

Using Differentiated Instruction in Improving the Academic Performance of Students in Filipino Language

Ma. Rita R. Aranda* and Joel L. Zamora

National University, Manila

Tibagan National High School, Makati

**aranda_rita@yahoo.com@ national-u.edu.ph*

Abstract: Student diversity inside the classroom challenges educators to create an environment focused on individual learning. Differentiated instruction based on different learning styles of each student can facilitate individual learning. The purpose of the study was to investigate the effectiveness of differentiated instruction in the academic performance of grade ten students in Filipino subject. In this study, quasi-experimental design was used to determine the effectiveness of differentiated instruction in terms of improving the academic performance of the students. The participants were purposively chosen for the control and experimental group, respectively. The learning styles of the students were identified using the Grasha-Riechmann Student Learning Style Scale which served as the basis for designing differentiated activities in the Filipino subject. The experimental group received differentiated instruction for two months while the control group received traditional teaching instruction. The results revealed that the academic performance of the students in the experimental group is higher compared to the control group. This study concludes that differentiated instruction based on different learning styles was effective in teaching the Filipino subject to grade ten students.

Keywords: differentiated instruction; learning styles; individual learning; academic performance; Filipino subject

1. INTRODUCTION

Classrooms are full of diverse learners in this second decade of the 21st century, both culturally and linguistically (Gregory & Chapman, 2013). Diversity is common in every classroom, and in each room we can find distinctive perspectives and characteristics of young individuals ready and willing to learn, and teaching diverse students is always a great challenge to every educator. It is very crucial to the teachers to be mindful on how the students learn best in order for them to satisfy the needs of their diverse students (Gregory & Chapman, 2013). Teaching students that possess individual differences and with the variety of learning styles really a big responsibility of the teachers that need to develop and enhance.

Educators should consider the academic differences of the learners to help them integrate the content of the curriculum to their own lives and modify the complexity of instruction so all students experience learning success thus, making learning meaningful and interesting to them (Green, 1999 on Subban, 2006). Having diverse classroom and teaching diverse students will help discover the many benefits and learning opportunities both for the students and the teachers.

The scenario of having a diverse classroom with diverse students is not new in Philippine education and it is always a problem on how to address the different learning preferences and styles of the students. It is observed in the Philippine classroom that most of the teachers are engaged in traditional instruction, in which

one lesson is designed to meet the needs of all learners, and these teachers think they are using differentiation but actually not. Filipino subject like other academic subjects, suffered much because students' diversity were not addressed. Learning preferences and styles were not given attention, thus, learning becomes difficult and boring.

“Education For All” is the primary goal of Philippine education regardless of the “differences”. The Philippine Education For All (EFA) 2015 is a vision and a holistic program of reforms that aims at improving the quality of basic education for every Filipino by 2015. Through this, the Philippine government is committed in improving the quality of education at all grade levels (Philippine Education for All, 2015). As grade 11 start this school year 2016-2017, the teachers are challenged to address the diversity of Filipino students, and to accommodate these differences as they motivate the students to learn. In response to the different levels and needs of the students, differentiated instruction will be the approach in the learning environment in the Philippine classroom that has 40-50 students or more. In this study differentiated instruction will be applied to determine whether there is a difference in achievement between the students who are exposed to differentiated instruction and those that undergo the traditional or conservative instructional approach. Through this, the learning styles of grade ten students will be identified and this will help in preparing lessons for each learning styles.

Teachers teaching Filipino subject believed they were using differentiated instruction because they used group works and activities inside the classroom but in reality, it's not because they designed one lesson for all students and as teachers we

believe that “one size doesn't fit all”, thus, the learning preference and styles of the students were not met. Conducting learning style inventory before the school year start is very necessary because knowing the different learning styles of the students will help the teacher plan and design the appropriate lessons for them. In this study, the learning style inventory of Grasha and Riechmann Student Learning Style Scales (GRSLSS) was used to identify the different learning styles of the students. Through experimentation, it showed how it helped the teachers in creating lessons designed to meet the six (6) learning styles developed by Grasha and Riechmann.

1.1 Theoretical Background of Differentiated Instruction

Differentiated instruction is a philosophy grounded in Vygotsky's theory of sociocultural with key concept on Zone of Proximal Development and Scaffolding (ZPD) that explain, to achieve meaningful learning, it needs teacher scaffolding, collaboration with peers, and most specially, slightly difficult task that beyond the comfort level of the students (Konstantinou-Katzi et. al.,2013). This given tasks can be done through the help of someone who is more skilled, which is the teacher.

