific thinking and investigation, and the ability to

perform complex calculations. Careers that suit those with this intelligence include scientists, mathematicians, engineers, doctors, and economists.

2. **Linguistic Intelligence (Word Smart):** This intelligence is the ability to use language masterfully to express oneself rhetorically or poetically. This ability also allows one to use language as a means to remember information. Verbal-linguistic intelligence has to do with words, spoken or written. People with verbal-linguistic intelligence display a facility with words and languages. They are typically good at reading, writing, telling stories, and memorizing words and dates. They tend to learn best by reading, taking notes, and listening to lectures, and via discussion and debate. Those with verbal-linguistic intelligence learn foreign languages very easily as they have high verbal memory, recall power and an ability to understand as well as manipulate syntax and structure. Careers that suit those with this intelligence include writers, lawyers, philosophers, politicians, and teachers.

3. **Spatial/Visual Intelligence (Picture Smart):** The ability to manipulate and create mental images in order to solve problems is generally termed as visual intelligence. Not limited to visual sight, Gardner (1999) also noted that blind children can possess spatial intelligence. This area has to do with vision and spatial judgment. People with strong visual-spatial intelligence are typically very good at visualizing and mentally manipulating objects. They have a strong visual memory. Those with visual-spatial intelligence also generally have a very good sense of direction and may also have very good hand-eye coordination, although this is normally seen as a characteristic of the bodily-kinesthetic intelligence. Careers that suit those with this intelligence include artists, engineers, and architects.

4. **Musical Intelligence (Music Smart):** Musical Intelligence is the ability to read, understand, and compose musical pitches, tones, and rhythms. Auditory functions are required for a person to develop this intelligence in relation to pitch and tone, but it is not needed for the knowledge of rhythm. This area has to do with rhythm, music, and hearing. Those who have a high level of musical-rhythmic intelligence display greater sensitivity to sounds, rhythms, tones, and music. They normally have good pitch and may even have absolute pitch, and are able to sing, play musical instruments, and compose music. Those who are strongest in it may learn best via lecture. They will often use songs or rhythms to learn and memorize information, and may work best with music playing in the background. Careers that suit those with this intelligence include musicians, singers, conductors, and composers.

5. **Bodily-Kinesthetic Intelligence (Body Smart):** The ability to use one's mind to control one's bodily movements is bodily-kinesthetic intelligence. This challenges the popular belief that mental and physical activities are unrelated. This area has to do with movement and doing. In this category, people are generally adept at physical activities such as sports or dance and often prefer activities that utilize movement. They often learn best by physically doing something rather than reading or hearing about it. Those with strong bodily-kinesthetic intelligence seem to use what might be termed muscle memory; they remember things through their body, rather than through words (verbal memory) or images (visual memory). Careers which suit those with this intelligence include athletes, dancers, actors, comedians, builders, and artisans.

6. **Interpersonal Intelligence (People Smart):** Interpersonal Intelligence is the ability to apprehend the feelings and intentions of others. This area has to do with interaction

with others. People in this category are usually extroverts and are characterized by their sensitivity to others' moods, feelings, temperaments, and motivations and their ability to cooperate in order to work as part of a group. They communicate effectively and empathize easily with others, and may be either leaders or followers. They typically learn best by working with others and often enjoy discussion and debate. Careers that suit those with these intelligences include politicians, managers, social workers, and diplomats.

7. **Intrapersonal Intelligence (Myself Smart):** Intrapersonal Intelligence is the ability to understand one's own feelings and motivations. This area has to do with introspective and self-reflective capacities. Those who are strongest in this intelligence are typically introverts and prefer to work alone. They are usually highly self-aware and capable of understanding their own emotions, goals, and motivations. They often have an affinity for thought-based pursuits such as philosophy. They learn best when allowed to concentrate on the subject by themselves. Careers that suit those with this intelligence include philosophers, psychologists, theologians, and writers.

8. **Naturalist intelligence (Nature Smart):** This intelligence enables human beings to recognize, categorize and draw upon certain features of the environment. It 'combines a description of the core ability with a characterization of the role that many cultures value'. This area has to do with nature, nurturing, and classification. Those with this intelligences are said to have greater sensitivity to nature and their place within it, the ability to nurture and grow things, and greater ease in caring for, taming, and interacting with animals. They are also good at recognizing and classifying different species. Careers that suit those with this intelligence include scientists, naturalists, conservationists, gardeners, and farmers.

