

## APPLYING GARDNER'S MULTIPLE INTELLIGENCES THEORY IN EFL CONTEXT

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### Abstract

Intelligence is one's capability that is known as "g factor". For the very first time multiple intelligence theory was introduced by Howard Gardner. He identified nine different types of intelligence. According to him, every student has all these intelligences either strong or weak and every student can learn the same subject in same way. Pakistani educational system prefers linguistic ways of instruction but all learners have not equally strong linguistic intelligence. Students find difficulty in writing; therefore, in this research, MI theory is integrated for enhancing one discipline, writing instruction. The sixth grade students from a Pakistani school participated in this research with their writing course. The study has used a quasi-experimental research method with a pre-test and post-test design. 60 students of sixth grade at a school in Lahore were the participants of the study. The division among the participants was done randomly into an experimental and a control group. In experimental group the instructional activities were based on multiple intelligences while traditional method was used in control group the control. The findings suggest that the experimental group instructed through multiple intelligences activities showed more improvement from their pre-test to their post-test scores than the control group instructed through traditional method. Experimental group also outperformed the control group according to the post-test scores. In addition, the participants reflected on the multiple intelligences activities more positively than the traditional way of instruction.

**Key words:** Writing ability, multiple intelligences, EFL learners

### 1.1 Introduction

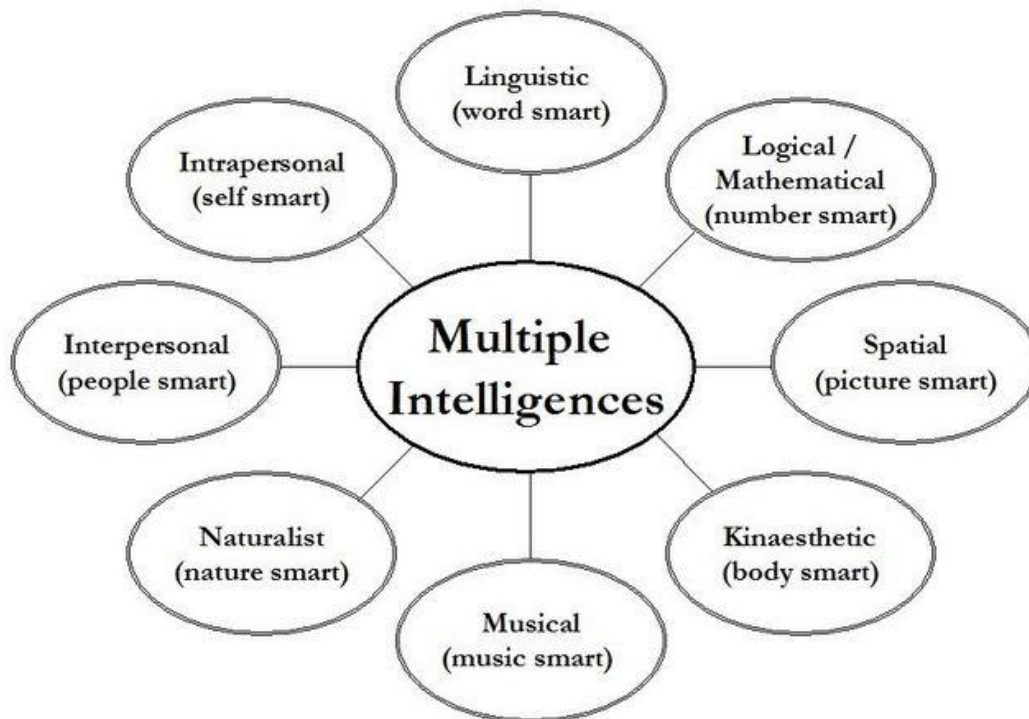
Different researches regarding brain introduced that how children acquire knowledge and how teacher instruct. Howard Gardner's work of multiple intelligences takes into account cognitive research with the appreciation for teachers who practice writing in class while giving attention to multiple intelligence of students. Basically intelligence is cognitive ability, "intelligence quotient" or IQ, was introduced by Alfred Binet in 1904. IQ test basically measured verbal/linguistic and logical/mathematical. Cognitive pluralists believe that people have more than one intelligence and they represent it into different forms. They believe that students express themselves in different ways, some through poetry and pictures and some through music and painting. They all have different intelligences.

