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# *THE ROAD LESS TAKEN:* DIFFERENTIATED INSTRUCTION (DI) AS PRACTICED BY GRADE 7 MATHEMATICS TEACHERS IN THE PHILIPPINES

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## Abstract

*In the K-12 curriculum program applied globally, teachers are challenged to apply the Differentiated Instruction (DI) which is responsive to the needs of all students and facilitates learning. In the Philippines, the Department of Education recently mandated the implementation of DI in the K-12 curriculum. Hence, this study sought to answer research question: What differentiations are practiced by the Grade 7 Mathematics teachers in their classes? Data gathered from lesson plans, interviews, and classroom observations of 21 Grade 7 Filipino mathematics teachers were qualitative analyzed through the Framework Analysis by Ritchie and Lewis (2013). Findings show that Maker's principles of differentiation on content, process, and product were applied in instruction though not to the fullest; and Tomlinson's principles are embedded in the teaching strategies and student's activities, considering student's readiness and interests.*

*Instruction is modified to enhance engagement in learning mathematics; activities are selected to ensure that students are able to connect, scaffold, develop mastery of the lesson, and unleash creativity; and performance tasks and evaluations are based on the preference of the students. Though there are various evidence of the application of the principles of DI by the Filipino mathematics teachers, the extent of its implementation in various disciplines can be explored qualitatively and quantitatively.*

**Keywords**

Differentiated Instruction, Filipino Mathematics Teachers' Practices, Framework Approach, Teaching Practice

## 1. Introduction

Tomlinson (2005), considered differentiated instruction as a philosophy that can be used to accommodate students' readiness levels, interests and learning profiles, wherein, it purports to unleash the full potential of every student in the classroom. Furthermore, she pointed out differentiating can be done in various ways. Maker and Schiever (2010) posited that differentiation can be done through content modification, adapting students' needs during teaching-learning process, and accepting outputs according to their preferences provided that the outputs are in line with the criteria (Tomlinson, 2000, cited by Subban, 2006).

According to Anderson (2007), in today's classroom (K–12 curriculum program), teachers are facing challenges in responding to the diverse needs of students, while at the same time pressured to be at par with the high-stakes testing. He further related that many argued that it was not possible to address all the students' needs, while aiming for the high performance in their examinations; but Tomlinson et al. (2003) contended that Differentiated Instruction (DI) is a response to these challenges and related that unless the curriculum and instruction are good and fit for academically-diverse learners, student outcomes are likely to be disappointing. While, Renzulli (1988, cited in Firmender, Reis, & Sweeny, 2013) suggested the five dimensions of differentiated instruction, namely: content of the lesson, instruction or teacher practices, organization and environment in the classroom, student outputs, and choices of the teacher on how to implement the teaching strategies effectively and appropriately.

### 1.1 Differentiated Instruction in Teaching Mathematics

In mathematics, the practice of Differentiated Instruction has been noted in researches in many countries such as: the differentiated curriculum in the United States (Beecher & Sweeny,

2008) where they explored the effect of using of flexible groups formed through formative and summative assessments, and the use of open-ended problem solving during big and small-group instruction; the curriculum modification in Taiwan (Yang & RU WU, 2010), where, the performance of students who received integration of number sense activities in instruction is compared with students who received instruction using regular mathematics textbooks; the students-readiness in Jordan (Al-Hroub, 2010), where the effects of two programs of instructional practices on the achievement of two groups of MG/LDs were investigated; the learning profile in Iran (Parvanehnezhad & Clarkson, 2006) where the strategy of switching languages in learning mathematics was explored; the learning profile in the Philippines (Bernardo & Calleja, 2005), where the effect of the use of the first language in solving mathematical word problems was empirically tested; readiness in Australia (White & Mitchelmore, 2010) where the effect of abstraction process in learning mathematics was explored; in Scotland (Mooij, Dijkstra, Walraven, & Kirschner, 2014) where differentiated classroom using technology and learning corners was applied based on students' diverse needs; and in Germany (Cai, Kaiser, Perry, & Wong, 2009) where the use of real life problems in mathematics was done in order to better understand mathematics knowledge was explored.

**1.2 Differentiated Instruction in the Philippines**

In the Philippines, Differentiated Instruction is newly enforced in the Basic Education, though this approach has been practiced in many countries, such as the United States, Australia, Europe, Germany, Scotland, Middle East, and the Asian countries. In the K-12 Curriculum Program, there is a clear provision to address the individual learning needs and diversity of students as expressed in the Republic Act #10533 (Retrieved from www.deped.gov.ph on February 24, 2017). Further, DepEd Order #31, Series of 2012 commented that in differentiated instruction, content standard should be in broad terms, so that, on one hand, teachers can differentiate how students will manifest their understanding, and on the other hand, students can have an option to express their understanding in their own way (Retrieved from www.deped.gov.ph on February 24, 2017).