9. **Spiritual intelligence (metaphysical smart)** : Gardner had initially mentioned only seven intelligences excluding the Naturalist Intelligences. However, subsequent research and reflection by Howard Gardner and his colleagues added naturalist intelligence in their list and looked at two other intelligences - **Spiritual Intelligence** and **Existential Intelligence** and thus made their list longer with ten intelligences as depicted in the figure 1. Spiritual intelligence is a term used to indicate a spiritual correlate to IQ (Intelligence Quotient) and EQ (Emotional Quotient). Like emotional quotient (EQ), spiritual quotient (SQ) is becoming more mainstream in scientific inquiry and philosophical/psychological discussion. It refers to a suite or set of propensities comprising: perceptions, intuitions, cognitions, etc., related to spirituality and/or religiosity, especially spiritual capital (Wikipedia, 2010). Suitable fields to choose for the persons with this intelligence might be spiritual leader, priest, saint etc.
10. **Existential Intelligences (Cosmic smart)**: The Existential Intelligence can be defined as the ability to be sensitive to, or have the capacity for, conceptualizing or tackling deeper or larger questions about human existence, such as the meaning of life, why are we born, why do we die, what is consciousness, or how did we get here (Wilson, 1997). It seems that Gardner was confused about this intelligence and so did not elucidate it, rather he just raised the topic and left ambiguous. He mentioned that Individuals who exhibit the proclivity to pose and ponder questions about life, death, and ultimate realities, can not be fully confirmed, endorsed, or described as having this intelligence. Despite this avoidance to elaborate this intelligence, there are many who have accepted the presence of this intelligence as fact and have attempted to clarify what it might look like if it were part of the MI array. For those who have met children who appear to have

"old souls," it is often easy to accept the existence of existential intelligence as something very real and important. These are the children who appear to have a sixth sense, they may be psychic, or ones who pose, and sometimes even answer, life's larger questions. Like: Why am I here? Why are we here? Can animals understand us, or do animals go to heaven? Where do we go when we die? Is there life on other planets? These may be those children who can be described as "fully aware" of the cosmos - of its diversity, complexity, and wonder. Suitable professions for them might be fortune teller, astrologer, palmists etc.

Gardner (1999) argued that culture also plays a large role in the development of the intelligences. All societies value different types of intelligences. The cultural value placed upon the ability to perform certain tasks provides the motivation to become skilled in those areas. Thus, while particular intelligences might be highly evolved in many people of one culture, those same intelligences might not be as developed in the individuals of another. Gardner (1999) and his associates finally concluded that these intelligences, even though separate from each other, very rarely operate independently. Rather, the intelligences are used concurrently and typically complement each other as individuals develop skills or solve problems. They have put forward an example of a dancer to justify their conclusion. They have advocated that a dancer can excel in his art only if he has:

- strong musical intelligence to understand the rhythm and variations of the music,
- interpersonal intelligence to understand how he can inspire or emotionally move his audience through his movements, as well as

- bodily-kinesthetic intelligence to provide him with the agility and coordination to complete the movements successfully.

5.2. *Instruction Vs Construction Pedagogy*

There are different schools of thought on pedagogy. Among them, the most popular and frequently discussed pedagogies are of two types - ***Instruction and Construction***. The former approach is nothing other than the common method applied in our traditional institutions while the latter refers to a way of teaching that demands a redefinition of the traditional teacher-student relationship. The advent of constructive approaches in teaching has taken place along with the advancement of Information and Communication Technology (ICT) and seems to be augmenting with the greater use of ICT in education. The basic differences between instruction and construction teaching approaches can be listed as shown below.

<i>Features</i>	<i>Instruction</i>	<i>Construction</i>
Classroom Activity	Teacher centered Didactic	Learner centered Interactive
Teacher Role	Fact teller Always expert	Collaborator Sometimes expert
Student role	Listener Always learner	Collaborator Sometimes expert
Instructional emphasis	Facts Memorization	Relationships Inquiry and Invention
Concept of knowledge	Accumulation of facts	Transformation of facts
Demonstration of success	Quantity	Quality of understanding
Assessment	Norm referenced Multiple-choice items	Criterion referenced
Technology use	Drill and practice	Communication, collaboration, information access, expression

5.3. UNESCO's View of Switching Process in Pedagogy

The big question is to follow the procedure here at this situation is to know how teachers can move from the instruction to the construction approach. Teachers automatically move through stages as they begin to adopt IT in teaching and learning (UNESCO, 2010). The UNESCO report on teacher-education articulates that the teacher initially adopting technology applies it simply as a substitute for current teaching practice where technology is not used. Lectures are supported by electronic tools with the help of power point slides, students writing papers by hand are substituted by word processor and a course syllabus on paper becomes course syllabus online.