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### Howard Gardner's 1983 Theory of Multiple Intelligences

For the very first time Howard Gardner suggested Multiple Intelligences Theory (MIT). He conjugates with brain research and performed interviews of many people. The people who were stroke victims and those idiot servants were also among those whom he interviewed. He makes claim that learning, knowing and understanding of the universe take into account diversity of abilities. So this diversity of abilities among the students should be kept in by teachers (Christison, 1998; Gardner, 1983; Larsen-Freeman, 2000). Various interests are expressed by students because of their different family, social and economic background. According to Gardner, we can improve students' learning if we pay special attention toward multiple intelligences of our students. According to Campbell (1999) teachers can understand and identify a wider range of students' abilities with multiple intelligences.

So far as Gardner's theory of multiple intelligences is concerned, he has suggested two claims. According to his first claim, everyone has all type knowledge without his being different in sex, age or birth place. So far as his second claim is concerned, he observed that similar intelligence profiles cannot be shared by two different individuals. Our behavior is shaped by various experiences that we have throughout our lives. According to MI theory, among the nine different human intelligence, we all have at least one dominant intelligence. The first two intelligences are Verbal-linguistic and mathematical-logical. Bodily-kinesthetic, musical, spatial, interpersonal are the other five intelligences. Later he included eighth intelligence type "naturalistic intelligence", followed by a ninth type, existentialist intelligence.

#### a) Linguistic Intelligence

This intelligence addresses to student's sensitivity to the rhythms, sounds, and comprehension of text. Any individual is expected to be equipped with this intelligence with different ranges. All individuals like speakers, authors, orators and poets demonstrate strong linguistic intelligence in the form of eloquence, persuasiveness, forcefulness and fluency. In the past history of education and learning atmosphere, researchers have given special attention to linguistic intelligence and logical mathematical intelligence. Teachers employed significant strategies "say and see words" as well as reading books together. During these methods 'discussion' has been encouraged by the respective teachers. In this pursuit of learning some special tools were used including word games, computers, books, tape recorders, lecture and multimedia. These intelligences bring people in fame like Dr. Muhammad Iqbal, Maya Angelou, and J.K. Rowling.

#### **b) Logical-Mathematical Intelligence**

In this perspective, students show special inclination towards logical or mathematical areas of intelligence. In some cases, they have capacity to recognize logical patterns and handle reasoning issues. Such students are really inclined to mathematical puzzles and experiments. They get a lot because of strength in logical- mathematical intelligence. Teachers can manipulate and enhance this faculty of intelligence by encouraging critical-thinking activities and logic puzzles. The best examples in this domain are Newton, Albert Einstein and Dr. Abdul Qadeer.

#### **c) Spatial Intelligence**

It is the visual-spatial perception related capacity of the students. They preferably intend to be indulged in jigsaw puzzles and reading maps. Teachers can encourage this intelligence by some special tasks like highlighting physical and verbal imagery. In this learning strategy, graphics, charts, , drawings, video, videoconferencing, multimedia, microscopes, computer graphics software and photographs cab be used as tools. In this category of spatial intelligence people like Georgia O'Keefe, Bobby Fischer and Pablo Picasso are included.

#### **d) Bodily-Kinesthetic Intelligence**

This intelligence is attached with the control over body movements like the abilities to control movements skillfully of a player and a dancer. In this situation, individuals like touching, movement and making things. Students can be encouraged by teachers to get more intelligence through physical activity; when they are indulged in role paly, different exercises and acting out. In this activity real objects and equipment can be employed as tools. In this category renowned players can be included like Wasim Akram, Serena Williams and Sania Mirza.

#### **e) Musical Intelligence**

This intelligence is attached with students' abilities to create and be pleased about rhythm and different forms of musical technicalities. Language learning activities can be

integrated with music in the background and students can be encouraged by employing students' musical intelligence. In this context, teaching stuff can be converted into lyrics, and tapping out time for realizing the significance of tempo in music. In this strategy, multimedia, musical instruments, stereo and CD-ROM can be used. Mozart, Beethoven and Nusrat Fateh Ali Khan are renowned round the globe, were gifted with musical intelligence.