The above mandate challenged Filipino teachers not just in mathematics on how to address the individual needs and diversity of students considering the set-up of the Philippine classroom are in heterogeneous groupings and in a conventional way (classroom-based) of which no learning centers or corner table for students to work on due to class size. In this reason, this study intends to find out what DI as practiced by the Grade 7 mathematics teachers in the Philippines. Specifically,

this study sought to answer the research question: What differentiations are practiced by the Grade 7 Mathematics teachers in their mathematics classes?

The findings of this study offer information about DI as practiced by the Filipino Grade 7 mathematics teachers that can be used as reference by the basic education teachers for improving the teaching practice in their mathematics classrooms. Lastly, the findings of this study can serve as a guide for administrators and trainers to provide an effective series of professional development activities on differentiated instruction.

### 1.3 Theoretical Framework

According to Maker and his co-authors specified that differentiation be made on content of the lesson, process of learning, and product of the students (Kanevsky, 2011). Specifically, content-related principles focus on concepts, ideas, strategies, images and information in curricula (Maker & Schiever, 2010); the process-oriented principles focus on the way educators teach and the ways students use information (Maker & Schiever, 2010); the outcome-oriented principles address the nature of products expected of students when students demonstrate what they have learned (Maker & Schiever, 2010); and lastly, the principles related to the learning environment which they recommended are learner-centered (vs. teacher-centered), independent (vs. dependent), open (vs. closed), accepting (vs. judging), complex (vs. simple), and flexible (vs. rigid); involves varied groupings (vs. similar groupings) and high student mobility (vs. low)". Maker Model determines the efficacy of differentiated curriculum and instruction (Kanevsky, 2011).

## 2. Research Methodology

### 2.1 Research Design and Procedure

This study applied the qualitative research approach specifically utilizing the Framework Method which focuses on qualitative content analysis and thematic analysis (Gale, Heath,
Cameron, Rashid, & Redwood, 2013). This research method consists of intricately and interconnected stages and processes used in qualitative approach. Each process observes a logical procedure (Ritchie & Spencer, 1994; Ritchie & Lewis, 2003; Ritchie, Lewis, Nicholls, & Ormston, 2013).

### 2.2 Sampling Procedure

Twenty-one (21) Grade 7 mathematics teachers were purposively selected based on the following criteria: (a) applies Differentiated Instruction in Grade 7 Mathematics; (b) participates in

seminars and trainings on Differentiated Instruction; and (c) a graduate of Bachelor of Secondary Education, major in Mathematics.

The researcher followed the protocols in seeking permission to conduct the study. In this reason, only willing teacher-respondents were asked to fill up the consent form and affix their signatures to signify their willingness to participate in the interview (Barela et al, 2018) and the videotaping of their respective classes, before the actual classroom observation and interview. To adhere to the policy of the DepEd policy, "no disturbance of classes," teachers were the ones who gave the schedules of the classroom observations and interviews. The interview had to be done during their vacant classes as long as it was not prior to the classroom observation in order to validate their intentions for the activities or actions during instruction.

**2.3 Study Site**

Manila is the study site because this region is the political, economic, social, cultural, and educational center of the Philippines as proclaimed by the Presidential Decree No. 940. The Department of Education is mandated to regulate and monitor basic education or the K-12 program in the Philippines. In the Philippines, only two categories of schools under the basic education program, i. e. the public and private schools, are both regulated and monitored by the Department of Education. The public schools are owned by the government while the private schools are owned by private entities.

**2.4 Data Gathering Procedure**

This study utilized multi-sources of data, to provide a more in-depth analysis of data set and allow the researchers to validate findings and thus, increase the reliability of the findings that is according to Yin (2013). Data sources are the semi-structured interview guide, classroom observation checklist or the assessment instrument for the mathematics teachers' lesson plans, and content analysis of the teachers' lesson plans, IPhone for audio and video recordings. The different sources of data are not dependent on each other, and data from each source are analyzed independently.

**2.5 Data Gathering Instruments**

All instruments used in this study underwent validity check. Validity of the instrument was cross-examined by the experts of differentiated instruction as suggested by Wynd, Schmidt, and Schaefer (2003).