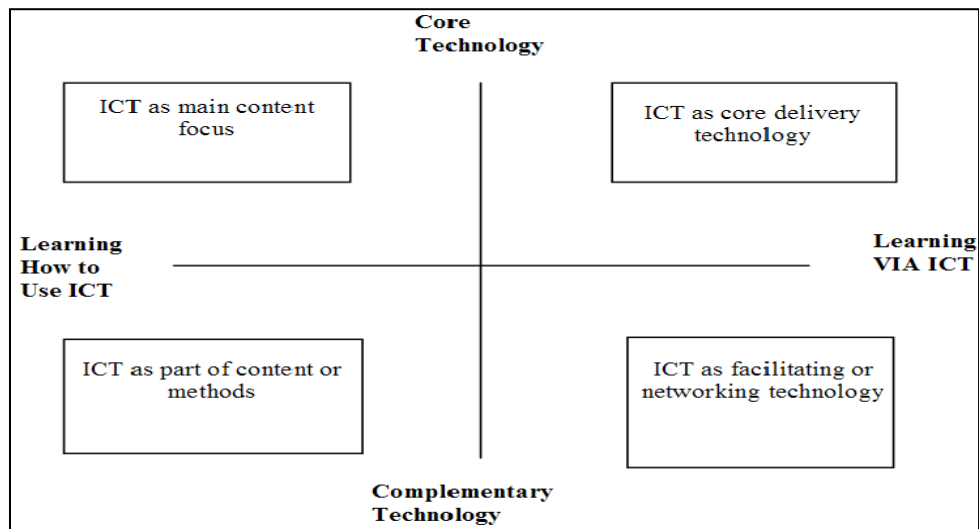


Figure 2: Categories for ICT in Teacher Training

This approaches adopted by teachers in teaching gradually develops towards the use of more IT supported pedagogy. As teachers' experience with new technologies continues to develop, and organizational support and access to IT grows, it becomes possible to move beyond the adaptation of ICT applications. Transformation of the educational process starts to occur. As a result, the teaching approach happens to be a student-centric learning process. When the use of IT continues in education, innovative and creative ideas begin to sprout in the classroom and the pedagogy starts to move towards constructive approaches leaving behind the traditional

instructive approaches. Due to the global trend and the nature of modern forms of ICT, the use of it in classrooms can easily lead to a shift towards more learner-centered approaches (Jung, 2005).

6. METHODOLOGY

The major emphasis in this study was to know the application of multiple intelligence teaching approach (MITA) in Nepalese institutions and its implications over the learning curve of students having the differing talents. Therefore, stratified random sampling approach was used to select the sample institutions for the study. Altogether, eight (8) samples were taken into consideration selecting two samples from each strata viz. bachelor colleges / campuses, +2 colleges, secondary schools and Montessori schools of Pokhara valley. Then 10 respondents from each institutions were selected randomly as shown in the table 1.1. Pre-tested questionnaires were then used to collect required facts and information along with personal conversation when required.

Table 1.1 **Respondents Detail**

Nature of Respondents	Selected institutions	Number of respondents	Represent Percentage
Colleges / Campuses (Bachelor Plus)	2	10	25%
+ 2 Colleges	2	10	25%
Secondary Schools	2	10	25%
Montessori Schools	2	10	25%
Total	8	40	100 %

Source: Field Survey 2010

7. DATA COLLECTION, INTERPRETATION AND ANALYSIS

The study was mainly based on primary data collected from questionnaires and personal conversations with minimal backing of the secondary information. Secondary data were also used as per the requirement and relevancy of the study. In order to analyze the outcomes of the

study, various statistical tools were used. Mean, Weighted Average, Standard Deviation, Correlation Analysis, Percentage, Bar Diagram, Pie Charts have been extensively used to process the data, analyze them and to interpret the results. Manual processing and analysis was also done for some qualitative data to interpret and construe the qualitative attributes of the information.

