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**RESEARCH ARTICLE**

## Differentiated Instruction as Strategy in Improving Reading Comprehension

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### ABSTRACT

Reading and understanding what was read are integral parts in the life of every individual and are indispensable in the circle of educational system. However, this vital skill is what most students lack interest of. As a result, it affects their understanding in the other areas of their education endeavor. To address the problem, Robert Glaser proposed a strategy, the so called Individually Prescribed Instruction [IPI], which later on was known as Differentiated Instruction. It showcases a variety of classroom practices that accommodate differences in students' learning styles, interests, prior knowledge, socialization needs, and comfort zones. This study, therefore, aims to determine the effectiveness of differentiated instruction strategy in improving reading comprehension among students in Sta. Rosa National High School Junior High School. The study utilized a quasi-experimental method which the 50 Grade 7 English research subjects of the study were divided into two groups, namely control and experimental. Strategies employed in these groups were different. The traditional method was practiced in the control group, while the differentiated instruction strategy was implemented in the experimental group. For data gathering, a Phil-IRI adapted test questionnaire was used as the main instrument. Another test questionnaire from Phil-IRI was used as a springboard in the implementation of strategies for both groups. Statistical treatments used for data analysis were frequency count, percentages, t-Test for Correlational Samples for Means, and t-Test for Two Independent Samples. Findings revealed that in measuring subjects' reading comprehension skills, there was a significant difference between the posttest performances of the groups. The research subjects under experimental group performed higher than the control group. Based on the findings, the study concludes that Differentiated Instruction is an effective strategy in improving reading comprehension skills.

### KEYWORDS

Differentiated instruction, improving reading comprehension skills, teaching reading, Grade 7 English students, quasi-experimental method.

### ARTICLE INFORMATION

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### 1. Introduction

One of the most fundamental reading abilities is comprehension. Students will not be able to grasp the content they are reading if they do not have adequate reading comprehension, whether it is in Science, Math, or any other topic (Ocampo, 2018). Reading, according to Berninger et al. (2014), is the understanding of printed or written symbols as well as a set of connected abilities required to interpret meaning accumulated via the reader's prior experience. Reading literacy, according to the Programme for International Student Assessment [PISA] (2018), is described as the ability to grasp, utilize, analyze, think on, and interact with texts in order to attain one's goals, improve one's knowledge and capabilities, and function in society.

Reading, according to the Philippine Informal Reading Test Handbook (2018), is a complex process that encompasses phonemic awareness, phonics, reading fluency, and reading comprehension. Furthermore, it is the dynamic interaction between the readers' previous knowledge, the information indicated by the text being read, and the context of the reading situation that allows meaning to be constructed. Reading comprehension focuses on the level of understanding a material, whereas reading focuses on the process. This comprehension is the result of the interaction between the written words and how they trigger information outside of the text.

In a recent survey of 79 countries conducted by the Organization for Economic Cooperation and Development (OECD) through the 2018 Programme for International Student Assessment (PISA), 77 percent of students achieved at least Level 2 proficiency in reading on average across OECD countries. Level 2 readers can recognize the main theme in a somewhat long piece of material. However, it is sad to note that Philippines ranked lowest in reading comprehension among the 79 countries surveyed. Results showed that one in four students is unable to complete even the most basic reading tasks (CNN Philippine Staff, 2019).

The Department of Education's (DepEd) Basic Education Curriculum aspires to develop functionally literate graduates who possess the required and expected abilities for the twenty-first century. As a result, both public and private organizations have established reading programs in all school divisions to encourage students to acquire excellent reading habits. The ECARP (Every Child a Reader Program) and DEAR (Drop Everything and Read) were founded with the tagline "Reading Abilities, Key to Learning," and were aimed to provide students with strategic reading and writing skills (Ocampo, 2018).

Despite the government's efforts and school initiatives that support the DepEd's objective, the reading problem continues to develop. According to the results of a recent pre-test taken by public elementary school teachers in Bicol using the Philippine Informal Reading Inventory (Phil-IRI), the region's 70, 000 pupils are nonreaders. The problem in Bicol, according to Department of Education Secretary Leonor Briones, is not literacy but reading comprehension (Salaverria & Adonis, 2020).

From a local standpoint, the researcher has noticed that teachers in Sta. Rosa National High School, the researcher's school, have been teaching reading comprehension using the traditional method. They distribute reading tasks in the hopes that students would finish them, without taking into account the students' reading comprehension level or learning profile. The strategy does not appear to provide students with an opportunity to improve their reading comprehension skills. If these problems are not addressed and no appropriate intervention is provided, students may have trouble reading, which may impede learning of other abilities, potentially leading to failure. As a result, a tailored education technique will be used in order to encourage students to read. Differentiated instruction aims to create interesting tasks that challenge and enrich each student's learning. Content, procedure, and product are used to guide and assess instructional activities.

In this premise comes the interest of the researcher to conduct a study on the use of differentiated instruction in improving the reading comprehension of the students in Sta. Rosa National High School S.Y. 2020-2021 as the basis of a proposed action plan. The researcher chose Grade 7 students for the easy conduct of the study since she is teaching English 7 subject to them and that Phil-IRI of the Department of Education, which served as the main instrument of the study, is only administered up until Grade 7 learners. The study would center on the differentiation of the content, process and the product to set the parameter of the study.

## **2. Framework**

This study is anchored on different learning theories highlighting the use of differentiated instruction strategy towards accomplishing assigned tasks. The main theory is founded by Lev Vygotsky called the Zone of Proximal Development. Two other theories, namely Jerome Bruner's Constructivist Theory and Deci and Ryan's Self Determination Theory are the supporting theories of the study.

