

# The Effects of Using Multiple Bits of Intelligence Approach in Developing Students' Verbal Intelligence in Storytelling

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## ABSTRACT

The paper describes Multiple Bits of Intelligence approach in developing students' verbal intelligence in storytelling. The main purpose is to explain and then measure the students' ability in storytelling after using Multiple Bits of Intelligence Approach. In obtaining the data, the writer uses Observations and Test. The problems of this writing are what the effect of using multiple bits of intelligence approach in developing students' verbal intelligence, especially in storytelling in class D second-semester students of Artha Wacana Christian University studying in 2012 is? With quantitative descriptive, the writer tries to answer the problem. The result of the research shows that: the mean score of the control group is 2.9 and 3.9 for the mean score of the experimental group, in other words, the mean score of the experimental group is greater than the mean score of the control group. It was also found out that the multiple bits of intelligence approach activities were more effective in the positive development of the students' verbal intelligence especially in storytelling rather than teaching storytelling conventionally. Claiming that teaching storytelling using multiple bits of intelligence approach significantly contributes towards students' verbal intelligence as compared to conventional teaching to storytelling. This approach contributes towards the students' verbal intelligence.

## KEYWORDS

Multiple Bits of Intelligence Approach, Storytelling, Verbal Intelligence, Indonesia

## INTRODUCTION

Theory of Multiple Bits of Intelligence has strong implications towards learning development. Nowadays, the use of multiple bits of intelligence in schools areas is a trend to raise the quality of education and level of schools. Teachers who view special needs in the context of the nine bits of intelligence view all those students differently. Haley (2004: 29) asserts that Multiple Knowledge can be utilized to enhance the open learning doors for various learners, and it positively affects both understudies with exceptional needs and their instructors. On the off chance that an instructor is experiencing issues achieving an understudy in the more customary etymological or consistent methods for a guideline, the hypothesis of numerous bits of insight proposes a few courses in which the material may be introduced to encourage powerful learning especially in learning English. Gardner (1993:185) argues that a viable training assembles an extension between the substance being instructed and the understudies in the teaching space.

From one viewpoint, teachers need to perceive the troubles understudies confront in accomplishing a bona fide comprehension of vital themes and ideas.

Then again, instructors need to consider the distinctions among psyches and, beyond what many would consider possible, mold training that can achieve the endless assortment of understudies. Narrating as a piece of verbal insights (one of numerous insights) as some specific devices that conveys different insights (MI) Approach and systems give a structure and devices that can help instructors in planning classrooms, direction, and educational program that meet the individual needs of numerous sorts of understudies to utilize dialect (either talked or composed) in learning and recollect well what they listen. It is derived from an assumption that multiple bits of intelligence approach to storytelling can increase students' confidence and enthusiasm for learning and also improve their academic achievement and change teachers' perceptions of their students' learning abilities.

## FRAMEWORK

There are some theoretical concepts related to multiple bits of intelligence approach. The activities that will be chosen by the teacher to use in the classroom should be helpful to optimize students' all nine bits of intelligence. It is, therefore, critical that we understand how our students learn, what they conceive learning to be and how the learning–teaching context influences their learning. This is supported by Larsen–Freeman, 2000: 170 who says”. A few educators feel that they have to make exercises that draw on every one of the nine bits of knowledge, not exclusively to encourage dialect securing among differing understudies, additionally to help them understand their maximum capacity with each of the nine. One method for doing as such is to consider the exercises that are every now and again utilized as a part of the classroom and to sort them as per knowledge sort". Insight is not a static structure that can be measured and seriously evaluated, yet an open, dynamic framework that can keep on developing all through life. Thomas Armstrong (2004: 78) states that “through systematic and planned enrichment, intelligence can be modified, expanded, and developed.”