Differentiated instruction as Tomlinson (2003) defines, it is a philosophy of teaching that is based on the premise that students learn best when their teachers accommodate the differences in their readiness levels, interest, and learning profiles. A chief objective of differentiated instruction is to take full advantage of every student's ability to learn (Subban, 2006). Using differentiated instruction inside the classroom recognizes the diversity of the learner, and it affirms that each learner has

his or her own style of learning inside the classroom.

The differentiated classroom will help the teacher to support and respond to the academic needs of the learner. According to Prince and Howard (2002) in Koeze (2007), in a differentiated classroom, there is no room for fear and students are free to take risks in their learning. By developing lessons according to students' readiness levels, interest, learning profiles, teachers will be able to integrate students prior knowledge and experiences outside the school environment which will empower students to view things differently and share their opinions because they already have knowledge and interest in the topic. With modifications made to lessons, students are challenged at appropriate levels to eliminate frustrations and boredom. According to Tomlinson (1999) in a differentiated classroom, the teacher plans and carries out varied approaches to content, process and product in anticipation of and response to student differences in readiness, interest and learning needs. She also identified content, process, and products as components that are differentiated in a classroom. Content pertains to "what to teach," and it's what students learn or acquire. Process deals with "how to teach" the ideas and skills that the students need to learn. Product shows the personal interpretation of the learners, and it demonstrates what they have learned (Martin and Loomis, 2014).

Learners learn and process information in different ways (Gregory and Chapman, 2013). Some students prefer certain methods of learning, and it is important that educators utilize a wide variety of teaching activities to address learning preferences of the students. Being able to identify the various learning styles

of students and teaching them with an informed awareness of those differences can assist students to achieve a better academic result and improve their attitudes towards learning. Grasha (1996), has defined learning styles as, "personal qualities that influence a student's ability to acquire information, to interact with peers and the teacher, and otherwise participate in learning experiences." Identifying learning styles enables a teacher to capitalize on a student's strengths and to become familiar with concepts they may find challenging (Subban, 2006). Outfitting student's unique style will make every student bring up their full potential and provide opportunities for genuine learning based on learners' interest and needs; thus, the rewards are great. Teachers who are unaware of student learning styles will likely teach in a manner that prevents pupils from doing their best work (Morgan, 2014).

1.2 Research Studies in Differentiated Instruction

There is increase in numbers of researchers conducting studies that shows evidence how differentiated instruction gain positive results in the classroom. Indeed using differentiated instruction improve the academic performance of the students.

In a recent study of Valiandes (2015), it was found out that students made better progress in classrooms where differentiated instruction methods were systematically employed, compared to students in classrooms where differentiated instruction methods were not employed. Based on the findings, the quality of differentiated teaching being given by the teacher has a great effect on students' achievement as well as the systematic employment of differentiated instruction methods in mixed ability classrooms in

promoting equity, optimization of quality and effectiveness in teaching.

In a research conducted by Koeze (2007), it is evidently showed that differentiated instruction had a positive effect on students performance. Based on study, it had an increase in performance and has impact on student achievement, and it is greatly suggested that teacher using differentiated instruction should first administer a learning style inventory to their students before implementing differentiated instruction because this learning style inventory will provide the teacher with the necessary information on how to differentiate lessons according to the choice and interest of the students.

The study presented by Konstantinou-Katzi et. al. (2013) proved that differentiated instruction was effective in improving students' performance and in enhancing their motivation and engagement. There was a positive impact on student learning and attitudes towards mathematics when differentiated instruction applied to engineering students in college-level mathematics. Based on the observations of the researchers, the whole class was being transformed into more interactive and livelier one and showed enthusiasm during the interviews and has a lively participation throughout the semester when the differentiated instruction was applied. Through the differentiated instruction, the students felt that they were given the chance to actually do and understand mathematics and not feel handicapped by any lack of prerequisite knowledge. Students felt they had constructive interaction with the instructor and their peers. As a result, the differentiated instruction was shown to be effective in improving students' performance.

Allcock (2010) conducted a study comparing learning styles to academic ability as a basis for differentiation to improved A-level student performance of psychology students. In one class, learning activities were differentiated by academic ability; in the other class, learning activities were differentiated by learning style for nine weeks, followed by a further class test. Both classes showed significant improvement from the beginning to the final test, but there was no significant difference in improvement between the two groups. The study recommended further research in personalized learning make student-focused intervention to enable students to better understand and to employ their own learning styles as a tool for independent study.

