



Learning Behavior towards Modular Instruction, Sex, and Academic Performance in English of Grade 7 Public High School Students

Christiany Joy S. Lazaro^{a*} and Chona G. Mascuñana^a

^a *University of Negros Occidental-Recoletos, Negros Occidental, Philippines.*

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Learning behavior is accounted to be pivotal to academic success. During the pandemic, concerns about students' learning behavior toward Printed Modular Distance Learning (PMDL) modality were put to consideration. Thus, using descriptive-correlational analysis, this study examined the extent of learning behavior (LB) in English PMDL of 242 Grade 7 students in a district in Northern Negros. The level of English academic performance was identified and correlated with the extent of LB. For data collection, an English test and a contextualized LB Scale were given. Using percentage, weighted mean, Mann-Whitney U test, and Spearman rank correlation, the results yielded a high extent of LB toward English PMDL and an average level of academic performance as a whole and by sex. The difference in the extent of Attention-Persistence behavior was insignificant in terms of sex while females' extent of Competence-Motivation, Attitude toward Learning, and Strategy/Flexibility were significantly higher than males. The level of English academic performance was also insignificant according to sex. Lastly, no correlation was found between learners' extent of LB in PMDL and the level of English academic performance. Although learners still fell short in achieving higher academic performance in consideration of stronger interplaying factors, the findings still shed light on the learners' status during pandemic where positive behaviors were displayed. The findings may serve as basis to revisit the PMDL implementation, and craft contextualized English 7 materials and enhancement programs to fill the language gaps of learners during the school year.

*Corresponding author: Email: christiany.lazaro@deped.gov.ph;

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1. INTRODUCTION

1.1 Background of the Study

Students are considered as the core of the learning process. Looking into factors that affect their learning is important as students play critical roles in transforming their learning to achieve desired goals [1]. Knowledge of a student's learning behavior is believed to be a significant aspect of shaping a student's academic success [2]. This aspect can aid in the development of effective solutions for students who are under learning hurdles [3].

The rapid educational shift brought about the pandemic adjusted not only the learning modalities but also the students' behavior towards learning. PMDL (Printed Modular Distance Learning) modality bridged the gap in learning inequity in the Philippines. However, it also brought concerns regarding the students' display of motivation, effort, and attention to lessons that may influence their achievement of expected outputs [4]. While English modular learning offers flexible instruction among learners, there are issues of focus, interest, and adaptability which are not fully displayed while doing activities at home. The display of these learning behaviors has possible effects on their academic performance [5].

The PMDL modality left language learners grappling with English modular learning as evidences of skipped and incomplete tasks become common due to low effort and persistence while also struggling in vocabulary, comprehension, and writing [6]. Locally, PMDL is implemented as one of the distance learning modalities. However, English teachers in the district face a similar recurring issue of receiving blank, unanswered modules resulting in low academic achievement. Parents express learners' display of behaviors, such as idleness, inattention, and frustration. With the ongoing goal of offering quality instruction, improving the well-being and academic performance of students is one of the prime movers of educational interventions, which, in this study, required knowledge of students' learning behavior and academic performance. Positive learning behaviors are teachable and can be transferred through interventions that are said to be linked to desirable academic results [3].

Studies on learning behavior towards online and blended learning in English [7,8] have been made. Research highlighting the relationship between student learning behavior and academic performance in the face-to-face setting [9,10] has been done. Since PMDL has been fully implemented since the rise of the new normal, few local studies on learning behavior towards modular learning and its influence on academic performance were explored. This prompted the researcher to conduct a study investigating students' modular learning behavior in the new normal context and its correlation to English academic performance. This is the research gap that this study intended to fill in.