Vygotsky (1978) defined ZPD as the difference between one's actual developmental level as measured by independent issue solving and one's potential developmental level as determined by problem solving under adult supervision or in collaboration with more capable peers. Although the child's zone or region of sensitivity to learning is originally defined by the child's existing knowledge or competence in an area of intellectual growth, with sufficient learning assistance, the child's degree of competence in this area changes, and the child's ZPD changes as well.

Working within a kid's ZPD, with the help of an adult or more experienced peer, helps the child to participate in the environment in more sophisticated and competent ways, according to Vygotsky. In other words, a kid can engage in more complex cognitive processes in social interaction aimed toward the child's ZPD than the child can do alone. A more experienced partner can assist the learner in a variety of ways, including breaking down the activity into component parts to make it more understandable and accessible, modeling new problem-solving strategies, encouraging and supporting the learner's participation in the more complex components, and performing the more difficult task components so the learner can focus on other aspects. An adult, for example, may maintain track of what has been done so far in the problem or in connection to the goal, allowing the child to focus on the next urgent action step (Vygotsky, 1978).

Learning should be linked to a child's developmental stage, according to the Zone of Proximal Development (ZPD) theory. It's critical to distinguish between a child's actual and potential levels in order to properly comprehend the relationship between the two. The actual level refers to the tasks that a child can complete or demonstrate without the assistance of an adult, whereas the potential level refers to the tasks that a child can complete with the assistance of an adult (McLeod, 2018). When child demands assistance at a potential level, the concept of a more educated other is best represented and conveyed. The more knowledgeable other (MKO) is someone who has a higher capability and level of knowledge than the learner when it comes to tasks, concepts, or procedures. The MKO serves as a learning assistance system for children (McLeod, 2014). "The zone is a research area in which the learner is cognitively capable but requires aid and social touch to fully develop," Briner explained (Vygotsky, 1980).

Learning and development, according to Vygotsky, are best understood when the focus is on examining how one learns when engaged in shared tasks rather than measuring what the learner can accomplish independently. Learners can build abilities and tactics that will eventually apply in their settings by engaging in productive interactions and aligning instructions to the ZPD. It instructs the student on how to complete the task and organize the newly acquired knowledge in their current mental schemas, which he or she will later utilize to execute more complex and advanced tasks independently. Furthermore, it emphasizes that in order to construct effective learning experiences, instructional decisions must be linked to the types and quality of interactions. As a result, ZPD should be defined as "any situation in which some activity leads persons beyond their existing level of functioning" (Psychology Notes Headquarters, 2018).

The ZPD is optimum, according to Sivan (1986), since tasks are calibrated to the learner's level, and proper support and scaffolding ensure that tasks are performed effectively. Other people's help also aids the learner in learning how to work on challenging tasks while simultaneously controlling or managing fear and irritation. Working within the ZPD is also intrinsically motivating since it entails the transfer of responsibility for learning from the teacher or another more capable person to the learner. This transfer of control motivates students because it recognizes their mastery of the activity and, as a result, their growing efficacy.

It is also possible to think of the ZPD as a relational or emotive zone (Goldstein, 1999). The ZPD, according to Goldstein, is a socially mediated place that is generated via sensitivity and trusting interactions. The interactions between students and their teacher in a classroom generate this space when they engage in supportive activities that increase learner confidence and pleasant emotions. The emotional quality and tone of interaction in the ZPD, as well as the sense of compassion engendered, can have significant ramifications for students' engagement in learning and readiness to take on new challenges.

Valsiner (1997) expanded the ZPD into a zone system that emphasizes not only the necessity of supported learning, but also the elements that can help or hinder learning. ZPD's scaffolding technique provides a lot of possibilities for molding students' independence and extending their learning on their own. The student's role shifts from passive to active receiver of knowledge as a result of this concept. The first supporting theory, Constructivist Theory by Jerome Bruner, is the underlying theory that makes this possible and achievable.

Bruner (1961) posits that learners generate their own knowledge by employing a coding system to organize and categorize information. Bruner believed that discovering a coding system rather than being informed by a teacher is the most efficient approach to do so. Students develop their own knowledge for themselves, according to constructivist theory. He believes that the objective of education is to assist a child's thinking and problem-solving skills, which may subsequently be used to a variety of situations. The teacher's role should be to aid the learning process rather than to teach facts by rote learning. This means that a skilled teacher will plan classes to help pupils figure out how to connect disparate pieces of information. To accomplish this, a teacher must provide students with the information they require while also arranging for them. The usage of a spiral curriculum can help with the discovery learning process.

According to Bruner (1961), constructivist theory's theoretical underpinning is that learning is an active process in which learners construct new ideas or concepts based on their present or previous knowledge. The learner uses a cognitive framework to select and change information, build hypotheses, and make judgments. Cognitive structure (e.g., schema, mental models) gives meaning and organization to experiences and helps a person to "move beyond the information provided." The experiences and settings that make a learner willing and able to learn (readiness) must be addressed throughout instruction (Culatta & Kearsely, 2020).

Arends (1998) elaborates on constructivist principles, stating that constructivism believes in the learner's personal production of meaning through experience, and that meaning is modified by the interaction of past knowledge and new events.

Constructivist theory's basic principle is that knowledge is created rather than innate or passively acquired. Its core premise is that human learning is built, with learners building new knowledge on top of past knowledge. This prior information has an impact on the new or modified knowledge that an individual will develop as a result of fresh learning experiences (Phillips, 1995).

The second idea is that learning is a process that is active rather than inert. The learner is viewed as an "empty vessel" to be filled with knowledge in the passive perspective of teaching, whereas constructivism says that learners construct meaning only via active engagement with the world (such as experiments or real-world problem solving). Understanding, on the other hand, cannot be passively received because it requires generating meaningful connections between existing information, new knowledge, and the learning processes.