#### **f) Interpersonal Intelligence**

It is students' capacity that is related with the suitable reaction and its determination to the temperaments, moods and the desires of others. In this intelligence "interaction" is the strategy to learn. Teachers can design lessons that help out in encouraging the development of interpersonal intelligence including seminars, dialogues and group activities. The special tools like the audio conferencing, telephone, computer conferencing and emailing can be utilized. Such personalities include Abd-us-Sattar Edhi, Oprah Winfrey and Ronald Reagan.

#### **g) Intrapersonal Intelligence**

This intelligence gives capacity to individuals to know, understand and discriminate their feelings among them and sketch one's desires, strengths and weaknesses. In this scenario, instructors can motivate their students by assigning reflective activities like independent study and journal writing. For this task, creative materials, books, and diaries can be used as tool. In this category of intelligence, Paul Satre, Mark Twin and Saudat Hussain Manto are included.

#### **h) Naturalist Intelligence**

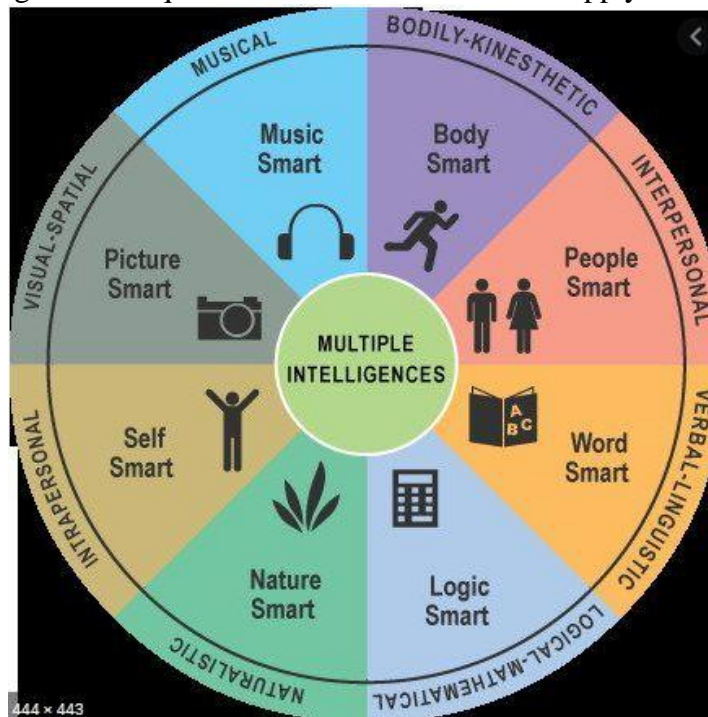
It is concerned with the ability to comprehend. This is related to classify, understand and categorize. In other words, this intelligence can easily explain the world around and its surroundings faced by an individual. This intelligence can be enhanced by differentiating among living and non-living things (plants, animals, and hills), comparing, contrasting and demonstrating relationships to science issues and real life. In this category, Jane Goodall, John Muir and Charles Darwin can be included.

#### **i) Existential Intelligence**

In this type of intelligence, students have been gifted with the ability to contemplate and raise questions regarding existence and many others philosophical areas. This is actually connected with the domain of philosophers. Such students pose questions into a global perspective or a larger framework. They have special inclination to ask the "why?" questions. On the contrary, the educators have not accepted this intelligence (Giles, Pitre, & Womack, 2003). According to Tupper (2002) this area has been researched by researchers and educationists. Some renowned personalities like Mother Teresa, Confucius and Dalai Lama come under the umbrella of existential intelligence.

### **1.2. Application of Multiple Intelligences Theory in Classroom**

According to Marefat (2007), it has been proved that at least one of the Howard Gardner's multiple intelligences is present in every student. This notion paves ground for the learning and processing of information by the students which means teacher can address as many of these intelligences in classroom setting. In order to achieve tangible learning outcomes, the significance question arises that how can we apply this approach.