Thus, this study sought to know the extent of learning behavior towards PMDL of Grade 7 public high school students in District IX of the Cadiz City Division for the school year 2020-2021 as assessed by themselves when taken as a whole and grouped by sex. Also, it aimed to determine the relationship between their learning behavior and English academic performance. The findings of the study were used as the basis for crafting an English 7 LAS (Learning Activity Sheet) focusing on grammar, vocabulary, and reading comprehension activities that may strengthen target positive learning behaviors and impact students' academic success.

1.2 Statement of the Problem

This study aimed to determine the extent of learning behavior towards modular English instruction of Grade 7 public high school students in District IX for the school year 2020-2021 in the areas of competence motivation, attitude toward learning, attention-persistence, and strategy/ flexibility as assessed by the students as a whole and when grouped in terms of sex.

Likewise, it assessed the level of academic performance in English of the Grade 7 students in the areas of vocabulary, grammar, and reading comprehension.

Specifically, it sought to answer the following questions:

1. What is the significant difference in the extent of learning behavior of students in modular distance learning as assessed by themselves in terms of learning behavior

dimensions and their grouping according to sex?

2. What is the significant difference in the level of academic performance of students in terms of the areas of the English subject and their grouping according to sex?
3. What is the significant relationship between learning behavior and academic performance?

1.3 Hypotheses

1. There is no significant difference in the extent of learning behavior of students in modular distance learning as assessed by themselves in terms of learning behavior dimensions and their grouping according to sex.
2. There is no significant difference in the level of academic performance of students in terms of the areas of the English subject and their grouping according to sex.
3. There is no significant relationship between learning behavior and academic performance.

1.4 Definition of Terms

The following concepts and variables in this study are defined operationally.

1.4.1 Extent of learning behavior in modular English instruction

Extent of learning behavior in modular English instruction is the range of behavior manifestation, whether it is high, average, or low, when a learner is under modular learning in English. The learning behavior domains are:

1.4.1.1 Competence motivation

Competence motivation refers to the learners' drive to attempt and complete tasks in English modules and learning activities sheets.

1.4.1.2 Attitude toward learning

Attitude toward learning refers to the learners' manifestation of interest in learning during English modular instruction.

1.4.1.3 Attention/Persistence

Attention/Persistence refers to the mindfulness and heeds to complete given tasks in English modules and learning activities sheets.

1.4.1.4 Strategy/Flexibility

Strategy/Flexibility refers to the learners' adaptability and flexible thinking in completing tasks given in English modules.

1.4.2 Level of academic performance in English

Level of academic performance in English refers to the measurement of student achievement based on the learners' scores on the teacher-made summative test in English 7 covering areas of vocabulary, grammar, and reading comprehension.

1.4.2.1 Vocabulary

Vocabulary refers to the language domain where students can show competence in supplying appropriate words or expressions that complete an analogy.

1.4.2.2 Grammar

Grammar refers to the language domain in which students can demonstrate the ability to use correct subject-verb agreement, meaningfully use passive and active voice in varied contexts, and correctly use the past and past perfect tenses in varied contexts.

1.4.2.3 Reading comprehension

Reading comprehension refers to the language domain in which students can comprehensively read texts using appropriate reading styles and strategies to meet their purpose.

1.4.3 Grade 7 high school students

Grade 7 high school students refer to learners who took up English 7 under the PMDL in the school year 2020-2021.

1.4.3.1 Sex

Sex refers to the main categories that biologically categorize the students as either male or female.

1.5 Significance of the Study

The findings of this study can be of benefit to English language teachers as it may prompt them to provide supplemental learning activities and learning materials to reinforce students' learning at home, develop positive learning

behaviors while providing the needed linguistic competencies, and contribute to better academic achievement. Similarly, Education Program Supervisors (EPS) in English, as primary IMs specialists, may craft enhanced learning interventions in the form of instructional materials, specifically English learning activity sheets (LAS) containing activities to strengthen positive learning behavior of students under the modular instruction. This may also help school administrators develop contextualized innovation programs that will help cater the needs of students with problems in studying under the modality. Lastly, future researchers may consider the findings and revisit modular learning resources of other subject matters to improve and develop content for effective results and better implementation.