Knowledge is socially constructed, according to the third idea. Learning is a social activity; rather than being an abstract concept, it is something we do together, in connection with one another (Dewey, 1938). As a result, all teaching and learning entails the sharing and negotiation of socially constructed knowledge. However, if the learner is not self-motivated to participate, the process will fail (Copple & Bredekamp, 2009). Deci and Ryan's Self-determination theory, the study's second supporting theory, best describe and support this viewpoint.

Self-determination Theory (SDT) focuses on intrinsic motivation as a larger framework for the study of human motivation, personality, and functioning (Ryan & Deci, 2000). The theory proposes three basic psychological human needs for facilitating optimal functioning for constructive social growth and personal well-being: (a) autonomy, the need to feel free in determining one's behavior, (b) competence, the need to feel efficacious or skilled in achieving one's goals, and (c) relatedness, the need to feel firmly connected to others.

Recognition of perceptions and possibilities for self-direction has been demonstrated to increase intrinsic motivation by giving people a stronger sense of autonomy. Furthermore, studies have demonstrated that autonomy-supportive teachers (as opposed to authoritarian teachers) stimulate greater inner desire, curiosity, and excitement for a task in their students. SDT also fostered a sense of belonging and security. According to studies, ignoring a child's work reduces intrinsic drive. Despite the fact that intrinsically driven behaviors do not require proximal support and can still be isolated, the stable relationship attracts more inner motivation (Ryan & Deci, 2000).

According to Johnson and Johnson (2003), motivation is the degree to which people put out effort to achieve goals that are meaningful and worthwhile to them. It might differ not only in strength but also in orientation, according to Park (2018), which relates to the many causes for an individual's propensity to accomplish something. It also has two types of driving forces: intrinsic and external (Mata et al., 2009). Intrinsic motivation is an inclination to engage in an activity for the sake of one's own inner pleasure, and it frequently leads to high levels of engagement and performance, which is the central idea of self-determination theory (Ryan & Deci, 2000). If someone is intrinsically motivated, he can meet all of the basic human demands of autonomy, competence, and relatedness (Seifert & Sutton, 2012).

Of fact, for most teachers and students, "pure" self-determination is the goal, but the reality is generally rather different. Teachers in most classrooms cannot be expected to address all of their students' basic requirements at all times for a variety of reasons. One factor is the enormous quantity of students, which makes it hard to provide faultless service to each and every one of them at all times. Another issue is that teachers are responsible for a curriculum, which can necessitate setting expectations for students' activities, which can conflict with their autonomy or make them feel (temporarily) incompetent. Another factor is that students'

personal backgrounds, which range from divorce to poverty, may produce needs in some students that teachers are unable to meet (Koestner & Losier, 2004).

From the perspective of students, the consequence is frequently just a partial sense of self-determination, and hence a combination of intrinsic and extrinsic motives. Self-determination theory acknowledges this reality by proposing that motivation's "intrinsicness" is a question of degree, ranging from extremely extrinsic through diverse combinations of intrinsic and extrinsic to highly intrinsic (Koestner & Losier, 2004).

Grounded by these different theories and their outstanding principles, Robert Glaser suggested a new technique, Individually Prescribed Instruction, which eventually became known as Differentiated Instruction, based on these various ideas and their highly outstanding principles. Differentiated Instruction is a broad word that encompasses a wide range of classroom activities that cater to variances in students' learning styles, interests, prior knowledge, socialization needs, and comfort zones. It is a balance of content and competencies expected on mandatory examinations, as well as many pedagogical alternatives, to ensure long-term learning. The standard specifies what students should know and be able to do (Benjamin, 2013).

Differentiating instruction for reading is comparable to preparing for a sailing excursion. The captain determines each crew member's skill and talent so that assignments in their areas of expertise can be made to ensure the journey's success. Similarly, all readers have distinct abilities and capabilities, as well as the right to learn as much as they can. Learning experiences are personalized during the reading journey in order for this to happen (Chapman & King, 2009).

Differentiated instruction, according to Pham (2011), allows students to absorb knowledge and make sense of ideas in the most efficient and preferred manner possible. Differentiated instruction's main goal is to determine students' readiness levels so that education may be adjusted for academic achievement. Teachers may choose direct teaching for low-achieving children, whereas self-directed or autonomous learning is more suited for high-achieving kids. Student readiness, according to Linde (2019), is described as a student's capacity to do a task depending on their present level of understanding, such as reading comprehension level. The term "readiness" relates to the learning brain, as well as the learners' knowledge and abilities in a certain area of study (Sebihi, 2016; Tomlinson, 2017). It has to deal with past learning, experiences, and attitudes regarding education and subjects among pupils. In the classroom, readiness can change dramatically over time depending on the conditions and the topic. According to Tomlinson (2014), if preparedness differs by classroom, so should the difficulty of the information delivered.

Differentiated instruction, according to Tomlinson (1999), involves changing the content, procedure, and product of education. Students should be challenged but not overwhelmed by the material; otherwise, they will fall behind and get disheartened. Modifying the material is beneficial if it is in line with one's developmental growth and within his or her developmental range. In order to achieve the intended learning results, content modification should also stress crucial elements of training. One of the ideas that instructors should keep in mind for effective differentiation is to focus on the core of education. Learners are more likely to forget than recall every piece of knowledge, thus deciding what sort of material to offer can save time and effort while still achieving effective results.