Dosch and Zidon (2014) explored the implementation of differentiated instruction in higher education to understand if quantitative improvements were noted in a differentiated (DI) classroom compared to a non-differentiated (NDI) classroom in two different sections of the same Educational Psychology course taught by the same instructor

Findings showed, the DI group significantly outperformed the NDI group in the combined assignments and the exams. However, only two assignments and one exam showed significantly higher scores for the DI group when examined individually. The DI group perceived differentiated methods as beneficial to their learning as noted on the course evaluation and survey questions.

Research has found that implementation of differentiated instruction can help not only in the students achievement but also in the teaching performance of the teachers including their perceptions and attitudes. In a study conducted by Maeng and Bell (2015), it

investigated the implementation practices of secondary science teachers who differentiate instruction and all the participants employed differentiated instruction (DI) in the delivery of their lessons. Based on the results, participants implemented a variety of differentiation strategies in their classrooms with varying proficiency. Evidence suggested all participants used instructional modifications that required little advance preparation to accommodate differences in students' interests and learning profile.

This descriptive study investigated the implementation practices of secondary science teachers who differentiate instruction. Participants included seven high school science teachers purposefully selected from four different schools located in a mid-Atlantic state

The same study conducted by Robinson, Maldonado, and Whaley (2014), it investigated how teacher participants from an elementary school, a middle school, and a high school successfully differentiate instruction. Teachers' understanding and knowledge in a differentiating classroom are crucial in achieving students success. The interviews explored participants' perceptions of how differentiated instruction has influenced their ability to successfully reach the diverse needs of learners in their classrooms. Major findings in the case study included a lack of professional development, time constraints, how differentiated instruction meets the needs of all learners, the difficulties of learning how to initially implement differentiated instruction, and the belief that differentiated instruction is essential for student success.

The study presented by Wan (2016) examined prospective teachers' teaching beliefs toward differentiated instruction and teaching efficacy. Changes in teaching

beliefs regarding differentiated instruction as well as teaching efficacy levels were found and more positive attitudes toward differentiated teaching were noted. Though there are some different concerns in class management and conflicts with personal teaching beliefs, these concerns may be related to practical experiences and confidence as well as expectations for students.

Hence, the present study is very similar in the studies of Koeze (2007) and Allcock (2010) that resulted in a positive effect of differentiated instruction using learning style inventory as the basis for differentiation. Studies of Valiandes (2015), Konstantinou-Katzi et. al. (2013), and Dosch and Zidon (2014) addressed the problem on student diversity by using differentiated instruction and results of these studies confirmed that students made better progress compared to students in a non-differentiated classroom. Studies of Maeng and Bell (2015), Robinson, Maldonado, and Whaley (2014), and Wan (2016) address the teachers' teaching beliefs, perceptions, attitudes and understanding on how to differentiate lessons. Results revealed that there were positive attitudes toward differentiated teaching and the belief that differentiated instruction is essential for student success.

2. METHODOLOGY

The study used a quasi-experimental design in comparing two variables, the control and the experimental group using pretest and posttest. This is to determine the effectiveness of differentiated instruction in terms of improving the academic performance of the students in the experimental group. Non-equivalent group design using purposive sampling technique was employed in two groups using two

sections, homogenous in nature, in grade ten that the researcher is teaching which are involved in the research.

2.1 Context of Study and Participants

The study took place in one public school in the Philippines having 434 grade ten students who are all regular students and were all enrolled in a class who are taking eight academic subjects including Filipino subject. Out of 8 sections, two sections composed of forty-six (46) students per section were purposively chosen for the control and experimental group, respectively. The control group was exposed to a traditional method of teaching instruction for eight weeks while the experimental was exposed to differentiated instruction. Both classes met four times a week having one hour per session, a total of 32 hours for two months.

2.2 Instrument

To be able to gather from the control and experimental groups sufficient data for analysis, the researcher utilized pretest to determine students readiness before subjecting them into instruction. The test came from K to 12 Grade Ten Curriculum Module and was being administered at the beginning of every grading period. This test is composed of 35 multiple choice questions.

After the pretest, an instrument on learning style inventory was administered to determine students' learning style to both groups. In this study the Grasha- Reichmann Student Learning Styles Scales (GRSLSS) was used. There are six styles included in GRSLSS namely (1) Avoidant, (2) Dependent, (3) Participant, (4) Independent, (5) Competitive, and (6) Collaborative.

After eight weeks of applying differentiated instruction, a post-test was administered.