The multiple intelligences theory can be applied by many ways and means in the classroom setting (Educational Broadcasting Corporation, 2004a). It is common observation, elementary students perform special writing tasks like perform and compose songs about grammar concepts in the class. While middle school students demonstrate multimedia presentations and perform different writing tasks. High school students exhibit writing portfolios, and presentations for demonstrating their intelligences. In cooperative learning groups, students help to correct and edit other students' essays and other writing compositions.

The theory of multiple intelligences enhances and broadens students' comprehension of the targeted skill. Writing teacher can make classroom activities more creative and productive by employing this theory. For example, such activities are as follows:

- The teachers can activate linguistic intelligence By writing a report or essay
- Linguistic and interpersonal intelligence can be enhanced by the classroom activities like Group discussion
- linguistic and interpersonal intelligences can be enhanced by Journal writing
- Writing a song (like nursery rhymes)—serves musical and linguistic intelligences
- linguistic and spatial intelligences can be integrated by designing posters and putting captions (Educational Broadcasting Corporation, 2004a, pp. 4-6)



These above-mentioned activities can positively enhance students writing skills by focusing on different types of intelligences; they are equipped with these nine intelligences with different ratios.

### **1.3. Strategies for Applying Multiple Intelligences in the Classroom**

The researcher employed this theory for enhancing and improving writing skills of 6<sup>th</sup> grade school students. This is common observation that “writing” is a creative expression of some experiences based on real or imagined perceptions. Hanson, (2009) regards “writing” a sensorimotor and cognitive process, which is not just linguistic intelligence but it is related with all the multiple intelligences of Howard Gardner. In this perspective, he is of the view that during the process of writing proofs to respective theories by scientists, writing activates logical-mathematical intelligence; during writing blue prints of structures by the architects, spatial intelligence comes under observation; during writing strategic tips for athletes by coaches, domain of bodily-kinesthetic intelligence begins; during demonstrating musical genius by musician through written composition, the area of musical intelligence starts; during editing essay of other students by the other student group, the domain of interpersonal intelligence appears; during reflecting on a written piece by the student is an area of intrapersonal intelligence; during demonstrating sensitivity to the natural world by humans, naturalist intelligence begins; during studying the meaning of life by the religious leaders or philosophers comes under existential intelligence.

#### **1.4. Integration of multiple intelligences in the classroom: Tools**

The projection of a variety of activities in the classroom is necessary for the integration of multiple intelligences. In order to enhance interpersonal as well intrapersonal intelligences, both group and individual tasks should be encouraged. “Presentations, simulation and learning centers” are the three classroom tools that enhance this wide range of multiple intelligences. (Educational Broadcasting Corporation, 2004b, pp.3-8).

##### **(I) Presentation.**

Presentation is the final stage of the writing process that contains five stages like prewriting, drafting, revising, editing and publishing. Publishing means to share stories with the audience like sharing the stories with the classmates or sending them to the publishing companies for publication. It is a kind of celebration of students’ work if they encouraged by their teachers to present or publish the work they have done (Hughey & Slake, 2001; Lunenburg & Lunenburg, 2014).

##### **(II) Simulation**

Students’ multiple intelligences are enhanced by simulation activities because such activities give real life experiences. So in practical life such activities have a great role, such as a trainee pilot does have a lot of simulation exercises on the ground before going into the actual air. It is very hard to distinguish between play and work in the early grades. But in older grades role of play goes to back seat as teachers forget its importance. Students learnt better by doing or by their experiences rather than by being taught. So simulation activities provide students with very safe ground to play and learn simultaneously. It is just like to learn riding bicycle with training wheels or learning and teaching with five stage process of writing. “Role playing, debating, and

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simulation software” are examples of some simulative activities that can integrate classroom work with multiple intelligences activities (Educational Broadcasting Corporation, 2004b, pp. 4-5). Role playing is very much interesting activity in the writing class as it gives opportunity to students to go through the work of renowned authors like William Wordsworth, Shakespeare etc. Students may act on the short plays or prepare lectures on ideas presented in those work or may initiate discussion the class. Debates are very thought provoking, debating and panel discussion in the writing class promote understanding and critical thinking of the students (Fred C. Lunenburg & Melody R. Lunenburg, 2014).