If differentiated instruction can result in predicted improvements in students' learning, it is effective. It is crucial to identify students' previous knowledge, such as readiness level and learning profile, since it allows teachers to assess what sorts of interventions are required and how much help should be provided to children. Addressing students' educational levels in a course environment is certainly a desirable teaching technique. It is a mix of conceptual orientation and practical application that allows students to perceive a subject matter in a holistic rather than fragmented manner, as well as acquire a critical knowledge of learning principles used in real-life situations. Identifying students' readiness levels, adapting instruction, incorporating cooperation and autonomy into learning, and combining teaching and practice to improve learning are all examples of effective differentiation. Using key ideas and concepts, it provides students with tools and ways to be self-directed, creative, and contextually sensitive in their search for knowledge (Pham, 2011).

Differentiation can occur at any of the five levels: content, process, product, affect, and learning environment, or all five. The most basic distinction is that different content is delivered to different learners (Rasheed & Wahid, 2018).

The teacher has to adapt the information being taught in order to differentiate the instructional content. The content should be more in-depth than typical education permits, or focused on a similar but separate topic, allowing for a more comprehensive

knowledge of the issue. We can distinguish information in reading by employing reading materials with differing readability levels (Sizemore, 2015).

Differentiating the educational process necessitates changing the teaching technique to make it more relevant for the target learners. The Learning Profile Questionnaire was developed by O'Brien (1985) to determine the learning profiles of students, which are split into three categories: visual, auditory, and kinesthetic. Students learn about the same material, but in a different way, when this strategy is used correctly. According to Powers (2008), using an independent study to differentiate teaching for seventh-grade children who are highly motivated and want to be self-directed in their learning is an effective strategy. This technique may not be applicable in all circumstances, but it served as an example of how process diversification may be used to fit the requirements of learners. We can differentiate instruction in reading by employing tiered activities in which all students work on the same key concepts and abilities, but at various degrees of support, challenge, or complexity, taking into account the students' learning profiles.

When the teacher changed the way students exhibited their comprehension and mastery of the subjects, product differentiation emerged. Alternative assessment procedures that highlight the use of higher-order thinking abilities, such as synthesis and evaluation, were used to differentiate the products. The difficulty level of multiple-choice or true/false tests can also be used to differentiate them. For example, as Tomlinson said, some districts do an intriguing thing, especially in areas with a high number of second language learners: they have a standard version of the test and a plain-English version. It's the same idea, but it's written in a more streamlined manner with fewer words and more white space. Learners must still grasp and be able to work with the same concepts; the format has simply been made more accessible to them (Association of Supervision and Curriculum Development [ASCD], 2011).

Key features of differentiation that effectively responds to learner readiness, interest, and learning profile, according to Tomlinson et al. (2003), include: proactive rather than reactive differentiation of curriculum and instruction; flexible use of small teaching-learning groups in the classroom; and varied materials used by individuals and small groups of students.

Students were kept challenged and interested by using instructional tactics such as integrated modules, student choice, and firsthand experiences. Effective differentiation, according to Linn-Cohen and Hertzog (2007), is directly tied to the classroom and school environment. Teachers' capacity to discriminate was shown to be highly connected to the autonomy and academic freedom found in self-contained classrooms, especially when pupils were homogeneously classified by ability level, according to research.

During the last two decades, several studies focused on differentiated instruction. In a Virginia school, McCullough (2011) focused on the impact of differentiation in enhancing the vocabulary and reading comprehension of struggling second-grade pupils. The researcher gathered and examined the results of 78 students from the pretest and posttest of two types of tests. The study's findings showed that using tailored teaching helped pupils improve their vocabulary and reading comprehension.

Smith (2011), for example, conducted a qualitative research to uncover four outstanding competent instructors' perceptions, understandings, interpretations, and practical differentiation tactics. To begin with, the participants claimed that formal training had little impact on how they used the method; nevertheless, the expert teachers intentionally used the relevant tactics. They also stated that instructors who take risks and educate via "trial and error" will be successful in identifying and developing new lines to meet the requirements of their students.

Haghighi (2012) organized a research study to determine the feasibility of the technique at different proficiency levels in a recent study aimed at actually applying differentiated teaching in the Iranian EFL environment. Four control and four experimental groups in the 4th, 5th, 7th, and 11th grades participated in this study, which took place in eight courses at one language institute. Flexible grouping, tiered instruction, tiered assignments, and on-going evaluation were used as differentiation strategies by teachers in the experimental group. Based on the students' main intelligences, academic strengths and limitations, and learning profiles, they differentiated the content, method, and product. In grades four, five, and seven (i.e., elementary and intermediate level students), statistical procedures of T-test revealed a significant positive difference between the students' reading comprehension in the pretest and posttest; however, no meaningful difference was found in the achievement of advanced level students in grade 11.

After all, as has been demonstrated, several quantitative and qualitative research have been undertaken to determine the usefulness of varied teaching in promoting student reading comprehension. However, there is a gap in the present literature when it comes to investigating the efficiency of differentiated instruction in diverse educational contexts. As a result, the researchers were inspired to undertake the current study in order to investigate if there is a difference in reading comprehension performance between Iranian male and female students when differentiation is used.

Aliakbari and Haghighi (2014) conducted another research to see if varied teaching may increase EFL learners' reading comprehension at the Alpha private language institute in Ilam, Iran. In compared to traditional teaching, the study found that applying individualized instruction is significantly helpful in boosting students' reading comprehension. It was shown that pupils who received differentiation outperformed classmates who were taught in a typical classroom setting.

Yousefi and Bonyadi (2016) also looked at the impact of customized learning on reading comprehension success in two Iranian language learners. Following a random sample distribution to achieve group homogeneity, the experimental group had 30 responses and the control group had the same number. The experimental group acquired changed learning techniques over the course of twelve sessions, whereas the control group studied in the typical manner. The researchers used pre-test/post-test reading comprehension as the primary data gathering tool. The experimental groups' mean scores beat the control groups' mean scores, according to the findings. Differentiated instruction improved pupils' reading comprehension scores, according to the findings.