*2.5.1 Interview Guide* -The instrument consists of two parts, namely: the profile of the respondents and the interview questions. There are sixteen (16) questions divided into four (4) clusters, namely: (a) the conceptions of the respondents on DI (4 items); (b) the details on how the respondents applied DI (5 items); (c) the details on how the respondents prepared their lesson plans/teaching guide (1 item); and (d) the details on how the respondents implemented their lessons (6 items). Aside from these questions, follow-up and probing questions were included so as to achieve the richness of the data gathered.

*2.5.2 Classroom Observation Checklist*- It consists of 23 statements. These statements are clustered into learning objectives, learning content, learning materials, class procedure, lesson proper, application/performance tasks, assignment, and assessment using the DI principles of Maker, and these are to be matched by the respondents with the DI principles of Tomlinson based on their teaching practice in their mathematics classes.

*2.5.3 Code Book*- keywords and cue words and phrases related to DI for content analysis of the lesson plan of the teacher-respondents.

**2.6 Mode of Analysis**

This study utilized the steps observed in Framework Analysis (Ritchie & Spencer, 1994; Ritchie & Lewis, 2003), specifically, five key stages of qualitative data analysis. The transcribed data were processed through word co-occurrence, word for word; then cue words and phrases related to DI (Atay & Danju, 2012), were chosen. These words, concepts, themes, phrases, characters, or sentences within texts (Shahmohammadi, 2013) were presented and quantified based on DI. The journey of analyzing data in this study started with familiarization by reading and re-reading and scanning and video-taping the classroom observations.

The researchers utilized the truth-table for disjunction (Whittemore, Chase, & Mandle, 2001) to identify if the horizons or significant statements are truly within the context of DI, either that of Maker's or Tomlinson's, wherein p is for the truthfulness of the statements in the Maker's principles, while q is for the truthfulness of the Tomlinson's principles. The truth-table specifies that a disjunction is true on any truth-value assignment where either one or both of the disjunctions is true, and false just in case both of the disjunctions are false (www.phil.cmu.edu/projects/logicandproofs/alpha/htmltest/m03_semantics/translated_chapter3.html ). Below is the truth-table.

**Table 1:** *Truth-Table for Disjunction*

| ***P*** | ***Q*** | ***P v Q*** |
|---|---|---|
| T | T | T |
| T | F | T |
| F | T | T |
| F | F | F |

To apply this principle in coding the meaningful units, p assigned as Maker's principles and q as Tomlinson's principles are the referents. Hence, the generic table was prepared for re-coding or validating the codes assigned to certain words or cue words or phrases. Then, the researcher assigned the final codes to certain words, cue words or phrases, and grouped them according to categories or themes. Subsequently, as the final codes were assigned, descriptions were provided according to connections, differences and summary of the themes (Tambychik & Meerah, 2010), after which, the identified meaningful units of DI were reviewed and analyzed for content and coded according to identified categories based on the existing framework as suggested by Polit and Beck (2004).

## 3. Findings

From the framework analysis revealed differentiations are practiced by the Grade 7 Mathematics teachers in their mathematics classes is summarized in Table 1.

**Table 1:** *Matrix of A priori and Posteriori of Practices by Grade 7 Mathematics Teachers on Differentiated Instruction*

| Types of Differentiation | Components of the instruction in Philippine classroom: | Observable Actions | End |
|---|---|---|---|
| Content of the lesson | Lesson plan | Lesson plan utilized the inductive approach<br>Students' initial potential were considered in designing learning activities and evaluation.<br>Exercises and activities were planned according to students interest and level<br>Students' level and interest were considered in assigning performance task and requiring output | Intention to cater student's diversity |
| Process of the lesson | Introducing the lesson | Group Games<br>Ice Breakers<br>Reward System<br>Motive Questions<br>Introduce lesson with variety of activities/visuals<br>Give trivias<br>Relating lesson to real life situation | Intention to connect and motivate |
| | Learning materials/ Learning activities | Utilized teaching visual aids and tools to easily impart the lesson<br>Provide appropriate learning exercises/tasks/activities<br>Group students according to their interest/profile/level<br>Assisting students during learning exercises/ task<br>Uses words of encouragement/cues/prompts | Intention to scaffold, engage, and mastery |

| | | | | | |
|---|---|---|---|---|---|
| Product | — | Students' output | Allowing students to work according to their interest/preference<br>Allowing students to work with preferred group members<br>Allowing students to exhibit their learning output according to their choice of format and form | — | Intention to unleased achievement and creativity |

*Indication of differentiation according to students' readiness, interest and profile (Tomlinson's principle) is noticeable in the teaching practice of Grade 7 mathematics teachers in the Philippines encompassing throughout the components of the instruction.