### **(III) Learning centers**

The areas that a teacher creates and provides to the students to work individually or in groups are referred as learning centers. In each learning center, students are provided with supplies of material and equipment like pen, books, tape, yellow pages, sticky notes, ribbons, illustrated books, charts etc. that they need to carry on for the completion of activities. Students not only get understanding of the subject but their multiple intelligences are enhanced by these learning centers. The number of students in class, their interest and grade level, actually determine the types of learning centers. Learning centers are equally successful in middle as well as high school level. (Springer, 2010).

### **1.5. Objectives of the Study**

- The study aims to investigate a relationship between students’ writing ability and their MI profiles
- The study also aims to investigate how with the use of multiple intelligences, students’ writing skills can be improved.
- The current research is an investigation of the relationship between writing performance and MI based activities
- The application of multiple intelligences in classroom to teach writing will be examined in this study
- The students writing skills will be improved by this study

### **1.6. Research Questions**

RQ1: Is there a significant relationship between MI types and students’ writing skill?

RQ2: Which types of MI are more effective in writing skill learning procedure?

## **2. Methodology**

The researcher selected a quasi-experimental (pre-test & post-test) design. In this study, there was a random assigning of the participants to the control and experimental groups. The participants were asked to perform the task of writing short essays in pre-test and post-test for investigating the degree of utility and incorporation of MI techniques on writing enhancement skills. The pre-test was carried out for both control and experimental groups in the beginning. In these activities, students (control group) were assigned tasks through traditional method. On the other hand, students (experimental group) were treated differently by adding MI based activities for enhancing writing skills. The time for implementing MI activities, was four weeks. The teachers taught English two hours and strictly followed the implementation process and lesson

plan for both group respectively. The students were evaluated for post-test writing skills, after implementation process.

## **2.1 Population**

In this study, 60 students of English in 6th grade were selected in a private category school of Lahore. They were selected randomly to their class groups (control and experimental). For making these groups, equal in numbers, gender (male/female), socio-economic characteristics and academic achievements in primary school.

## **2.2 Sample**

The researcher randomly assigned both the groups to control and experimental groups. In each group, 30 students learnt English subject differently in the past years. In this study, they have been exposed to English subject for two hours every day in a week. In this study, majority of the students have Punjabi as their mother tongue and they were at beginner level (age ranges between 11-14). The researcher also observed their SES (socio-economic status), majority of the students belong to those families migrated from the neighboring villages of Lahore city. The parents of the students were normally primary school graduates and few of them graduated from colleges and worked in government and semi-government institutes.

## **2.3 Instrument**

In this experiment, writing prompts were essay writing tasks with some brief rubrics (introduction, development & conclusion). The essay was selected, by keeping in view respective lesson plan for the students of both groups.

## **3. Data Collection Procedure**

In this content-based frame-work study, two methods were contrasted for understanding differences between traditional method and multiple intelligence method. The writing enhancement in English was researched by the participants of both groups (control & experimental). In pre-test, they were given an essay to write and in post-test, they attempted respective essay. In order to contextualize the current writing tasks were related to the covered units.

## **4. Data Analysis**

The essay was evaluated objectively and checked by the teachers by following Reid's essay evaluation rubric. In addition to this, essay was also blind-rated by teachers and three experts of English language. Maximum 100 score was set by the researcher. Statistically, Inter-rater reliability coefficients for two sets of essays were 0.81 and 0.84. The researcher not only interpreted quantitative data but also collected qualitative data through observations. The students also shared their deep concern regarding their writing experience at the end of post-test. They discussed their difficulties in the way of writing impressively as well as enjoying moments during this writing task. The complete data was elicited by using five open-ended questions through pre and post-test, demographic properties and interviews.