In a quasi-experimental approach, Jefferson, Grant, and Sander (2017) investigated the impact of separated teaching and intervention on reading fluency and comprehension. The sample consisted of 83 male and female grade 3 pupils who were separated into two research groups. The data was collected using a pretest/post-test technique, with the experimental group receiving differentiated reading comprehension materials over a five-month period. The control group, on the other hand, simply got the basic curriculum. When compared to individuals in the control group, learners who trained utilizing segregated materials through changed teaching methodologies had higher mean scores.

Altin and Saracaloglu (2018) looked at how differentiated instruction combined with culturally relevant educational resources affected English reading comprehension, vocabulary, and students' views about English classes. The study's two groups were randomly allocated to two levels of grade 7 students. The researchers employed a quasi-experimental approach to get the investigation's results, which included a pre/post English reading comprehension accomplishment exam. Treatment instructors instructed the experimental group on reading comprehension texts using educational resources and varied learning strategies over the course of six weeks. The comparison group, on the other hand, spent the same amount of time studying traditional reading comprehension teaching. Differentiated instruction improved students' reading comprehension and their attitudes toward English learning, according to the findings.

Davidson (2018) conducted another research to demonstrate the usefulness of tailored teaching in improving students' reading comprehension. A total of 128 third-graders were included in the study. The experimental group consisted of 64 students who were taught using modified teaching, whereas the comparison group consisted of 64 students who were taught using standard methods. The results of this quasi-experimental investigation took a year to disclose. Her findings revealed that tailored instruction had a considerable favorable impact on students' reading comprehension.

Forster, Kawohl, and Souvignier (2018) investigated at how long-term varied instruction affected reading comprehension and fluency. In both sets of research, twenty-eight third-grade pupils in Germany took part. The treatment group's instruction was changed to improve reading comprehension and fluency, whereas the control group's instruction remained same. The results revealed that the treatment group significantly outperformed the control group in terms of reading comprehension and fluency. The studies also revealed that the pupils who scored below average benefited the most.

A research by Magableh and Abdullah (2019) studied the influence of tailored instruction on reading comprehension success in relation to the motivation that has demonstrated towards reading. The study enlisted the participation of 55 grade 7 pupils from two sections at two separate schools. In the domains of content, process, and product, the experimental group used the tactics of flexible grouping, tiered assignments, and tiered instructions. Following the experiment, a semi-structured interview was undertaken. Differentiated instruction was shown to be helpful in enhancing reading comprehension proficiency and lowering classroom diversity, according to the findings.

Magableh and Abdullah (2020), from two separate randomly selected schools in Irbid, Jordan, did another study to determine the efficiency of varied teaching on students' English achievement. According to the findings of their study, there was a statistically significant difference in favor of the experimental group over the control group.

Ocampo (2018) found a significant change between the pretest and posttest of the respondents in a study that looked at the impact of differentiated teaching in 150 Grade 11 senior high school students' reading comprehension levels. Despite the fact that the students' reading comprehension levels did not change as a result of some factors (e.g., restrictions in differentiating the content of the lesson), the results showed that Differentiated Instruction was more effective than the Conventional Approach in improving students' reading comprehension.

Suson et al. (2020) did another study in the Philippines on the use of differentiated instruction for basic reading comprehension. The research was carried out by the Department of Education in the Philippines' province of Cebu. To determine the population samples in this investigation, basic random sampling was used. Three hundred fifty-two students were chosen at random as the study's samples. The current study's larger consequence is that when confronted with numerous intelligences, learners exhibit a variety of behaviors. More specifically, the findings revealed that there were no significant disparities between the kids' multiple intelligences and reading abilities. Intrapersonal and sequencing events, on the other hand, are determined to be significant. The data allows for a deeper analysis into how one competence differs from the others. The findings showed that pupils who received tailored teaching improved their reading comprehension. It was also shown that kids with various learning styles do better academically when teaching tactics are tailored to their preferences.

Given the ideas and studies that support the success of Differentiated Instruction, the researcher is eager to conduct a study to see if the method may improve reading comprehension in her localization.

**3. Objectives of the Study**

This study determined the effectiveness of differentiated instruction in improving reading comprehension among Grade 7 English students in Sta. Rosa National High School. Through the lens of the control and experimental group's pre-test and post-test scores, whether there is a significant difference between their pre and post-test scores and, finally, if a significant difference is observed between their post-test scores.

**4. Methodology**

**4.1 Research Design**

A quasi-experimental study design uses a descriptive - and evaluative method. This was conducted at Sta. Rosa National Junior High School, located in Sta. Rosa, Lapu-Lapu City. Fifty (50) Grade 7 English subject students, who belong to Grade 7-A class, participated in the study.

**Table 1**  
***Pairing of the Research Subjects***

Control Group				Experimental Group			
Subjects	Age	Gender	First Quarter Grade in Grade 7 English	Subjects	Age	Gender	First Quarter Grade in Grade 7 English
A	13	F	88	AA	14	M	86
B	13	M	90	BB	13	F	84
C	13	F	84	CC	13	M	84
D	14	F	85	DD	13	F	84
E	13	F	83	EE	13	F	90
F	13	F	83	FF	13	M	83
G	13	F	82	GG	13	F	82
H	14	F	82	HH	13	F	82
I	14	F	82	II	13	M	81
J	13	F	83	JJ	13	M	81



