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MULTIPLE INTELLIGENCE-BASED CLASSROOM ACTIVITIES AND LEARNERS' ACADEMIC ACHIEVEMENT

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ABSTRACT: Everyone is born possessing different abilities and has a unique way of learning anddistinct intelligence. Nevertheless, all students will come into the classroom with different sets ofdeveloped bits of intelligence. Instruction- based on multiple intelligences theory helps teachers recognizesuccessful students who are active learners (Nolen, 2003) and allow the teacher to properly assess thechild's progress (Lazear, 1992). This study aimed to ascertain the multiple intelligence-based classroomactivities and the effect the academic achievement of the learners. The researchers' involved a scientificmethod which implied observing and describing of the subject with the abet of a modified questionnaireon multiple intelligences in the classroom. The results of the study proved that multiple intelligences-based classroom activities improves the students' academic performance in school as it broadens therange of talents and skills, understanding, build confidence, take educational risks, and retain moreknowledge. However, it requires important components from administrative support, students' choice inplanning, and patience and persistence in working through initial resistance to multiple intelligencesactivities by both students and teachers. Furthermore, to provide teaching strategies and other pedagogictools will do a lot in meaningful and useful ways to better address the needs of students.

Keywords: Academic, Achievement, Multiple Intelligence-Based Classroom Activities

I.   INTRODUCTION

Each person is unique. Each one is far more complex, mysterious, and profound that no standard testing instrument can reveal. An interesting fact is that not everybody is strong in the same areas. Just as we look physically different, we also learn differently. Howard Gardner of Harvard has identified nine distinct intelligences and this is called multiple intelligence theory.

Everyone is born possessing the nine intelligences. Nevertheless, all students will come into the classroom with different sets of developed intelligences. This means that each child will have his own unique set of intellectual strengths and weaknesses. These sets determine how easy or difficult it is for a student to learn information when it is presented in a particular manner. This is commonly referred to as a learning style. Many learning styles can be found within one classroom. Therefore, it is impossible, as well as impractical, for a teacher to accommodate every lesson to all of the learning styles found within the classroom. Nevertheless, the teacher can show students how to use their more developed intelligences to assist in the understanding of a subject which normally employs their weaker intelligences [1].

Application of multiple intelligence theory into classroom pedagogical practice has a wide-ranging impact on students, teachers, and learning in the classroom. In the journal education, Jennifer Nolen focuses specifically on the academic application of multiple intelligence theory. She describes several of the learning benefits of teachers employing multiple intelligence activities in the classroom. She contends that when instruction is individualized based upon the intelligences of each of the students; learning is optimized for the entire class. Multiple intelligence theory restructures the classroom to focus on individual learners and refocuses the teacher's attention to meeting individual student needs. [2] also says that instruction based on multiple intelligence theory helps teachers recognize successful students who are active learners.

Gardner's theory debuted in his first book entitled Frames of Mind, where he defined seven intelligences. Those first seven intelligences are: Interpersonal (appreciates group work), Intrapersonal (prefers working alone), Kinesthetic (needs movement), Linguistic/Verbal (understanding through speaking), Logical/Mathematical (uses numbers), Musical (learns through rhythm and music), and Spatial (visual understanding) [3].

At the time the theory emerged, educators were searching for ways to explain the dramatic differences they saw in students, and how they learned. The MI Theory seemed to answer many questions for experienced teachers who all had students who did not fit the mold, students were bright, but they did not excel on tests [4].

The implementation of MI was discussed at White Marsh Elementary School in Maryland. The application of MI increased student performance on standardized tests and produced a "school-wide culture of achievement [5]. Over a period of five years, Greenhawk and her colleagues collected data that revealed MI-based curriculum helped students understand their abilities as learners, build confidence, take educational risks, and retain more knowledge. MI helped educators initiate 'unforgettable learning' experiences and assess student knowledge more accurately. He further postulates that MI transformed her school's learning community and helped the teachers and students strive toward excellence by valuing excellence, diversity and achievement.

Similarly, in the Iranian context, a study was conducted to identify the relationship between EFL learners' multiple intelligences and their learning styles [6]. They also focused on the most and the least dominant learning styles and investigated the difference between genders. As a result, only a significant difference was found between genders.

In another context, a research study with parents was conducted. They tried to find out the significance of parents' awareness of their child's multiple intelligences and learning styles [7]. They stated that if parents were sensitive to use the Multiple Intelligence theory in children's education, then learning could be enjoyable, meaningful and thus the outcomes would be positive for both children and their parents. The relationship between tertiary level EFL college students' learning styles, and learning strategies was explored [8]. As a result, most of participants were balanced-type of learners on all learning style dimensions.