2. REVIEW OF RELATED LITERATURE

2.1 Learning Behavior

Conventional intelligence tests are useful in decision-making regarding a learner's academic standing; however, they provide limited information about specific behaviors and abilities that can be the basis for designing interventions for students who struggle in learning [3]. One cannot know what is inside one's mind, so observing changes in behavior is a way of finding out what a person is learning [11]. Several studies revolving around learning behavior are anchored on the concept that to achieve a change in external behavior, a great deal of repetition of desired actions and competency, praises for correct outcomes, and immediate reproach to mistakes are applied [12]. These undertakings are important because knowing students' behavior and attitude are where instructors base the students' individual differences and needs [13]. A way of looking at different learning behavior is by delving deep into various studies that explore this broad field.

2.2 Learning Behavior in English Modular Instruction

The English language opened the world of globalization and communication among countries. Despite the limitations in learning brought about by the pandemic, schools proactively act to advance education. Previous studies on modular instruction in English subjects were made; they presented positive and negative perspectives, study skills, and learning behaviors developed under the instruction.

A study by Nardo [14] presented that using modules in language learning plays an important role among language learners in their behavioral aspect of autonomy and flexibility in learning. Modular learning encourages students to work on interesting and challenging activities with focus and attention, thus fostering independent study. Modular instruction allows students to acquire better learning skills and strategies through engaging themselves in concepts presented accordingly in the module. Furthermore, it gives learners a sense of responsibility to accomplish the tasks given in the module with minimum assistance from parents or teachers while progressing on their own. They learn how to learn; they are empowered.

In a study on English learning behavior using a modular approach, Ibyatova et al. [15] state that learning grammar under instruction motivates and encourages learners to learn and explore the discipline. It revealed that modular learning developed students to self-evaluate and perform better in the succeeding English modules. However, modular learning and assessment do not remove the stress and workload of traditional approaches. Modular learning requires improvement on the approach and structure of modules.

In the Philippines, the Department of Education introduced the SLM or the Self-Learning Modules designed for distance or remote learning. The SLM is crafted so learners can easily grasp, understand, and do activities without the teacher's presence. The creation of the SLM is based on the K to 12 Curriculum Guide, Teacher's Guide/ Teacher's Manual, and Learner's Material/Textbook [16].

A study by Dangle and Sumaoang [17] on the implementation of modular learning in the Philippines revealed several challenges faced by learners and other stakeholders. It was found that students struggle with self-studying due to factors including the lack of greater self-discipline and self-motivation. Most students cannot study independently, with 70% failing to easily follow instructions in the modules, resulting in late submissions and blank answer sheets. Other factors aside from students' behavior towards learning are also considered, such as family responsibilities and lack of parents' academic assistance.

2.2.1 Competence motivation

Many factors, such as intelligence, attitudes, abilities, and motivation, support success in

foreign language learning. Motivation is one of the fundamental factors influencing English learning since it intervenes with the attitudes toward the language and the results during the time spent learning it [18].

Fandiño et al. [19] studied motivation and English e-learning that is anchored on the Theory of Self-Determination (SDT). They identified and analyzed the aspects related to students' motivation to learn English using distance learning modalities. It was concluded that motivation for learning English is strongly influenced by external factors that are sometimes beyond the teacher's and school's scope, like the learner's socio-economic stability, other responsibilities a learner has to deal with or feel comfortable with lessons, and activities that can affect the learner's motivation. Also, incorporating into the module exercises the activities that advance motivation and permit learners to encounter the sociocultural climate of the target language, as they do with online and other distance learning conditions, could further develop the learning process.

2.2.2 Attitude toward learning

Attitude is the key element in learning a language [20]. As language teachers, it is essential to understand and guide learners in achieving language competence and practice ways to overcome language acquisition anxiety and develop a positive attitude and curiosity toward the English language [21].