K	13	F	82	KK	14	M	81
L	14	F	90	LL	13	F	81
M	13	M	81	MM	13	F	90
N	13	F	89	NN	13	F	90
O	14	F	85	OO	14	F	90
P	15	F	90	PP	13	F	84
Q	13	M	90	QQ	14	F	90
R	14	F	89	RR	13	F	89
S	12	F	88	SS	13	F	89
T	13	F	89	TT	14	F	89
U	12	M	88	UU	14	F	89
V	14	F	87	VV	14	F	88
W	13	F	87	WW	13	F	87
X	14	M	86	XX	13	F	84
Y	13	M	86	YY	13	F	86
Total/ Ave.	333/ 13.32	M=6 F=19	2, 149/ 85.96	Total	332/ 13.28	M=6 F=19	2, 144 / 85.76

The Philippine-Informal Reading Inventory (IRA) materials were given to the subjects to assess the level of reading comprehension of the students. The examination consisted of a 20-item multiple choice exam that had to be completed in 30 minutes with qualitative interpretation following score ranges: 14-20 Very good, 8-13 Good, and 0-7 Poor.

#### 4.2 Research Procedures

**Gathering of Data.** The researcher gained permission from the principal of Sta. Rosa National High School's to perform the study (see Appendix A for the transmittal letter) and the consent of the parents (see Appendix F for the consent letter). The study was done by the researcher herself, as she is in charge of English 7, and the research subjects were under her supervision.

Prior to taking data, the researcher provided a brief background on reading and reading comprehension at the first encounter. The researcher separated the class into control and experimental groups before the period finished, depending on their age, gender, and first quarter grade in English 7.

The researcher used the second meeting to administer a pretest to both the control and experimental groups to establish the subjects' initial reading comprehension levels. For roughly 30 minutes during the pretest, respondents read and answered Phil-IRI adapted reading comprehension questions (Please see Appendix C-1 for the Research Instrument). The researcher obtained the findings of the two groups' pretests, which were then analyzed by a certified statistician.

The control and experimental groups were taught using various strategies shortly after the pretest. During the application of the technique in one group, research subjects from the other group were assigned to complete activities related to the graded passages (see Appendix C-2 for the copy of the passage).

The control group followed the traditional strategy of acquiring reading comprehension from the third to fifth meetings. They read graded passages and responded to reading comprehension questions (see Appendix C-2 Intervention Material), whereas the experimental group used the Differentiated Instruction strategy of Tomlinson (2005) to complete the intervention. During this session, the researcher discussed the concept of differentiated education as well as the steps involved in putting it into practice. The following were the intervention activities:

##### 1. Differentiation

The pupils were first divided into groups depending on their reading comprehension level (needs) as determined by the pretest results. Frustration, instructional, and independent were the three categories.

##### 2. Differentiation through Content, Process, Product

The researcher differentiated the reading content after determining the students' needs. The students were provided different reading materials at different readability levels during the process of distinguishing the content, based on their reading

comprehension level, which was assessed in the pretest (see Appendix C-2 for the Intervention Material). The recommendations from Phil-IRI for distinguishing the content and determining which text the students will read first are as follows:

- a. If the child's raw score in the pretest is 0-7 (Frustration), he/she must be given a passage that is 3 grade levels (Grade 4) below his current level.
- b. If the child's raw score in the pretest is 8-13 (Instructional), he/she must be given a passage that is 2 grade levels (Grade 5) below his current level.
- c. If the child's raw score in the pretest is 14-20 (Independent), he/she must be given a passage on his level (Grade 7). The students proceeded to the next grade level after getting the passing score, which is 75% of the total score, in his/her assigned graded passage.

In differentiating the process, the instructional methodology was modified to become more suited for the target learners by adopting tiered activities in which all learners engage with the same essential understandings and abilities, but at varying degrees of support, challenge, and complexity. For example, in the frustration group, the researcher employed scaffold reading resources designed for Grade 4 students. With reading materials for Grade 5 students, the instructional group got less monitoring. The independent group employed an individual study plan with more difficult reading material aimed at Grade 7 students.

When a teacher changes the way students demonstrate comprehension and mastery of subjects, this is called product differentiation. The difficulty level of multiple-choice or true/false tests can also be used to differentiate them. The questions for the Frustration group were easier to comprehend and were translated into Cebuano. The instructional group's examination had a simpler vocabulary and a moderate degree of difficulty, but the independent group's assessment was more difficult and complicated. The questions were delivered in plain English at both the instructional and independent levels (Please see Appendix C-2 for the Intervention material).

### 3. Differentiation according to students' readiness level and learning profile

The students answered a 20-item test in their pretest from Phil-IRI in order to identify their Readiness Level. The researcher divided the experimental group into three levels namely: frustration, instructional, and independent. Each level answered different reading materials.

In order to identify the learning profile, the students answered the profiling questions by O'Brien (1985) (see Appendix E for the profiling instrument). The researcher had the flexible grouping of the students according to their learning profile (Visual, Auditory, Kinesthetic) while taking into consideration their readiness (Level of Reading Comprehension). For the visual learners, they were given hard/soft copy of the reading material. Auditory learners also received a copy of the reading materials with audio. Kinesthetic learners were given the opportunity to move while reading and answering the graded passage.

### 4. Instructional Strategy

The researcher used the following strategy in the conduct of the intervention:

- a. **Scaffolded Reading.** It is a versatile practice that may be used before, during, or after reading to give students with support in understanding, learning, and enjoying literature. Scaffolding and student learning demonstrate its significance. Teachers equip students with the tools they need to make reading enjoyable and worthwhile. This will be communicated to the disgruntled readers.
- b. **Tiering.** This is an educational method that allows pupils to work their way up to grade-level expectations. Tiered assignments are small groups of students who are given parallel tasks dependent on their readiness to perform them. This will be used to identify students who are experiencing difficulties.
- c. **Independent studies.** It is an approach that encourages students to study independently. The research subjects at the Independent Level will benefit from this technique.