## 5. Results/Major Findings

Following findings interpret the results of essay writing tasks statistically:

**Table 1. Descriptive Statistics for Pre-test and Post-test Scores**

Test	Group	N	Mean	Std. Deviation	Std. Error mean
Writing pre-test	Experimental group	30	33.47	7.23	1.44
	Control group	30	34.20	10.35	2.75
Writing post-test	Experimental group	30	54.72	17.10	3.45
	Control group	30	35.34	9.25	2.87

According to descriptive statistics (Table 1), it is obvious that, in the beginning, the writing scores of the control and experimental groups are similar

**Table 2. Independent Samples t-test Results on Pre-test Scores**

Group	Mean	Std. Deviation	t	df	p
Experimental	54.72	17.10	.522	51	.73
Control	35.34	9.25			

For understanding any differences in the control and experimental groups, in order to analyze pre-test scores of both groups (control & experimental) an independent samples t-test was applied. The results depicted by Table 2 showed no significant difference between groups of pre-test scores on writing ( $p > .05$ ). So on account of the results of pre-test score, the L2 writing level was almost similar of both the groups in the beginning and after the research, the implementation of two different methods, is the main reason of any difference between two groups.

For understanding any differences in development from pre-test to the post test, in two groups on their post-test scores, the pre and post test scores of each group were compared within the

**Table 3. Paired Samples t-test Results for Control Group on Pre-test and Post-test Scores**

	N	Mean	Std. Deviation	df	T	p
Pre-writing	30	33.47	7.23	27	-1.461	.31
Post-writing	30	34.20	10.35			

While investigating Table 3, it is quite clear that control group, the group instructed through traditional method, the students in this group, showed a small improvement during pre-test and post-test which indicates a considerable change in this study. Though, it was found ( $p > .05$ ) which means non-significant. In other words, it may be recommended that for improving writing skill of L2 students, traditional method is not very realistic and doable.

**Table 4. Paired Samples t-test Results for Experimental Group on Pre-test and Post-test Scores**

	N	Mean	Std. Deviation	df	t	p
Pre-writing	30	33.47	7.23	26	-6.21	.003
Post-writing	30	54.72	17.10			

While analyzing table 4, pre-test and post-test scores of experimental group indicated that the post test scores of the experimental group are higher than the pre-test scores. In Paired samples t test analysis, the significant value ( $p < .05$ ) showed the difference between pre-test and post-test scores of experimental group. This result showed the significance of MI activities during the implementation process, in a content-based framework where students from this group are improving and enhancing their writing skill.

**Table 5. Independent Samples t-test Results on Post-test Scores of Both Groups**

Group	Mean	Std. Deviation	t	Df	p
Experimental	54.72	17.10			

<b>Control</b>	35.34	9.25	<b>6.87</b>	<b>51</b>	<b>.004</b>
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Table 5, indicates the results of the current study, (MI-based activities and the traditional method), on writing development. This table shows independent samples t test analysis was conducted on the post-test scores of experimental and control groups. Additionally, it clearly indicates the significant difference between the post-test scores of the control group and those of the experimental group on writing test ( $t = 6.87$ ,  $df = 51$ ,  $p \leq 0.04$ ). It shows the differences between students' performances of both groups (control & experimental) in their respective pre and post-test writing scores. The clear statistical difference emerges, while comparing the mean scores of writing test, which favors experimental group. In pre-test, means value of experimental group is 33.47 and 54.72 in post-test. On the contrary, the pre-test of control group, means 34.20 and 35.34 for post-test.

As a result, the statistical analyses of the pre and post-tests of both groups fortify the claim that, as for as present study is concerned, the traditional method of enhancing and improving writing skills of 6<sup>th</sup> grade students, is not more effective than MI based activities.

## 6. Discussion on Major Findings

For understanding any differences for two groups, paired samples t test was applied on essay scores, between pre-test and post-test scores within the same group. Additionally, for finding differences between scores of experimental and control groups, in order to find out whether there were any differences between the post tests, independent samples t test was applied on the post-test scores of both groups.