According to The Theory of Multiple Bits of Intelligence from Gardner (1993: 16), people have various unmistakable insights that show themselves in various aptitudes and capacities. These multiple bits of intelligence can be nurtured and strengthened or ignored and weakened. Instead, Gardner proposes nine different bits of intelligence to account for a broader range of human potential in children and adults. He has identified nine distinct types of intelligence: verbal/linguistic, Logical/Mathematical, Musical, Visual/Spacial, Body/Kinesthetic, Interpersonal, Intrapersonal, Naturalist Intelligence and Existential Intelligence. When the teacher recognizes each aspect of intelligence, that would be explored by using Multiple bits of intelligence approach in classroom activities, the students probably have shown their intelligence that stick out differs for each student and can be increasing and develop their potential by using application of Multiple Bits of Intelligence focused on storytelling. The learners learn best by hearing; they understand and retain information well when it is communicated orally. They have strong language skills and can articulate ideas clearly. Also, this kind of learner needs to listen and likes to talk to him/her or others. They understand better if concepts are explained in their words.

In verbal intelligence they learn best through verbal addresses, exchanges, talking things through and tuning into what others need to state. Sound-related learners translate the hidden implications of discourse through tuning into the manner of speaking, pitch, speed and different subtleties. Composed data may have small significance until it listens. These learners frequently advantage from perusing content so that anyone might hear and utilize a recording device. Instructors may utilize Reading, Improving vocabulary, Emergent/experimental writing, Writing and perusing reports/articles, Taking and giving correspondence, Giving and tuning into verbal directions (oral as well as composed), Storytelling, Dialog and Discourse, Debate, Publishing, Telling jokes, Listening to tapes, Doing crossword confounds, Keeping a journal or diary (Berman, 1998: 126). Stories give the beginning stage to a wide assortment of related dialect and learning exercises (Brewster, 2003:17). Individuals who are solid in the dialect knowledge appreciate saying, hearing, and seeing words. They like recounting stories. Instructors can likewise utilize picture strip stories where understudies are required to re-recount a story by utilizing the visuals (Ersoz 2006: 34). Narrating helps understudies be dynamic in showing as well as in centered tuning in and responding, upgrading the essential abilities of correspondence. Narrating is an old craftsmanship that reinforces and upgrades aptitudes that youngsters need, to obtain to work in this day and age. As grown-ups, we work in gatherings, sharing thoughts and expanding upon them. Understudies hone similar aptitudes, frequently working cooperatively in agreeable gatherings. Understudies help pick their undertakings and make learning openings in light of their individual advantages and qualities.

Berman (1998: 187) says that in an oral presentation such as storytelling, we have to make the words come alive by using a variety of delivery techniques. Delivery techniques can be divided into two main groups: voice and body techniques. First in voice: plan to use a variety of appropriate and controlled voice techniques to help make your oral presentation interesting by vary your voice: pace, fast to show excitement, slow to show importance, pitch;high to show excitement, low to show importance and authority,tone;feeling needs to suit the words said, volume; loud to show excitement, soft to show fear, pause; a planned rest in your speaking to emphasize an idea. Second, Body ;plan to use a variety of appropriate and natural body techniques to help express your meaning by use body techniques in your oral presentation: facial expression;look sad when talking about a serious topic eye contact;look at the audience regularly to help build a relationship with the audience, gesture;shrug shoulders or point out a person; make the gesture obvious and relevant to your oral presentation stance;the way you stand should be balanced and natural, but not too relaxed that you look sloppy movement;pacing or swaying is distracting; however, you don't have to stand in the same spot throughout the presentation. For example: plan to take a step forward when introducing an important idea, or walk a few paces to the side when giving a complex explanation. Students act in storytelling activities will influence how they feel about the story. So he/she will use relates and suitable words and delivery the techniques to help communicate the message that carrying in the story to their hearer. If students spend time rehearsing a story, they become comfortable using this variety of techniques to support them in their dominant intelligence.