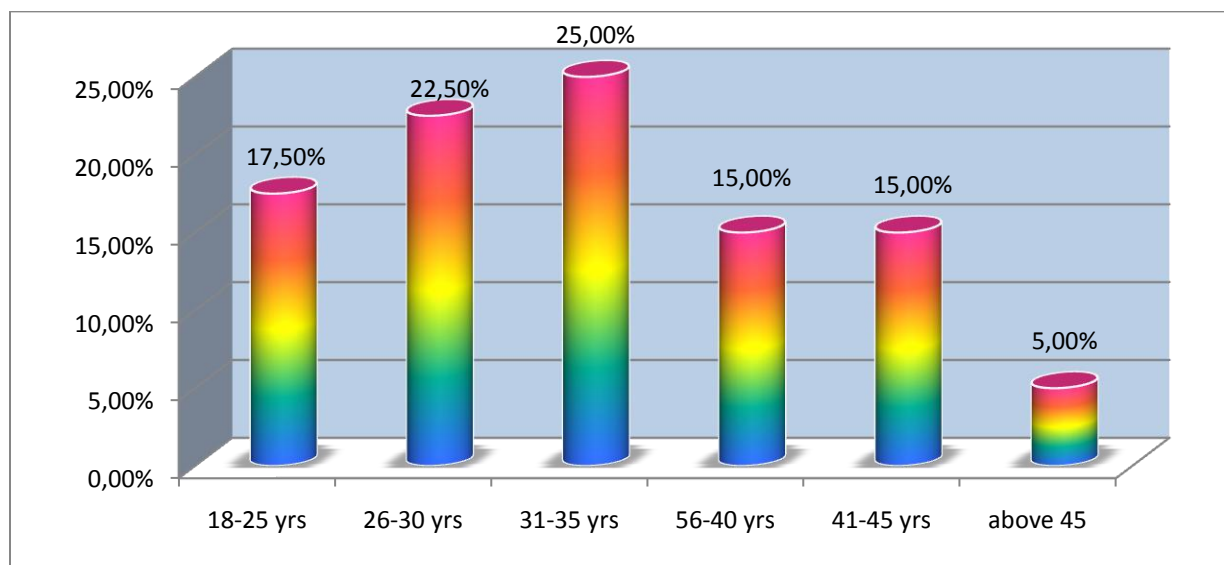


Figure 3: Age-wise Respondents' Profile

Among the total respondents, female constituted 32.4% (13) of the total respondents where as there were 67.5 % (27) male participants to fill the questionnaire form. Age-wise, there were 17.5% of respondents who were under 25 years of age and 22.5% of them were under 26 to 30 years of age category. The maximum number (25%) of respondents turned out to be of 31 to 35 years of age group. There were 15% of respondents each from 36 to 40 years age category and 41 to 45 years category. Similarly, 45 plus age group comprised of the smallest percentage of respondents which was only 5% of the total respondents as shown in the figure 3.

Altogether there were 40 respondents who were from pre-nursery teachers to lecturers taking classes in bachelor level and master level in various colleges with a range of qualification from

just SLC pass to Ph.D holder. The highest numbers (52.5%) of total respondents were master-degree holder as shown in table 1.2

Table 1.2: Qualification of Respondents

Formal Education	Respondents	Percent
Doctor/M. Phil. Level	1	2.50%
Master's Level	21	52.50%
Bachelor's Level	7	17.50%
PCL/+2 Level	6	15.00%
SLC Level	5	12.50%
Others...	0	0.00%
Total	40	100.00%

Source: Field Survey 2010

Among them, 75% have attended teachers' training programs at least once till the date. However, 25% respondents who were relatively new in teaching profession were found not attending any kind of training program so far. The participants who have already attended at least a training program expressed that such training programs have become very helpful in their teaching profession. Almost 98% (c/f Figure 4) respondents felt that such training programs should be continued in the future though they measured the effectiveness of such training programs differently ranging from 12.5% who realized such programs little bit useful to 62.5% who felt such programs significantly important and effective in teaching / learning process.