### 5. Giving of the intervention material

The experimental group read the graded passages utilizing the Differentiated Instruction Strategy on the third to fifth meetings, whereas the control group read the graded passages using the traditional method (see Appendix C-2 for the copy of the passage).

The main features of differentiated instruction introduced by Tomlinson et al. (2003) were followed throughout the procedure, including proactive instruction, flexible use of small teaching-learning groups, a variety of materials used by individuals and small groups of students, variable pacing as a means of addressing learner needs, and knowledge centered and learner centered instruction.

The posttest was given to both groups on the sixth meeting, after all of the processes had been completed. The same Phil-IRI adapted instrument that was used in the pretest was used again. The same statistician obtained and analyzed the posttest results of both groups. This is done to determine how far the students have progressed.

## 5. Results and Discussion

This chapter deals with the presentation, analysis, and interpretation of data gathered from the pre-test and post-test scores and the significant difference between the two groups of respondents.

### 5.1 Pre-test Scores

This section presents the summary, analysis, and interpretation of the pre-test scores of the control and experimental groups. Table 2 shows the results.

**Table 2**  
**Pretest Performances of the Control and Experimental Groups**

	Control		Experimental	
	F	%	F	%
Poor (1-5)	1	4.0	1	4.0
Fair (6-10)	15	60.0	20	80.0
Good (11-15)	8	32.0	4	16.0
Very Good (16-20)	1	4.0	0	0.0
<b>TOTAL</b>	<b>25</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

As shown in Table 2, when comparing and contrasting the pretest performances of both control and experimental groups, the following were observed: sixty percent of the students in the control group showed a *fair* performance in the pretest while the thirty-two percent (32 %) were *good*, four percent (4%) were *very good* and the other four percent (4%) performed *poorly*, and on the other hand, there are eighty percent (80 %) of students in the experimental who performed *fairly* in the pretest and sixteen percent (16 %) were categorized as *good* while only four percent (4%) fell under the *poor* category.

The consistency of the table's results added to the evidence that the two groups were legitimate samples who were both struggling with their performance. This also led to the finding that the research participants lacked reading comprehension abilities. As a result, it recognizes the need of using the differentiated instruction strategy as an intervention to help them enhance their reading comprehension abilities. This method allows pupils to absorb knowledge and make sense of it in the most efficient and preferred manner possible. The goal of differentiated education is to identify students' readiness levels so that instruction may be tailored to their needs (Pham, 2011).

### 5.2 Post-test Scores

This section presents the summary, analysis, and interpretation of the post-test scores of the control and experimental groups. Table 3 shows the results.

**Table 3**  
**Posttest Performances of the Control and Experimental Groups**

Posttest	Control		Experimental	
	F	%	F	%
Poor (1-5)	0	0.0	0	0.0
Fair (6-10)	12	48.0	3	12.0
Good (11-15)	13	52.0	16	64.0
Very Good (16-20)	0	0.0	6	24.0
<b>TOTAL</b>	<b>25</b>	<b>100.0</b>	<b>25</b>	<b>100.0</b>

As shown in Table 3, both groups improved in their posttest performances. Most of the subjects in the control group, which garnered fifty-two percent (52%), fell under *good* category, made a slight increase in their performance insignificantly. However, being compared to the experimental group makes a major comparison. Twenty-four percent of subjects under the experimental group were categorized as *very good* while most of the subjects which garnered sixty-four percent (64%) fell under *good* category. It justifies that most of the subjects' scores under this group have increased significantly.

The result also highlight that there were more subjects from the control group who performed *fairly* which has forty-eight percent (48%) compared to the experimental group which only has twelve percent (12%).

The greatest gain in outcomes among the experimental group individuals, as shown in table 4, strongly suggests that the differentiated instruction strategy is beneficial in enhancing reading comprehension. The idea of scaffolding is best supported by Vygotsky's Zone of Proximal Development theory, according to the approach. The conclusion may be derived that the potential level of less competent students was developed with the help of a More Knowing Person (MKO) (McLeod, 2018).

**5.3 Difference Between the Pre-test Scores**

Table 4 shows the findings of the test of differences between the control and experimental groups' pretest performances. This is to see if the method used with a specific group has a significant influence on improving pupils' reading comprehension.

**Table 4**  
***Difference Between the Pretest Performances of the Control and Experimental Groups***

<b>Groups</b>	<b>Pretest</b>	<b>p-value</b>	<b>Interpretation</b>
Control	9.12 ± 2.55	.77	No sig difference
Experimental	8.92 ± 2.31		

As indicated in Table 4, The computed p-value for both groups is 0.77, as shown in Table 5. The null hypothesis is accepted since the p-value is larger than the 0.05 criterion of significance. It means that there is no substantial difference between the control and experimental groups' pretest performance.

From the specified pretest, both groups' study participants produce similar findings or mean scores, as well as similar performances. This confirms that the individuals were evenly distributed based on their age, gender, and English 7 first quarter grade.

Students' scores increased in both the control and experimental groups, according to the findings. It suggests that both the regular teaching strategy and individualized instruction for grade 7 English students are successful.

This finding is backed up by Aliakbari and Haghghi (2014), who claim that differentiated training increases reading comprehension. In compared to traditional teaching, the results of a research conducted among EFL students at the Alpha private language institution in Ilam, Iran, revealed that applying individualized instruction is significantly beneficial in boosting students' reading comprehension. It was shown that pupils who received differentiation outperformed classmates who were taught in a typical classroom setting.

Similarly, McCullough (2011) supports it in his research of the favorable effect on vocabulary and reading comprehension of struggling 2nd grade children' reading performance when differentiated teaching was implemented. Differentiated instruction helped pupils increase their reading comprehension, according to the findings.