In the application of multiple bits of intelligence in the classroom by teaching storytelling using multiple bits of intelligence approach, the teacher tries to incorporate numerous teaching and learning strategies into project planning and implementation. Assisting learners in developing all of their intelligences will make learning a part of living, not just a preparation for it. Especially in Storytelling as a part of verbal intelligences, it always relate to linguistic part as words and language, written and spoken; retention, interpretation, and explanation of ideas and information via language, and also understands relationship between communication and meaning. Storytelling can be an art, a tool, a device, a gateway to the past and a portal to the future that supports the present. Our true voices come alive when we share stories. By giving the students multiple storytelling ways to express the concepts, that's to confirm that the students understood the material even though their linguistic skills outstripped their spatial skills (Kornhaber, 2004: 87). This process evaluates each part of intelligence directly, rather than funneling the information through a linguistic paper-and-pencil test. In a storytelling area, students can tell tales (linguistic), arrange props and character figurines (spatial and possibly bodily-kinesthetic), make characters interact (interpersonal), and design their storyboards (spatial). It encourages students to think about issues, and it can also deliver emotional and factual content beyond a child's vocabulary or reading ability. Storytelling helps students stretch and expand their thinking. Storytelling produces enthusiastic and engaged learners; Furthermore, qualitative and quantitative research studies show that storytelling can improve academic performance.

### OBJECTIVES OF THE STUDY

This study aimed to find out the effect of using multiple bits of intelligence approach in developing students' verbal intelligence, especially in storytelling in second-semester students of Artha Wacana Christian University

### METHODOLOGY

The most appropriate method to be employed for this study is a true experimental study which applies pre- test and post-test design. This method used is to establish an ideal condition for comparisons required by the hypothesis of the writer's experiment, and its main purpose is to explain and then measure the students' ability in storytelling after using the application of Multiple Bits of Intelligence Approach through statistical analysis of the data. In connection with the topic under discussion in this paper, the population was chosen are the Second Semester Students of Artha Wacana Christian University in the Academic year 2011/ 2012. All of the second semesters are 269 students divided into 6 classes. Regarding sampling, Arikunto (1998: 85) says that if the population is more than 100 only between 10% and 15% is taken as the sample, but if the population is less than 100 the whole number of population is taken as a sample. Based on the definition above, the writer will use random sampling. Random sampling applied which is take 30 students from class D. The writer just chooses 30 students as the sample because it would be difficult to manage the large class in restricted time especially for assessment (Kish, 1965:36). The writer takes them as a sample in doing this research to represent the population in doing this research on the second-semester students of Artha Wacana Christian University.

In collecting the data, the instrument used by the researcher are observation and speaking test. Observation will be conducted by researcher intended to find out students own Intelligence that could be strengthened and developed for support students' verbal intelligence in storytelling. The observation will be made before the classroom activity for two meetings, and also when the students make theirs perform in their storytelling class. Therefore, observation checklist will be used during the observation and teaching learning process. Then the writer will give the test, pretest and post test to see the results after teaching storytelling using of Multiple Bits of Intelligence approach. The researcher prepared the observation and test using the following steps. First, the researcher observed the Teaching learning process during the storytelling class and the students fill the observation checklist for multiple bits of intelligence after that the researcher analyzed the data gained from the students' observation checklist to conducts speaking materials suitable for storytelling and based on the students own intelligence gained in Multiple bits of intelligence observations' checklist. Second, the writer gave pre-test and posttest by setting a task for students, guiding them to choose interesting topics based on multiple bits of intelligence checklist to both groups, and about students previous knowledge about speaking material with topics (Narrative and storytelling).

Third, divided the students into two groups, two group pretest-post-test design, give to both experimental and control groups with one replication on the control group. Fourth, the subjects in the experimental group are taught to storytelling using multiple intelligences approach by the researcher read a story for the students, played the movie about the story and showed the students how to retell the story by optimizing all nine intelligences in storytelling activities while in the control group were taught the same material conventionally. Fourth, the post-test will be given as the instrument for collecting the data for both groups then collected the results and analyzed the results. Fifth, the writer tabulated both groups results based on the scoring system and analyzed using T-test to know the effects using application of multiple bits of intelligence approach in storytelling.