The post-test is a 35 multiple – choice item test and was made by the researcher based on the pre-test given at the beginning of the 3rd quarter.

2.3 Data gathering

Before the differentiation started, the researcher identified the learning profile of the students by conducting pre-test that will show the readiness of the students using K to 12 Basic Curriculum module and learning style inventory from Grasha – Reichmann Student Learning Styles Scales (GRSLSS). This was administered to both control and experimental groups during the first week of the 3rd quarter. The experimental group inventory result was used in giving differentiated instructions while the result of the control group was used only in comparing if there are a difference in learning styles of the students in control and experimental group.

2.3.1 Control Group

The control group was given traditional or direct instruction in their Filipino lessons in the 3rd quarter using lecture method, teaching lessons and conducting the same activities for all types of students learning styles.

2.3.2 Experimental Group

After assessing the different learning styles of the students, the researcher prepared the lesson according to the six styles of learning. The teacher identified at least three learning styles of each student, for the reason that, each student can have one or more learning styles. Every lesson was designed specifically for the characteristics of each learning types of the students and made use of flexible grouping. For eight weeks, the experiment group was exposed to the differentiated instruction.

During the experiment, assessment, and diagnostic tests were given every two weeks in order to determine whether or not the instruction is receptive to the needs of the students.

3. RESULTS AND DISCUSSION

Findings from the study verified the researchers assumption that there was a significant improvement on learners' learning when differentiated instruction applied in teaching Filipino literature and language.

In order to reveal the effectiveness of differentiated instruction on students' achievement, the teacher employed a learner-centered approach that provided grade ten students to collaborate with peers and teachers. To facilitate learning, the teacher initiated group participation in all activities and to interact with other groups. The lesson prepared for each session was based on the intended learning activities for each learning style of the students. Data on Table 1 shows the mean score obtained by students in pre-test of both groups

Table 1 Mean Score of Participants of Two Groups in Pre-test

Group	N	Mean	Standard Deviation
Experimental	46	10.11	2.302
Control	46	14.28	4.400

As seen in Table 1, before the experiment, pre-test was conducted and results showed that scores in the \pre-test of the two groups were not close. Experimental category got the lowest mean score of 10.11 with a standard deviation of 2.302 compared to control category who got

a higher mean score of 14.28 with a standard deviation of 4.400. It can be noticed that there is a mean difference in a pretest of two groups. Data on Table 2 shows the mean score obtained by students in post-test of both groups.

Table 2 Mean Score of Participants of Two Groups in Post-test

Group	N	Mean	Standard Deviation
Experimental	46	24.57	2.730
Control	46	17.57	4.015

Table 2 shows the result after the intervention, the teacher conducted post-test to see if there is an improvement of learning performance of the students. The posttest

results showed that experiment group got a higher mean score of 24.57 compared to the 17.57 mean score for the control group. It can be deduced through the mean scores

that students excel in the class after being exposed to differentiated instruction. There was a great improvement in the scores of experiment group. The findings of the study agree with the findings of Muthomi & Mbugua (2014) that the students when given compare to the students given a traditional method of teaching.

differentiated instruction significantly improve student achievement. Data on Table 3 shows the mean score and mean gain obtained by students in experimental and control group of both pretest and posttest.

Table 3. Descriptive Statistics and Result of the participants in t-test on pretest and posttest

Pre-test				Post Test				T	df	Sig.
M	VI	SD	N	M	VI	SD	N			
12.20	HN	4.074	92	21.07	KN	4.903	92	-11.614	91	0.000

Table 3 shows there is significant difference on the result of pretest and posttest with $(t(91)=11.614, p, <0.000)$. The participants performed better in posttest than in pretest wherein the mean score is 21.07 with SD of 4.903 compare to pretest with a mean score of 12.20 and SD of 4.074.

The results are also in consonance with Lim (2005), Ladson-Billings (1994) and Sternberg (1997) who found out that if the curriculum and interaction fit with the learning styles and academic intelligence, they will perform best in the classroom. The findings of the study were similar with that of Muthomi and Mbugua (2014) affirming that students who were taught using differentiated instruction performed better than those taught using conventional instructional approach.

A comparison was made on students' improvement from pretest to posttest in control and experimental group. The scores revealed that in the experimental group, the dependent category got the highest number of students and challenging got the lowest number of students while the control category, collaborative, and

It can be observed that pretest is lower than the posttest because differentiated instruction using learning style of the students was not yet performed. After facilitating differentiated instruction, there was an increased in score in the performance of the students.

participant got the same score being the highest while the lowest is the avoidant. The result was related to the research conducted by Grasha (1996), in the research, she found out that when analyzed, the students categorized as participative, collaborative and independent respectively in traditional classes.