Bacomo et al. [22] on learner's attitude and performance towards SLMs, present that learners display a positive attitude towards the instruction, such as showing eagerness to learn with minimal supervision, working comfortably, showing confidence in completing outputs, taking time to study, and persistence in finishing all requirements. Despite the findings, they also revealed that learners have a low to average outlook toward SLMs indicating contradicting attitudes in time management when reading modular concepts, understanding the discussion and examples, and self-regulation towards completing tasks. Bordeos [23] and Bacomo et al. [22] similarly report Filipino learners displaying negative attitude towards modular learning that may worsen as the pandemic continues. However, from the findings of learners giving positive attitudes toward SLMs, effective learning can happen. As Syukur [24] and Bacomo et al. [22] post, successful learning begins with having a positive attitude.

2.2.3 Attention-persistence

Attention is defined as the state of mental awareness and focus. Learning is ineffective when attention is inadequate and inappropriate. Not paying attention might be linked to problems in communication, distractions, and understanding (Cicekci & Sadik, 2019 cited in Balan et al. [25]).

One of the students' struggles in physical and distance learning is maintaining their attention toward the material given to them [25]. A study by Cicekci and Sadik (2019) as cited in Balan et al. [25] found a positive relationship between boredom and attentional problem. Boredom rises when an individual experiences a mental state of low arousal and dissatisfaction, frustration, or disinterest in something. However, Nardo [14] presents that modular instruction develops the students' sense of autonomy in learning which encourages them to work on challenging and interesting activities with focus and attention. With minimal assistance from more knowledgeable others, learners develop a sense of responsibility in completing the tasks.

2.2.4 Strategy-flexibility

Students' immersion in distance learning modalities made them face different challenges that impacted their learning performance. Thus, effective and appropriate learning strategies will lead to successful academic achievement [26].

Different factors cover students' learning strategies to cope with their learning environments. In the study of Shuja et al. [27] on students' academic performance and flexibility toward mobile learning, it was suggested that mobile learning enriches communication and flexibility in accessing learning materials that are not easily available around. Besides accessing learning resources, it also allows students to expand their resourcefulness, self-autonomy, and communication among distant learners and instructors (Yousuf, 2017 cited in Shuja et al. [27]). Similarly, the freedom distance learning offers learners due to unregulated class schedules and attendance trains learners to self-monitor and regulate their learning to ensure that all the lessons and activities are completed on time [28]. Also, students who practice self-monitoring performed better in academics than those who did not on the test of general English proficiency (Chang, 2013 cited in Kuama, [28]).

2.3 Learning Behavior and Sex

Students' individual characteristics, such as sex, learning styles, and academic achievement, have been noted to be linked to a student's success in distance learning (Council for Higher Education Accreditation, 2002 cited in Kupczynski et al. [29]). Merely identifying these factors that affect students' learning engagement is not enough; identifying relationships among them can form a part of a larger picture of these concepts.

Moreover, Perkowski [30] looked into the role of gender differences in self-efficacy and academic performance in distance learning and explored gender inequity in the success of male versus female students enrolled in distance learning classes. Self-efficacy is a construct related to learner motivation, the belief about his or her ability to act on behaviors to achieve a certain learning goal or accomplish a task (Bandura, 1977 cited in Carey & Forsyth, [31]). The findings support the effect of gender on academic performance and self-efficacy. Positive signs indicate that females perform better in academic performance and self-efficacy in online learning environments.

In a further interest in gender and behavior of learners, the study of Yu [32] cited several studies, such as that of Richardson and Woodley (2003), which presented that females were more persistent and committed than males, resulting in higher learning outcomes. Also, females have stronger self-regulation than males, leading to significantly more positive online learning outcomes (Alghamdi et al. 2020 cited in Yu, [32]). However, Nistor (2013) as cited in Yu [32] found that males were more stable in attitudes while females performed well in engagement. Thus, no significant gender differences were revealed in the learning outcomes in his study.