And also Students' performance will be measured using *Oral Examination Mark Bands* adapted is start from mark 0 to mark 5 for five categories: Fluency, Structure accuracy, Vocabulary, Pronunciation, Interaction, and task achievement. The researcher gave an experiment to the students, and she gave the pre-test and post- test to the students after the treatment. The test given was prepared by the researcher. The data obtained in the post-test is tabulated. The mean of both experimental and control groups will be calculated using formula t-test formulated by Arikunto.

### RESULTS AND DISCUSSION

The researcher had conducted an experiment. In this experiment, the subject was assigned, two groups. One function as the experimental group and the other one function as the control group. Both groups were exposed to the different treatment. A pre-test was given to know the students' knowledge about the materials taught before the experimental treatment, after that they were given a post-test as the instrument for collecting the data. Then the data on the result of the pre-test and post-test of both experimental and control groups

**Table 1. Prior intelligence appearance in pre-test of both experimental and control groups**

Sample(n)		Multiple Bits of Intelligence (MI)																		Total	
Eg	Cg	1		2		3		4		5		6		7		8		9			
1	1	√	√	-	√	-	-	-	√	√	-	√	√	-	-	√	√	-	√	4	6
2	2	√	-	√	-	-	-	√	√	-	-	√	√	-	-	√	√	√	√	6	4
3	3	-	√	-	-	-	√	-	√	-	√	√	√	-	-	√	√	-	-	3	6
4	4	√	√	-	-	-	-	-	√	-	-	√	√	-	√	√	√	√	√	4	6
5	5	-	√	√	-	-	√	-	-	-	√	√	√	-	-	√	-	√	√	4	5
6	6	√	√	-	√	-	√	√	√	-	√	√	√	-	-	√	√	-	-	4	5
7	7	-	√	-	√	-	-	√	-	-	√	√	√	√	-	√	√	√	-	5	5
8	8	-	√	√	-	-	√	-	-	√	√	-	√	√	-	√	-	√	-	5	4
9	9	√	-	-	-	√	-	-	√	√	-	√	-	√	-	√	√	√	-	4	4
10	10	√	√	-	√	-	-	√	-	√	-	√	√	-	-	-	√	√	-	5	4
11	11	-	√	-	√	√	√	√	√	√	√	-	-	√	-	-	-	√	√	5	5
12	12	-	√	√	-	√	-	-	√	-	√	-	-	-	√	-	√	-	√	3	4
13	13	-	√	-	√	√	-	-	√	√	√	√	√	√	-	√	√	√	√	6	7
14	14	√	-	√	√	-	√	√	√	-	√	-	-	-	-	√	-	√	√	5	5
15	15	√	-	-	-	√	√	-	√	-	-	√	√	√	-	√	√	-	-	4	4

**Notation :**

- n** = number of sample
- Eg** = experimental group
- Cg** = control group
- MI 1** = verbal linguistic intelligence
- MI 2** = logical mathematical intelligence
- MI 3** = kinetics intelligence
- MI 4** = visual spatial intelligence
- MI 5** = musical intelligence
- MI 6** = interpersonal intelligence
- MI 7** = intrapersonal intelligence
- MI 8** = naturalist intelligence
- MI 9** = existential intelligence
- √** = available intelligence
- = unavailable intelligence

All students from both experimental and control groups have their intelligence that appearance that researcher got from the multiple bits of intelligence checklist filled by the students before the pre-test. Their intelligence varies from 1 to 9 in both groups but the total intelligence that they own have is almost equal.

**Table 2. Pre- test of both Experimental and Control groups**

Sample (n)	Scores	
	Experimental Group (1)	Control Group (2)
1	2	2
2	3	2
3	3	2
4	1	2
5	2	3
6	2	2
7	2	4
8	4	3
9	2	3
10	2	2
11	3	2
12	3	3
13	2	3
14	1	3
15	2	4
n = 15	$\sum (1) = 34$	$\sum (2) = 40$

**Notation:** n = Number of sample

$\sum 1$  = Sum of the value of the Experimental Group

$\sum 2$  = Sum of the value of the Control Group

All students from both experimental and control groups get lower scores. The writer analyzed the data obtained using t-test formula Before coming to t- test formula, however; she used first the two important steps to get the final scores, that is mean scores and the standard deviations of both experimental and control groups