**5.4 Difference Between the Pre-test and Post-test Scores**

This section presents the findings of the significance test of the differences between the pretest and posttest performances of the control and experimental groups are shown in Table 5.

**Table 5**  
***Difference Between the Pretest and Posttest Performances of the Control and Experimental Groups***

<b>Groups</b>	<b>Pretest</b>	<b>Posttest</b>	<b>p-value</b>	<b>Interpretation</b>
Control	9.12 ± 2.55	10.0 ± 2.45	.22	No sig diff
Experimental	8.92 ± 2.31	13.56 ± 2.43	<.000	Sig diff

Table 5 shows that there was no significant change in the control group's overall performance throughout the pretest and posttest. Even when the typical strategy of boosting reading comprehension was adopted during the study procedure, the research subjects' scores or reading comprehension did not increase much. According to the data acquired, the lecture-based strategy used in the control group improved performance but did not have a significant influence on improving individuals' reading comprehension abilities. As a result, there is no significant difference in their results between the pretest and posttest.

Subjects in the experimental group, on the other hand, showed a substantial change between their pretest and posttest performance. This indicates that the experimental group's results improved significantly when the differentiated instruction strategy was applied. With this in mind, the experimental group's technique assisted in improving individuals' performance as well as their reading comprehension. In comparison to the old technique, this also demonstrated the effectiveness of the differentiated instruction strategy.

The findings support Pham's (2011) assertion that differentiated instruction allows students to absorb knowledge and make sense of ideas in the most effective and preferred method possible. The goal of differentiated education is to determine students' readiness levels so that instruction may be tailored to ensure academic achievement. For example, teachers may choose direct teaching for low-performing students whereas self-directed or independent learning is more suited for high-performing students.

Suson et al. (2020) found the same thing in their study on the use of differentiated instruction for basic reading comprehension in the Philippines. Students who received differentiated instruction improved their reading comprehension, according to the findings. It was also shown that students with various learning styles do better academically when teaching tactics are tailored to their preferences.

### **5.5 Difference Between the Post-test Scores**

This section tabulated the results of the test of significance of the differences between the posttest performances of the control and experimental groups.

**Table 6**  
***Difference Between the Posttest Performances of the Control and Experimental Groups***

<b>Groups</b>	<b>Posttest</b>	<b>p-value</b>	<b>Interpretation</b>
Control	10.0 ± 2.45	<.000	Sig difference
Experimental	13.56 ± 2.43		

Table 6 shows the outcomes of several ways to enhancing reading comprehension that were used in control and experimental groups. The conventional method was used, as well as differentiated instruction.

The calculated p-value for both groups is <.000, as shown in table 7. The null hypothesis is rejected since the p-value is less than the 0.05 level of significance. This implies that there were substantial variations in performance between the control and experimental groups. Furthermore, based on the average, the experimental group that used a differentiated instruction strategy outperformed the control group.

The data also imply that the experimental group's differentiated training is better and more successful than regular instruction. Students improved their reading comprehension because of the self-determination provided by the method, in which students are genuinely motivated to achieve a set of learning goals. Its success was greatly explained and hereby executed as suggested by Ryan & Deci (2000) explain that intrinsic motivation refers to a desire to engage in an activity for one's inner enjoyment and frequently leads to high levels of engagement and performance, which is the core argument of self-determination theory. If someone is intrinsically driven, he can meet all of the essential human demands of autonomy, competence, and relatedness (Seifert & Sutton, 2012).

Rather of using the same materials for all groups, the diversification of resources utilized by individuals and small groups of students helped them enhance their reading comprehension abilities. For example, the number of research participants in each group grew from 17 in the instructional group, seven in the frustration group, and one in the independent group to 12 in the independent group and 13 in the instructional group. It is also clear that the diversification of the procedure based on the students' learning styles is helpful. Teachers in differentiated classrooms should tailor resources to the individual learning requirements of groups in addition to flexible grouping of pupils (Tomlinson et al., 2003). Based on the findings in Table 7, it was clear that students' full commitment and a variety of resources might lead to greater success.

## **6. Conclusion**

This research is conducted in order to assess how differentiated instruction can help students improve their reading comprehension skills among Grade 7 English students. It examined the posttest scores of the control and experimental groups, investigating if there were any differences in their pretest scores and determining if significant variations existed between the pretest and posttest scores within each group. A noticeable difference was seen in the scores between the control and experimental groups, highlighting how differentiated instructions aid students' learning. Differentiated instruction helped the Grade 7 English students improve their reading comprehension skills. When compared to the minimal effect of the conventional method on the control group, it has a significant impact on the experimental group. The strategy's self-determination attitude, in which students are intrinsically motivated to achieve a set of learning goals, assisted students in improving their reading comprehension. Instead of using the same materials for all groups, the diversification of resources utilized by individuals and small groups of students helped them enhance their reading comprehension abilities.

Students were also encouraged to read when differentiated teaching was used because it provided interesting tasks that challenged and enhanced learning for each student. Content, procedure, and product are used to guide and assess instructional activities. These examples demonstrate the benefits of differentiated education and how to execute it. However, the focus of the research on Grade 7 students may limit the applicability of the results to different subjects or student populations. Also, external factors, such as individual learning styles, prior knowledge about differentiated instructions, and participant motivation could have influenced the outcomes.

Further research is suggested to explore the advantages and benefits of several student reading enhancement strategies, which include the use of differentiated instruction in improving reading skills, differentiated instruction strategy for vocabulary enrichment, differentiated instruction for intrinsic motivation enhancement, and varied reading materials to measure reading comprehension skills.

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