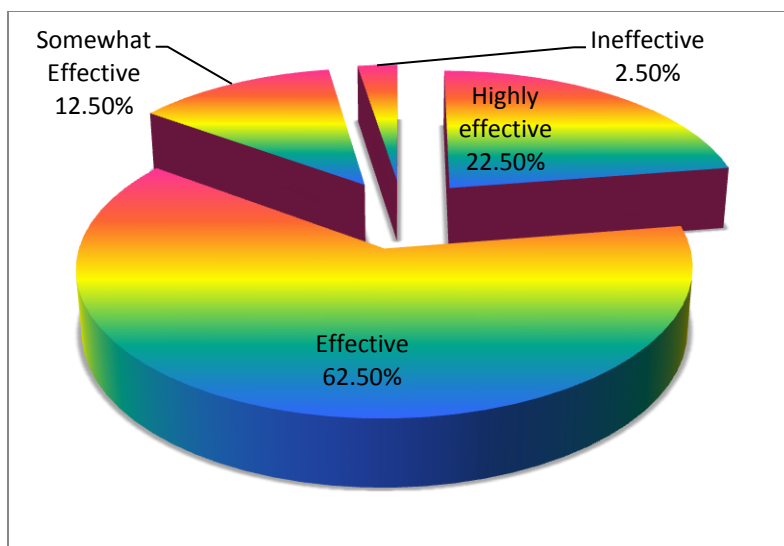


Figure 4: Effectiveness of Training Programs in Teaching

Of them, 22.5% realized that these programs can be highly beneficial and effective to the teachers as well as students in teaching and learning process. An incredible finding revealed through this research was that almost 73% teachers do not have any idea of Multiple Intelligence Teaching Approach (MITA) though they are involving in teaching profession for a long time, which seems to be of 5 to 20 years in the same profession continuously.

Only 27.5% teachers of the sample group as shown in the figure 5 claimed to know about MITA precisely and have been using this approach frequently in their class. This figure corroborates the fact that Multiple Intelligence Teaching Approach (MITA) is completely a new coming prodigy in Nepal and seems to be taking a couple of decades to gain its momentum. Almost 73% people are not aware of this teaching methodology though they have been using various approaches to explore the hidden intelligence of their students. Activities like games, group discussion, singing, dancing, acting etc. are some of the techniques used by them since long time back.

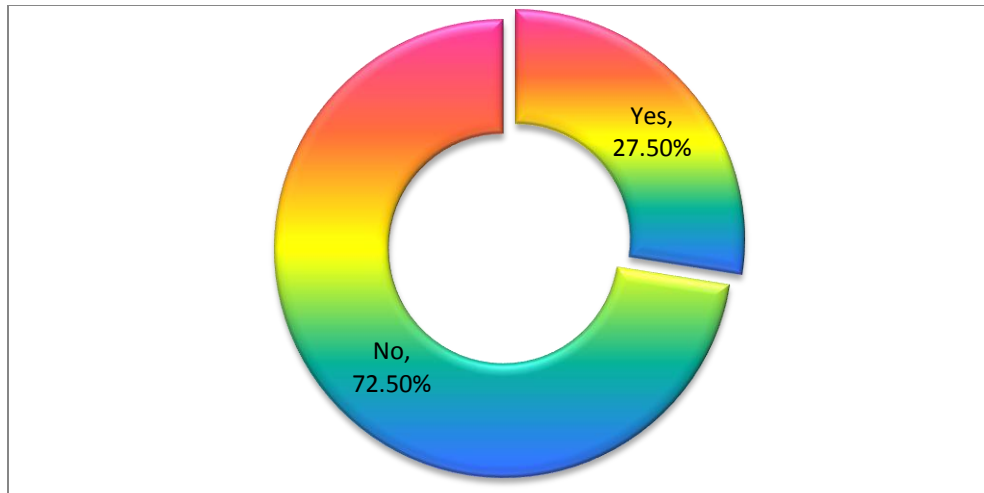


Figure 5: Number of Respondents having knowledge of MITA

Similarly, only 10% teachers of the sample group feel confident to use MITA in their class room and use frequently. They are mostly pre-primary Montessori teachers. However, they are not sure about the approach they are using in teaching their students. Anyway, they try to explore the hidden intelligence of students by using different means of teaching. Most of them opined that pre-primary students learn better through playing and therefore they employ play as a primary means of teaching in their institution.

Table 1.3: Frequency of using MITA in class room

Options	Respondents	Percent
Mostly use	4	10.00%
Use occasionally	3	7.50%
Use rarely	5	12.50%
Do not use at all	28	70.00%
Total	40	100.00%

Source: Field Survey 2010

According to the data collected from questionnaires, it has brought to our notice that the infrastructure, environment and technological aspects do not support multiple intelligence teaching approach to use in most of the institutions in Pokhara and that may apply to other part of the country as well. They are typically designed for “chalk and talk” set up of teaching.