Table 1 shows the matrix of differentiation practiced by the respondents. Column one presents the types of differentiation practiced according to Maker's principles, while column two presents the components of instructions in the Philippines, the third column are the observable actions in each of the categories and components, and the last column presents the DI principles practiced by the respondents. The Grade 7 mathematics teachers in the Philippines have their own unique ways to differentiate instruction, yet their diverse ways show clear keywords and patterns that are related to the existing theory used in this study such as:

**A. Differentiation in Lesson Plan: Addresses the Students' Diverse Learning Needs**

One of the required tasks of teachers is to have a teaching plan (Lesson Plan or Daily Lesson Log) before they engage in classroom instruction. This serves as their compass in teaching and is subject to the scrutiny of their coordinator or school principal. Their lesson plans were formatted in an outline form or in a semi-detailed plan.

Most of the data analysed were from the in-depth interview and the video clips during the classroom observations, because the lesson plans of the respondents were not detailed. In this study, most of the respondents adjusted their learning content and activities by considering the readiness levels and interests of the students; and what the students could do effectively in a given task. Three sub-themes emerged from this category, namely: the first sub-theme "*marking the sequence of the lessons*." Respondents verbalized that they adjusted the arrangement and sequence of their lessons based on the capacity of their students. Most of the teachers applied the four A's (Activity, Abstraction, Analysis, and Application) format in their lesson plans. Second sub-theme is "*marking the initial potential students*." From the sources of data, these show that the exercises and activities

prepared by the teachers are based on the capacity of their students. Most teachers characterized their classes with two types of learners, the slow learners and fast learners. One teacher claimed, "Exercises in higher sections are usually individual tasks but for the lower sections, I group them, or sometimes pair them off, because grouping helps them to finish the exercises." Lastly, the third sub-theme is "*marking the exercises and activities*." Most respondents related that they considered how the students were effectively challenged to do the learning activities. One posited "I am just giving simple examples in order for them to understand easily." Another declared, "By being sensitive to how groups or each individual would create ideas, I prepare the activities for them."

Through unit and thematic analysis of the significant statements of the respondents from the multi-sources of data surfaced the effects of the respondents' practice of DI in the mathematics classes, i.e., addressing the students' diverse learning needs.

**B. Differentiation in Introducing the Lesson: Motivates the Learners**

The respondents motivated the students in various ways. A teacher said, "I give rewards, like chips with equivalent points in the computer game, Clash of Clans also known as C.O.C. which is familiar to the students." The rewards maybe in kind such as points or chips representing points, when they do well in their learning tasks. As another teacher narrated, "When students answer correctly, I praise them." During classroom observations, affirmative words and praise words such as "yes" or "very good" were heard from the teacher-respondents.

The above findings reveal that an effect of the Grade 7 Filipino mathematics teachers' practice of DI is connecting and motivating the learners.

**C. Differentiation in Introducing the Lesson: Connects to Life Situations**

In this major theme, based on the responses of the teachers, video clips, and their lesson plans, as well as the recorded classroom observations, surfaced sub-themes. The first theme "*Let's Work Out*" involves learning activities that stimulate students, challenge their skills, and motivate them to actively participate in class. One teacher narrated, "When it comes to the lower sections, giving them a lot of activities stimulate the students." Another shared, "Group games give students more chances to succeed in their learning activities." All respondents utilized group activities to help their students in learning mathematical concepts.

The second theme is coded as *"let's guess"* because in this cluster, the respondents utilized questions and answers and provided clues in order for the students to have an idea of what may be the topic and understand their lesson for the day. One teacher recounted, "I ask provoking questions

in order for them to understand," while another teacher commented that "higher sections want challenging questions, but for those who are weak, I give bonus or easy questions because I encourage them to answer." In the third theme, *"Let's Relate,"* respondents shared that relating the lessons to real life situations makes students responsive, "I give practical applications of the lesson to our everyday life..." During one classroom observation, a teacher (T2) related the topic "literal coefficient" in the algebraic expression to symbols used in the social media such as Facebook and Twitter. Interestingly, students happily reacted and easily identified the symbols used in the social media.

Respondents provided a variety of ways to connect students to life situations in order for them to be connected with their students. Hence, in their practice of DI, the connection of the lesson to the realms of the students is evident.