**Table 3. Post- test scores of both Experimental and Control groups**

Sample (n)	Scores	
	Experimental Group (1)	Control Group (2)
1	4	2
2	4	2
3	3	4
4	4	2
5	5	3
6	3	4
7	5	3
8	4	2
9	3	5
10	4	2
11	5	4
12	4	2
13	4	2
14	3	2
15	4	5
n = 15	$\sum (1) = 59$	$\sum (2) = 44$

**Notation:** n = Number of sample

$\sum 1$  = Sum of the value of the Experimental Group

$\sum 2$  = Sum of the value of the Control Group

Table 3 shows the scores of both groups are different. In the experimental group, 11 students got high scores, that is from score 4 to 5, and there are only 4 students got lower than 4. Whereas in control group, there are 5 students who got high scores, that is, from score 4 to 5, 2 students got score 3, and the rest got lower than 3. So it's true that the total score of the experimental is better than that of the control group.

As in the pre- test, the data gained from post- the test is also analyzed statistically using t- test formula suggested in Arikunto (1998:134). So, it means the writer must go through same steps to find out the mean scores and standard deviation of the post- test, and this is the result

- Data analysis shows that value of t- obtained from pre- test scores of both experimental and control groups are -1.54. This means that the mean difference between the two groups is **-1.54**. To find out whether the difference is significance or not, the writer compared the value of *t- obtained* with the *t- observed* in the t distribution table (Riduwan, 1997:270). Using the formula  $(N_1 + N_2 - 2)$  or  $(15 + 15 - 2)$ , the writer got 28 as the degree freedom (df) associated with the value of *t- observed* in this analysis. Since the number of 28 is listed in the degree of freedom in t- table distribution, it is estimated that number 28 falls between 20-30 and significance level of 5% in finding between 2.048 and 2.045. Having compared the value of *t- obtained* to the value of t- table, it is found that  $-1.54 < 2.048$  and  $2.045$ . This means that the mean difference between the two groups is not significance. So, she may say that the two groups had equal achievement on storytelling before experimental treatment was given

Post- test scores: Mean Difference is Significant

- Mean difference between post-test scores of both experimental and control groups are 2.86. When it is compared with the value of t- table, it is found that 2.86 is higher at level of significance 5% for the df 28, since the t- table value is found between 2.048 and 2.045, this is also true at the level of significance 1%, and the degree of freedom 28, the t- table value is found between 2.763 and 2.756, which is less than the t- obtained. It is therefore concluded that the alternative hypothesis is accepted because the t- test score is higher than the score in the t- table within a degree of freedom 28 and the levels of significance 5% and 1%. This is based on the theory that if the t- test score  $<$  t-table, the alternative hypothesis is rejected, but if the t-test score  $>$  t-table score, then the alternative hypothesis is accepted.

## CONCLUSIONS

This study focuses on the effects of using multiple bits of intelligence approach in developing students' verbal intelligence especially in storytelling; a study at second-semester students of Artha Wacana Christian University. This study tested hypothesis stating that teaching storytelling using Multiple Bits of Intelligence approach significantly contributes students' verbal intelligence as compared to conventional teaching to storytelling. The writer applied multiple bits of intelligence (MI). "It is concluded that Using Multiple Bits of Intelligence Approach is significant in Teaching storytelling, that is, the students who are exposed to using multiple bits of intelligence approach in learning English speaking skill especially in storytelling have significant success. Applying Multiple Bits of Intelligence Approach in speaking classroom can be seen as very helpful in this case that could help the teacher in motivating their students to learn the language. Focusing on Students own Intelligence in storytelling, that are highly motivating, entertaining, and challenging and can make students feel enjoy to the learning process and get better achievement than those taught storytelling conventionally, as shown by this study. The use of multiple bits of intelligence approach in storytelling is potential in developing students' speaking ability and teacher should take into account such factors like those related to students, like individuals, teachers, teaching time, their environment and facilities when she/he is teaching them. These factors are believed to influence one's success or failure in learning

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