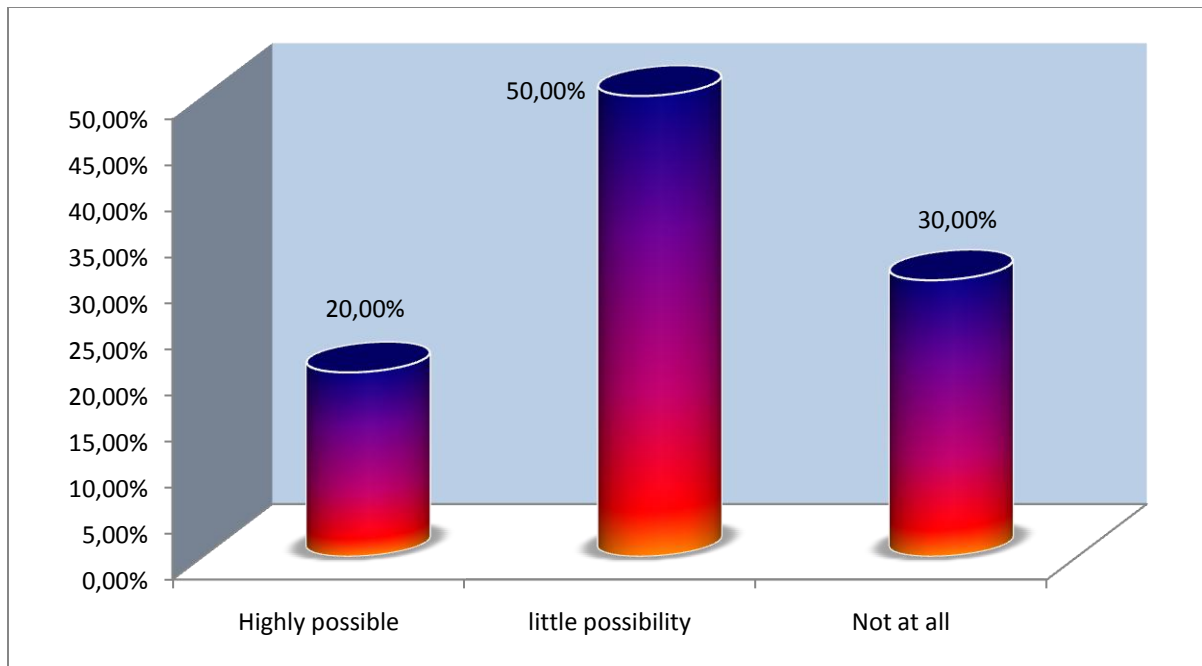


Figure 6: Possibility of using MITA in the institution

According to the survey report as shown in the figure 6, 30% of the total respondents assert that Nepalese institutions are completely incompatible to use IT based multiple intelligence methodology in the class room whereas 50% of them find little possibility to use different teaching approaches like MITA in their institutions. However, 20% of them are highly optimistic and find high possibility to adopt this teaching approach in their institutions. Mostly the teachers from Montessori schools are in this view and claim that they are using this technique in their every day class. Almost 85% teachers from sample group opined that multiple intelligence (MI) approach of teaching can help students learn better and faster. But at the same time they alleged that the present curriculum is not MITA friendly in Nepal and does not encourage to use these kinds of techniques.

And the evaluation procedure of students only at a time annually is also defective and does not encourage students to be active in every class as they are evaluated on the basis of what they

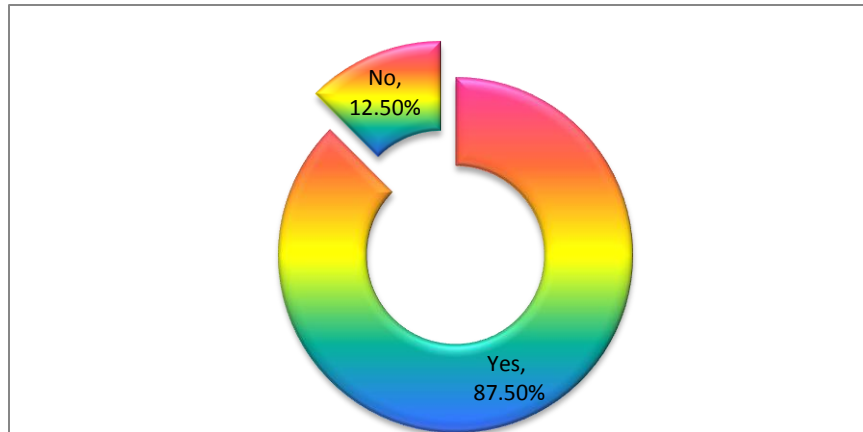


Figure 7: Organize Activities to Explore Talent in Class Room

write in the final examinations though most of the institutions conduct terminal exams in their own style and weightage. Almost 98% respondents affirmed that their previous training (75% of them had expressed of taking teaching training at least once) programs were not sufficient to train teacher to use MI approach in their class room. According to them, a vigorous training package is necessary to make them (teachers) able to use MI concept in their teaching task effectively.