**D. Differentiation in Providing Learning Activities and Materials: Scaffolds, Engages, and Facilitates Mastery of the Lesson**

Since the respondents came from two different groups (public and private sectors), utilization of learning tools is noticeably different. The public school respondents' learning materials, include work sheets and activity sheets. A teacher said, "I have with me worksheets ready for them to answer during learning exercises." Also observed among the public school respondents was the use of visual aids made from Manila Paper, cardboard, and instruments like protractors and rulers. But all the eight respondents from private schools utilized high technology gadgets such as laptops, netbook, projectors, LED TV, Facebook or Facebook messenger or the Blackboard (online application), and air play display application. One teacher (T16) said, "It is easy for me because our learning tasks are uploaded in their Facebook or in the Blackboard. They view it anytime and anywhere they are." Another teacher (T18) stated, "I see that my students are happy whenever they get the correct answer because they can immediately display their answers on the board through 'air play' application." She also added, "The students have no hassle in performing their tasks like solving mean, median, and mode in their statistics because with their gadgets, they just enter the data, and then immediately they get the answer."

Respondents from the public schools provide learning activities in various forms. One teacher remarked, "I provide hands-on activities." Also observed, Teachers 4, 7, 9, and 10 provided creative ways by which their students can uncover the mathematical concepts. Some respondents used meaningful learning activities to help students engage actively in the activities, to scaffold and

facilitate mastery of skills and concepts in mathematics. Respondents from private schools are more frequently engaged in gadget related activities in groups according to their level (T16 and T18). As T18 said, "What is important for me is that the use of technology makes them appreciate Mathematics more."

In terms of having a mixed group, i.e., combining fast and slow learners, one teacher (T16) observed said, "I intend to have a mixed group so that the fast learners will help the slow ones to cope with the lesson." Teacher (T9) related that she intended to group students in a mixed mode for the same reason.

Though teachers' utilization of teaching strategies differs, such as some use the traditional way and the others are more inclined now in the modern technology; both still attempt to scaffold and facilitate students' learning in order that the students can master the mathematical concepts and skills.

**E. Differentiation in Students' Product: Unleashes Students' Achievement and Creativity**

The learning or performance tasks are premeditated by the teachers according to students' level and interest, hence, students have no option to choose which activity they want to do. But, the students have all the options on how they are to showcase their learning, provided that it is in the context of applying the concept learned. One teacher shared, "If they want to draw they can do so. For example, in our past lesson on sets, some of them had drawings. Even in their activity notebooks, you'll see their creativity while evidently others don't have." Another related, "If the students are interested and will be united, they would have a finished product; and they would be able to post, discuss, and share them with their classmates." This was also observed, whereby teachers provided the learning tasks, yet the students had the options to choose what outputs should be presented. It was common among the respondents to let their students present outputs in various forms like dance, poems, diagrams, jingle or yells, and simple reports. It was also reflected in some of the lesson plans.

Teacher 9, a typical of other respondents, was observed to have given three scenarios wherein students had the option to work and option to choose with whom he or she would work. Options made the students happy to perform their tasks.

With regard to differentiation in students' product, the respondents provided no option for students to choose what learning tasks they were to take according to their preference, except for Teacher 9. Only some respondents provided performance tasks that is already pre-meditated

according to the students' level but the students were allowed to showcase their performance according to their choice of format; these practices unleash students'' creativity.

## 5. Discussion

This study capitulated the practices of DI by the Grade 7 mathematics teachers in the Philippines. Out of rigor and iterative analysis of the interview protocols and content analysis of the lesson plans of the respondents, four categories surfaced the DI practices of the respondents; these are to address students' diverse needs, connect and motivate the learners, scaffold, engage, and facilitate mastery of the lesson, and unleash student achievement and creativity. Evidently the respondents practiced DI in planning their instruction according to the students' readiness level and interest which according to the respondents they already know their students. This DI practice is confirmed by George (2005; Dixon, Yssel, McConnel & Hardin (2014) who conveyed that differentiated instruction includes alteration of content, instruction, and assessment to meet the needs of the learners. This is also supported in the study of Firmender, Reis, and Sweeny (2013), where they related the importance of the assessment of the initial skills of the students when providing content and instruction that meet the needs of students at the various levels, i.e. in their study, fast and slow learners.