Looking within the experimental group, the mean score of each learning styles category increased in post-test and pre-test respectively. Based on the Grasha-Riechmann Student Learning Style Scales, Independent, Dependent, Competitive, Collaborative, Avoidant, and Participant, it can be observed that there are mean differences in t-values of the six categories of learning styles except challenging style because there is only one student that belong in this category.

Table 2: Mean difference of the participants on experimental group in pretest and posttest.

Style of Learning	Pre-test				Post-test			t - value	Sig.	Decision
	N	Mean	V.I	SD	Mean	V.I	SD			
Independent	8	10	HN	2.507	24.63	KN	1.188	12.733	0.000	Significant
Avoidant	7	9.57	HN	2.992	25.57	KN	1.397	16.395	0.000	Significant
Collaborative	9	10.11	HN	2.421	24.78	KN	2.682	12.975	0.000	Significant
Dependent	14	10.71	HN	1.729	23.50	KN	3.898	11.172	0.000	Significant
Challenging										
Participant	7	9.43	HN	2.302	25.29	KN	2.289	16.077	0.000	Significant
TOTAL	46	10.11	HN	2.302	24.57	KN	2.73	27.909	0.000	Significant

Results revealed that there is a significant mean difference in five categories. Significance in Challenging was not computed because only one participant belongs to this category. Specifically, independent has mean difference of $p - \text{value} > 0.00$, Avoidant with mean difference of $p - \text{value} > 0.00$, Collaborative with mean difference of $p - \text{value} > 0.00$, Dependent mean difference of $p - \text{value} > 0.00$, Challenging with mean difference of $p -$

value > 0.00 , and Participant with mean difference of $p - \text{value} > 0.00$. It can be observed that there is improvement of scores of all the participant within the experimental group. The findings are consistent also with Affholder (2003) who concluded that teachers who used differentiated instruction have shown improvement on their perception and became responsible for the students' academic performance.

4. CONCLUSION

The objective of the study was to determine the effectiveness of differentiated instruction in terms of improving the academic performance of the grade ten students in Filipino subject. Differentiated instruction was applied and the researcher made lessons according to the six learning styles. The students explored, collaborated, worked with groups in different activities for the whole duration of the eight-week experiment.

It was found out that in six learning styles used, a majority in the experimental group fall under dependent category while in a control group majority fall under collaborative and participant with the same number of students. There is a significant difference in the pre-test of experimental and control groups and there is a significant difference in overall mean of the control group rather than the two experimental group because differentiated instruction was not yet administered. But after the

application of differentiated instruction and post-test was given, there was an increase in academic performance of the experimental group.

Students in the experimental group had an increased in the academic performance in their pre-test and post-test. It is noted that within each category of learning styles students performed better when the differentiated instruction was administered.

The results verified that differentiated instruction displayed a significant difference in the test scores of grade 10 students. Based on observation, students in the experimental group were motivated and enthusiastic in learning because the lessons prepared for them are according to their learning styles. The researchers noticed that the teacher using differentiated instruction became more creative, more self-efficient and more open minded to try new instructional approaches. Differentiated instruction is encouraging for supporting academic needs of diverse students in the classroom and it is an effective method of teaching Filipino subject for it gives students many opportunities to excel in all their performances.

Findings also confirmed with other research studies that it is necessary to administer learning style inventory at the beginning of school year to help teachers design lessons according to learning preferences and styles of the students before implementing differentiated instruction.

As discuss earlier, there are many research studies confirming the benefits of differentiated instruction inside the classroom but there are concerns that need to be addressed in the implementation of differentiated instruction, first is the teacher itself. The teacher should be given training on how to differentiate instruction because

the preparation of designing everyday lessons that fit each learning styles of the students is not easy. It needs a lot of effort and require more time for both teacher and students. Another notable concern is the number of students in the classroom. It is difficult to manage differentiated instruction in big classes having group work and activities and attending to each groups' needs. It is highly suggested that another study on differentiated insruction using other learning inventory scale in major subjects be conducted.

Using differentiated instruction is a great challenge to all teachers especially in the Philippines that has a big number of students per class and also the continuous training and professional development of the teachers on how to differentiate lessons. There are many challenges to face but if the teacher discover how to handle those challenges, learning would be meaningful and interesting for the students.

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