In spite of this, almost 88% (c/f figure 7) teachers of sample group agreed that they have tried to explore the hidden talents of their students through talent hunt kind of activities in the class or through other co-curricular activities. According to them, the students who take part in these activities gradually become extrovert, open and cooperative after their participation as they call it a positive output of such activities. Almost all respondents acknowledged that the use of information technology (IT) in the class is inevitable to employ MI concept effectively but every school/college is not IT friendly due to the lack of infrastructure or trained manpower or merely due to the financial reason. Therefore, in spite of MI's positive consequences it is difficult to

apply in each and every institution of Nepal. Even it is stated that some well-off institutions also hesitate to invest a huge amount on teaching resources and technology adequately.

Table 1.4: Effectiveness of IT use in the classroom

Options	Respondents	Percent
Highly effective	9	22.50%
Effective	13	32.50%
No significant diff	2	5.00%
Difficult to use	16	40.00%
Total	40	100.00%

Source: Field Survey 2010

The interesting fact here is that when teachers use different teaching methodologies, students become more active, attentive, independent and confident. Almost 68% respondents believe that different approaches of teaching like MI can help student secure good marks and make them independent learner (77.5% responses). About 58% teachers from sample group strongly agree that suitable teaching approaches according to their interest and intelligence make students curious to learn. According to them, when students become curious, they learn better which makes them confident eventually as depicted in the figure 8.

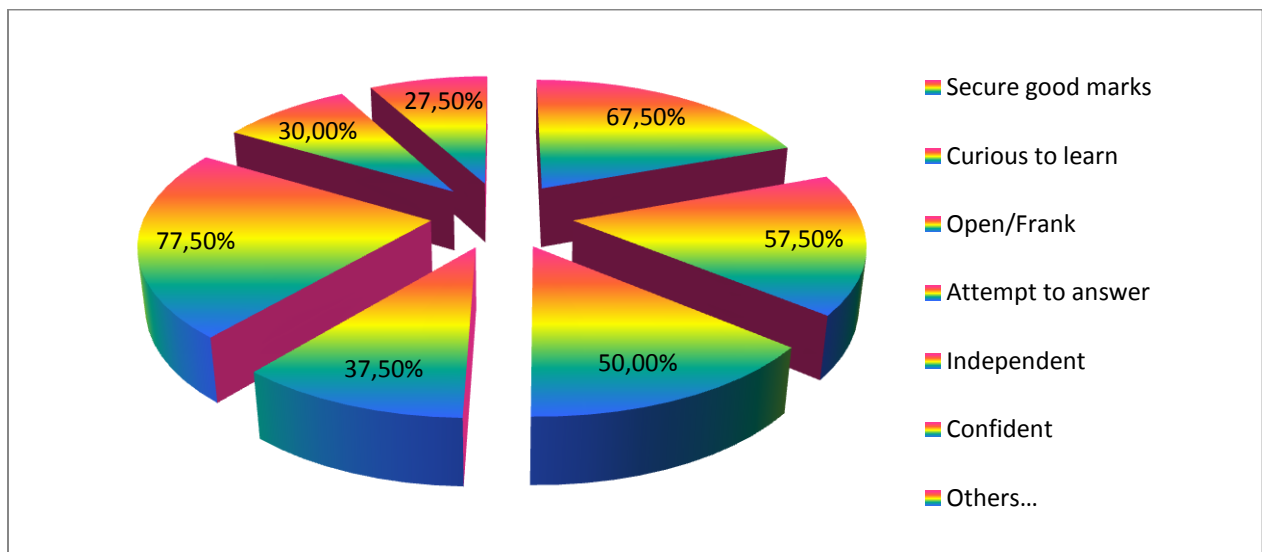


Figure 8: Effect after Methodology Change

8. SUMMARY, FINDINGS & CONCLUSIONS

Every parent's desire to put their children on the way to excellent education starts with the school. Family is the first school for children whereas school is the second home where children get the opportunity to develop their personality. Most of the necessary social and professional skills are developed in school. Development of these skills takes place through learning & thinking activities. Therefore, a school that has the potential to provide education on thinking and learning skills determines the achievement and satisfaction of the students and parents. Coming to the other part of the teachers' personality, Gurus /teachers have been revered in Asia including the Nepalese societies since ages. But of late, they have been criticized for many reasons and blamed of being incompetent to impart the 21st century education on a par with international standard. It may be due to their own reasons or institution's causes, or may be due to the curriculum flaws or the institutionalized pedagogy brought up through chalk and talk societal norms. Whatever are the reasons, the Nepalese education standard is not honored at parity vis-à-vis the global benchmark.