According to John Dewey of his Constructivism Theory, explains how an individual understands and explains what she/he has learned and that is about the nature of knowledge. Constructivism is a theory of learning that is about how people start to learn and about explaining the nature of knowledge [9].

This theory claims that people can create new understandings or they can combine things, ideas, events and activities they already know and believe in a manner of mutual interaction. Knowledge is gained in line with the will of a person instead of imitation and repetition.

Applying the Multiple Intelligences Method help students learn better. By doing so, students begin to understand now that they are intelligent. When students understand the balance of their own multiple intelligences, they begin to manage their own learning, and they value their individual strengths. Thus, teachers understand how students are intelligent as well as how intelligent they are.

Therefore, it is important that an educator creates an "intelligence profiles" for each student. Knowing how each student learns will allow the teacher to properly assess the child's progress [1].

II.   METHODOLOGY

To assess the multiple intelligence-based classroom activities and its effect on the academic achievement of Grade 6 pupils of public elementary schools in the district of Ubay 2, Bohol, Philippines, the researcher used the descriptive survey method.

This design involves observing and describing the different perspectives of a subject with the aid of questionnaire about a specific topic.

It utilized the modified questionnaire from Heming, Andrea Lauren in her study about the "Multiple Intelligences in the Classroom" (2008), wherein there were (nine) 9 sections of activities. This consists of 90 items. This questionnaire was conducted to both 200 pupil and 20 teacher respondents. To determine the effect, the Percentage, Weighted Mean, T- test for independent samples and Spearman Rank Correlation Coefficient
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III.   OBJECTIVES OF THE STUDY

The main purpose of the study is to ascertain the multiple intelligence-based classroom activities and its effect on the academic achievement of Grade 6 pupils of selected public elementary schools. It seeks to answer the respondents' demographic profile, common multiple intelligence-based classroom activities and pupils' academic achievement.

IV.   RESULTS AND DISCUSSION

After gathering the data it was then tallied, tabulated, collated and were subjected to descriptive and inferential statistics for the purposes of analysis and interpretation in accord to the specific problems of the study.

TABLE 1. DEMOGRAPHIC PROFILE OF TEACHER-RESPONDENTS

1.1 Highest Educational Attainment	Frequency	Percentage (%)	Rank
Bachelor Degree Holder	4	20.00	2
With Units In Master's Degree	11	55.00	1
With Master's Degree	3	15.00	3
With Ph.D. / Ed. D. Units	0	0	5
With Ph.D. / Ed. D. Degree	2	10.00	4
Total	**20**	**100%**	
1.2 Teaching Experience			
Below 1 year	4	20.00	3
1-5 years	5	25.00	2
6-10 years	7	35.00	1
11-15 years	2	10.00	4
16-20 years	1	5.00	5.5
21-25 years	0	0	
26-30 years	0	0	
31 years and above	1	5.00	5.5
Total	**20**	**100.00%**	

The result shows that most teacher-respondents earned units in master's degree and Ph.D/ Ed.D degree. They had teaching experience of 6-10 years.

TABLE 2. DEMOGRAPHIC PROFILE OF PUPIL-RESPONDENTS

2.1 Age	Frequency	Percentage (%)	Rank
10 years old	21	10.50	2
11 years old	160	80.00	1
12 years old	14	7.00	3
13 years old	2	1.00	4.5
14 years old	2	1.00	4.5
15 years old	1	0.50	6
Total	**200**	**100%**	
2.2 Sex			
Male	73	36.50	2
Female	127	63.50	1
Total	**200**	**100%**	
2.3 Academic Performance			
Outstanding	**42**	**21.00**	3
Very Satisfactory	**66**	**33.00**	2
Satisfactory	**72**	**36.00**	1
Fairly Satisfactory	**20**	**10.00**	4
Did not Meet Expectation	**0**	**0**	
Total	**200**	**100%**	

Meanwhile, majority of the pupil-respondents belonged to age 11, females and obtained a grade point average of 80-84 or satisfactory rating.