DI practice that connects and motivates the learners is evidently applied by the respondents in the introduction of the lessons is also true in the study of Pham (2012; Philips & Popovic, 2012, as cited by Blas et al., 2018), where he indicated that applying varying activities, techniques, and teaching strategies helped the learners make sense of meaning and understand the underlying principles of the lesson. While on real-life situations, Stylianides and Stylianides (2007) related that well-designed real-life tasks stimulate students' interest and engagement. This claim is also true in this study.

DI principles practiced by the respondents that led to scaffold, engage, and facilitate mastery of the lesson by the students are the same findings in the study of Phillips and Popovic (2012; Wertheim & Leyser, 2002; Dalton, Proctor, Uccelli, Mo, & Snow (2011), who related that students are more engaged and successful in learning when they are grouped. Adjusting the respondents' teaching strategies to adapt to students' different abilities in the same class concurs with the study of Gersten, Chard, Jayanthi, Baker, Morphy and Flojo (2009). Lastly, Tomlinson, et al. (2003) said that a teacher who considers groups based on students' learning preferences makes students learn more.

An exceptional practice of the Grade 7 mathematics teachers as they implemented DI was their support for their students throughout the instruction. This teaching strategy is affirmed by the study of Konstantinou-Katzi, Tsolaki, Meletiou-Mavrotheris and Koutselini (2013), whereby a teacher would move around to help students as needed, and ensure that all students work at their own pace, in effect the students can develop a plan and be confident to finish their task.

In terms of learning materials and environment, it is common to the respondents to have instructional materials such as visual aids and learning materials such as worksheets for the performance task in order to facilitate learning. This is true in the study of Rubenstein, Gilson, Bruce-Davis, and Gubbins (2015). The performance tasks are sometimes written in an illustration board or type written in a bond paper, especially during the group work activity. There are respondents that provide learning activities according to students' level and interest. Manning, Stanford, and Reeves (2010), found out that reorganization and more advanced or complex abstractions and materials can challenge advanced learners.

Lastly, the utilization of gadgets or technology in students' learning activities as observed mostly in private schools was supported by the view of Scigliano and Hipsky (2010), who posited that technology is a new venue to tailor the learning of the students according to their interests, at the same time, this provides students the opportunities to express themselves in various forms.

Student's product that facilitates mastery of the lesson, and unleashes achievement and creativity is one of the categories that surfaced in this study. This finding is supported by the study of Ellis et al. (2008 cited by Manning, Stanford, & Reeves, 2010), which related that when they were allowed to have choices in expressing their learnings in different forms they were likely to produce outputs that were related and beneficial to their own needs (Nel, Kempen, & Ruscheinski, 2011).

## 6. Conclusion

The principles of DI as practiced by the Grade 7 mathematics teachers characterizes the teaching of mathematics in the K-12 curriculum program which enforced the teachers to differentiate instruction so that students will manifest their understanding, and on the other hand, students can have an option to express their understanding in their own way. The respondents practiced the principles of DI in their mathematics classes that address students' diverse learning needs, connect and motivate the learners, scaffold, engage, and facilitate mastery of the lesson, and unleashes achievement and creativity.

Categorically, respondents practiced DI across instruction from the lesson plan, introduction of the lesson, learning activities, and performance tasks but its implementation is considered limited since the concept of DI differs from other teaching approaches, not just modification of instruction according to content, process, product, and environment to accommodate students' readiness, interest, and profile; but, students have the options to choose which of the learning tasks she/he can be more interested and engaged so that she/he can reach the required standard before the given period of time; hence, teachers need to provide a variety of anchor activities that help students reach the learning goals at a given period of time and at the same time access the other anchor activities anytime whenever they shall have finished ahead of others (Tomlinson & Imbeau, 2010).

Despite the significant findings of this study, there is still a remarkable gap between the DI practice of the respondents and the DI described by Maker and Tomlinson. The findings can be attributed to the classroom set up in the Philippines, since both private and public school still utilize the conventional type of classroom, where there are no learning corners and centers to accommodate the diverse needs of students and the diversity of students' potentials and capacity. Another factor that hinders the full implementation of DI is the class size, where the average classroom size is about 40 students and the design of the classrooms is not appropriate to meet the diverse needs of students.

Hence, this study concludes that DI as practiced by the Filipino mathematics teachers is still "the road less taken."

In this reason, recommendation such as an intensive Teacher Training Program on DI for both teachers and would-be-teachers. This paper challenges other researchers to undertake a parallel study, an empirical research which shall focus on the extent of implementation of differentiated instruction as perceived by the students in their mathematics classes.

Lastly, this study achieved the purpose to provide the evidence of practice of DI principles by the Grade 7 mathematics teachers in the Philippines.

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