For understanding any differences in the control and experimental groups, independent samples t-test was applied on the pre-test scores of both groups (control & experimental). The results presented in Table 2 showed results with no significant difference between groups of pre-test scores on writing ( $p > .05$ ). As a result, it is concluded that in the beginning the groups were similar in their writing level in L2, and after the research, the implementation of two different methods, is the main reason of any difference between two groups. In order to understand any difference in development in two groups on their post-test scores, For understanding any differences in development from pre-test to the post test, the scores of the the pre and post test of each group were compared within the group.

## Conclusion

The study is an attempt to analyze the effects of MI based activities of writing enhancement of 6<sup>th</sup> grade students in Lahore. This study clearly identifies the difference between pre and post-test of experimental group. On the contrary, the control group was treated through traditional method, as a result, this group did not show any sign of improvement in pre and post-test writing. While comparing the difference in mean scores on post-test, it was observed that controlled group was surpassed by the experimental group. These results and observations pave grounds for claiming the utility and advantages of Gardner's Multiple Intelligences Theory for the enhancement of writing skills of students. According to Gardner, H. (1993),

each learner has unique inclinations of eight intelligences. In other words, MI theory is the name of employing different techniques in targeting and assisting the concerned intelligences in a child. The instructor can manipulate this theory for achieving the learning and academic outcomes successfully. There is another observation that students found MI based activities more entertaining, enjoyable and creative. By keeping in view the socio-demographic characteristics of students, the instructor can execute more innovative and productive aspects of MI theory. Furthermore, by being aware of MI theory, teachers can maximize the benefits of learning outcomes and would enhance the relevant faculty of skill by using relevant strategy and they can renovate their teaching method with innovation and creativity. Multiple intelligences are actually the problem-solving capabilities. The instructor can design such activities that demand to solve problem by using all the intelligences. The students can do reading tasks, be put into its analysis, they may be acting or reflecting on it relating it to nature, or discussing about it. Sometime problems are complicated that require students to think critically and innovatively. Thus it is very fruitful for students to solve a problem by using intelligences in multiple ways.

### **8. Recommendations/Implications of the Study**

For English language teaching, teacher should value the process of comprehending students in terms of their respective intelligences. These different intelligences must be kept in mind by the teachers and they can appreciate their talents (intelligences). By keeping in view, these intelligences of different students, lesson and activities should be planned contextually. The following suggestions must be exercised for getting advantages in enhancing writing skills with the help of activities based on MI theory:

#### **Linguistic Intelligence**

- Oral activities like interviewing, story-telling and discussion can be performed before writing.
- There should be content for reading in order to get ideas for writing
- Assigning crossword puzzles with vocabulary words

(Bratcher, 2012, pp. 31-32)

#### **Logical-Mathematical Intelligence**

- Such tasks can be given that show a logical progression while focusing at the writing process.
- Special writing prompts can be designed for presenting Cause and effect
- Sentence diagraming can be performed in order to instruct grammar rules

(Bratcher, 2012, p. 32)

#### **Spatial Intelligence**

- There can be utilization of pictures in order to design prompts for writing
- Before writing students can do imaginative exercises
- Students can be encouraged if they draw pictures along with their writing

(Bratcher, 2012, pp. 32-33)

#### Bodily-Kinesthetic Intelligence

- Role plays can be performed before writing about them
- Students can be encouraged to write plays along with stage directions
- Encouraging students to do writing projects

(Bratcher, 2012, p. 32)

#### Musical Intelligence

- loud poetry recitation and clapping with the rhythm of the words
- Creating readers' theatre with writing
- Writing concepts like sentence structure, parts of speech can be learnt by Listening to CDs

(Bratcher, 2012, pp. 33-34)

#### Interpersonal Intelligence

- Students can be assigned writing projects that are rich in cooperative learning. In this cooperative learning, they can work outside the school, conduct writing projects regarding social issues.
- Students can invite guests from the community to talk and tell stories

(Bratcher, 2012, p. 32)

#### Intrapersonal Intelligence

- Students can choose literary figures for essay writing and they can make them part of their portfolios, it will enhance their self-reflection about their piece of writing

(Bratcher, 2012, pp. 33-34)

#### Naturalist Intelligence

- Students can be given writing projects regarding natural objects like plants, rocks,



they observe them use nature's description in their writing.

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