TABLE 3. RELATIONSHIP BETWEEN PUPILS' ACADEMIC ACHIEVEMENT AND MULTIPLE INTELLIGENCE-BASED CLASSROOM ACTIVITIES

Pupils' Academic Achievement and….	r	Sig.	Interpretation	Decision
Multiple Intelligence-Based Classroom Activities				

Naturalistic	0.190	0.007	Significant	Reject Ho
Musical	0.118	0.095	Not Significant	Failed to Reject Ho
Logical	0.261	<0.001	Significant	Reject Ho
Existential	0.175	0.013	Significant	Reject Ho
Interpersonal	-0.076	0.287	Not Significant	Failed to Reject Ho
Kinesthetic	0.163	0.021	Significant	Reject Ho
Verbal	0.088	0.215	Not Significant	Failed to Reject Ho
Intrapersonal	0.154	0.029	Significant	Reject Ho
Visual	0.111	0.116	Not Significant	Failed to Reject Ho
Overall MIBCL	0.162	0.022	Significant	Reject Ho

On the relationship between the pupils' academic achievement and multiple intelligence-based classroom activities as to naturalistic, musical, logical, existential, interpersonal, kinesthetic, verbal, intrapersonal and visual. The result revealed that there is a significant relationship between pupils' academic achievement and multiple intelligence-based classroom activities as to naturalistic, logical, existential, kinesthetic, and intrapersonal since the computed correlation value of 0.190, 0.261, 0.175, 0.163, and 0.154 with the corresponding significant values of 0.007, <0.001, 0.013, 0.021, and 0.029 which are lesser that 0.05 level of significance. This denotes that most of the pupils excel on these types of intelligences.

However, there is no significant relationship between pupils' academic achievement and multiple intelligence-based classroom activities as to musical, interpersonal, verbal, and visual since the computed correlation value of 0.118, -0.076, 0.088, and 0.111 with the corresponding significant values of 0.095, 0.287, 0.215, and 0.116 which are greater than 0.05 level of significance. The result implies that these kind of intelligences are not often practiced by the pupils as well as by the teachers.

On the other hand, there is a significant relationship between pupils' academic achievement and the overall multiple intelligence-based classroom activities since the computed correlation value of 0.162 with a significant value of 0.022 which is lesser than the present level of significance 0.05 thus, the null hypothesis is rejected. This depicts that multiple intelligence-based classroom activities has positive implication to improve pupils' achievement in school.

The result shown that there is no significant difference between the respondents' assessment on multiple intelligence-based classroom activities along naturalistic, musical, logical, existential, interpersonal, kinesthetic, verbal, intrapersonal, and visual since the computed significant values are greater than 0.05 level of significance thus, the researcher failed to reject the null hypothesis.

In the context of education and pupils' achievement, MI is especially powerful because it helps parents and teachers understand education holistically. Gardner (1994) says MI persuades parents and teachers to examine their own ideas and assumptions about achievement and consider various teaching approaches. This suggestion provides a powerful lens to analyze MI in the context of elementary student performance.

According to the study of Ozdemir, Guneysu, and Tekkaya (2006), teachers need to broaden their instructional and assessment repertoires to include strategies drawing on a wider variety of intelligence types. MI is also a powerful pedagogical organizer that helps structure learning according to the needs of students.

TABLE 4. DIFFERENCE BETWEEN THE ASSESSMENT OF THE RESPONDENTS ON MULTIPLE INTELLIGENCE-BASED CLASSROOM ACTIVITIES

Multiple Intelligence-Based Classroom Activities	Mean		t	Sig.	Interpretation	Decision
	Teachers	Pupils				
Naturalistic	3.255	3.326	-0.074	0.470	Not Significant	Failed to Reject Ho
Musical	3.055	3.092	-0.474	0.640	Not Significant	Failed to Reject Ho
Logical	3.285	3.298	-0.154	0.879	Not Significant	Failed to

						Reject Ho
Existential	3.410	3.378	-0.316	0.755	Not Significant	Failed to Reject Ho
Interpersonal	3.185	3.097	1.008	0.323	Not Significant	Failed to Reject Ho
Kinesthetic	3.320	3.322	-0.020	0.984	Not Significant	Failed to Reject Ho
Verbal	3.055	3.113	-0.488	0.630	Not Significant	Failed to Reject Ho
Intrapersonal	3.480	3.330	1.452	0.160	Not Significant	Failed to Reject Ho
Visual	3.265	3.205	0.591	0.560	Not Significant	Failed to Reject Ho
Overall MIBCL	3.257	3.240	0.202	0.841	Not Significant	Failed to Reject Ho

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V. CONCLUSIONS

There was a significant relationship between multiple intelligence-based classroom activities and its effects to pupils' academic achievement. Therefore, it is concluded that various instructional designs based on multiple intelligences theory can enhance to pupils' academic achievement. Furthermore, the school should adapt the multiple intelligence-based classroom activities and must be included in the core curriculum to enhance overall performance.

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