One of the major challenges of developing countries like Nepal is to engage diverse students actively in education. When lessons do not accommodate students' interests and abilities as tools to achieve, learners lose interest and feel disengaged. Gardner's Theory of Multiple Intelligences (MI), however not free from some controversial issues, provides a useful theoretical foundation for recognizing the different abilities and talents of students. This theory acknowledges that all students may not be verbally or mathematically gifted, rather many children may have particular strengths in other areas such as music, spatial relations, metaphysical talent or interpersonal knowledge which are valued not only by them as individuals but also by society. Thus, Multiple

Intelligence Teaching Approach (MITA) stipulates that educators should recognize and teach to a broader range of talents and skills. And teachers should structure the presentation of material in a style that engages most or all of the intelligences in their teaching package. Mindy L. Kornhaber (2001), a researcher involved with Project Zero, identified a number of reasons why teachers and policymakers in North America have responded positively to Howard Gardner's presentation of multiple intelligences. Among these are that:

'...the theory validates educators' everyday experience: students think and learn in many different ways. It also provides educators with a conceptual framework for organizing and reflecting on curriculum assessment and pedagogical practices. In turn, this reflection has led many educators to develop new approaches that might better meet the needs of the range of learners in their classrooms.'

Proceeding with the research task around the main objective of exploration and analysis of the application of multiple intelligence teaching approach in Nepalese institutions, some incredible findings have come across. Almost three-fourth (3/4) teachers do not have any idea of Multiple Intelligence Teaching Approach (MITA) though they are involving in teaching profession for a long time, which seems to be of 5 to 20 years in the same profession continuously. Only one-fourth (1/4) teachers of the sample group claimed to know about MITA precisely and have been using this approach frequently in their class. This figure confirms the fact that Multiple Intelligence Teaching Approach (MITA) is completely a new trend in Nepal and seems to be taking a couple of decades to gain its momentum though it was developed by Howard Gardner some 27 years back in 1983. Some Montessori teachers are only found using MI approach in their class room. However, they are not sure about the approach they are using in teaching their students. Anyway, they try to explore the hidden intelligence of students by using different means of teaching. Most of them opined that pre-primary students learn better through playing and therefore they employ play as a major means of learning in their institution. But the study revealed that they also lack the knowledge of MI Approach.

According to the data collected from questionnaire, it has brought to our notice that the infrastructure, environment and technological aspects do not support multiple intelligence teaching approach to use in most of the institutions in Pokhara and that may apply to other parts of the country as well. They are typically designed for “chalk and talk” set up of teaching. According to the survey report almost 1/3rd of the total respondents assert that Nepalese institutions are completely incompatible to use IT based multiple intelligence methodology in the class room whereas half of them find little possibility to use different teaching approaches like MITA in their institutions. However, 20% of them are highly optimistic and find high possibility to adopt this teaching approach in their institutions. Mostly the Montessori teachers are in favor of this technique.

Thus, we can conclude that multiple intelligence (MI) approach of teaching can be highly effective to learn better and faster but the problem lies in the present curriculum, pedagogical legacy, technological support, techno-savvy teachers and student evaluation procedures in Nepalese context. The annual evaluation system of students exclusively through the final examination does not encourage students to be active in every class though most of the institutions conduct term and unit exams at an interval of certain time in their own style and weightage. Despite the unawareness of MITA, majority of respondent teachers agreed that they have been trying to explore and recognize the hidden genius of their students through talent hunt activities in the class or through other co-curricular activities. Almost all respondents apprehended the fact that the students who take part in these activities gradually become extrovert, open and cooperative after their participation as they call it a positive output of such activities.

The Wharton study in the United States found that the retention of only verbal presentations was only 10% (Pease & Pease, 2007). This means that a verbal presentation requires frequent repetition of key points to be effective. By comparison, the retention rate of combined verbal and visual presentations is 50%. This means we will achieve a 400% increase in efficiency through the use of visual aids. Therefore, some well-off institutions connected in the 'wired world' with resources at their fingertips can easily create MI friendly ambiance in their classes. But for others rather than financial issues, there are other glitches including change-adopt mind set which lingers the implementation of MITA in Nepalese institutions and perhaps, might need to wait a decade or a half to see a quantum jump in instructional pattern ousting the traditional approach of *Gurukulian* paradigm in spite of having lots of new sprouts in education pedagogy at the moment.

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