Contrary to these studies is Wang et al.'s [33] study on the impact of gender on online learning behavioral patterns, which reveals that there is no significant difference in the overall frequency of learning behaviors between female and male learners. Despite this result, the participants showed varying transitional patterns in their online learning behaviors. Female behaviors were more coherent, while male behaviours were relatively isolated. Females also tend to be more goal-oriented by reviewing achievement reports before performing instructional activities.

2.4 Academic Performance in English

Simpson and Weiner (1989, cited in Yusuf, [34]) defined academic performance as observable or measurable behavior in a particular situation. In education, academic performance measures student achievement across academic subjects using grade point average (GPA) from classroom performance and teacher-made tests [34].

In Philippine education, measuring academic performance is anchored on DepEd Order No. 8, s. 2015 entitled, "Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program," which presents a table of the grading scale, a descriptor, and remarks. A learner with a 90-100 grade is equivalent to Outstanding; a grade of 85-89 is deemed Very Satisfactory; grade 80-84 mean Satisfactory; 75-79 means Fairly Satisfactory; while grade below 75 translate to Did Not Meet Expectations. This scale is included in the report card of learners, which is presented quarterly to parents to show their summary of progress.

The public-health crisis caused by COVID-19 widened significant opportunity and achievement gaps in learning. Talimodao and Madrigal [35] post that while the quality and implementation of PMDL were consistently excellent, small and medium schools revealed a lower quality of PMDL, giving way to challenges on inconsistent participation and compliance of outputs, assessments, and activities.

English learners may face setbacks in their English language development after months without consistent opportunities to listen, speak, write, and read in English, as the level of academic English is foundational to educational success [36]. With an immensely diverse group of students, English learners also have varying experiences during the COVID-19 pandemic, including a broad range of educational needs and physical and emotional health-related needs [37].

2.4.1 Vocabulary

In the study of [38] on vocabulary teaching in distance learning, it was emphasized that the foreign language ability of students depends on the vocabulary they mastered. The word insufficiency or inaccuracy is one of the biggest obstacles for students to study English. Hence, a greatly important task for teachers is to scientifically enlarge students' vocabulary

according to the new English curriculum standard and memorization rules.

Sriwichai [8] studied learning English under blended learning and posited that problems, such as inadequate essential knowledge of English vocabulary and grammar structures, are among the challenges students face in learning on their own through distance learning. A response by one of the learners presents that he or she has limited vocabulary and knowledge of grammar, so he or she barely understands the module's content clearly.

In the study of Panganiban and Madrigal [6] on the experiences of pupils under PMDL, the difficulty in English language skills of most learners in rural areas poses a problem to quality learning as PMDL demands students to have the fundamental language skills and proficiency in English as it is the major language of instruction used in modules. As poor vocabulary causes struggle in understanding texts, it was found that pupils tend to ask for local translations of most English words to allow comprehension of lessons.

2.4.2 Grammar

In the study of Ibyatova et al. [15] on the modular approach to teaching and learning in a technical school in Russia with learners studying English grammar using a modular training manual to study Practical Grammar of the English language and experiment on its use, the results show that modular method of teaching is effective for improving students' knowledge and enhances students' understanding and critical thinking.

Another study, which examined students' English language acquisition of skills during the pandemic, was explored by Hopp and Thoma [39]. They assessed the effects of the temporary closure of schools and analyzed vocabulary and grammar skills before and after the educational shift. It was found that there are no negative effects of instructional suspension on foreign language teaching, especially in grammar and vocabulary among youth.

Panganiban and Madrigal [6] presented that learners studying modules written in English tend to skip essay questions implying problems in language usage and communication and challenges in vocabulary, grammar, and spelling that hinder them from forming sentences and paragraphs in essay tasks. This poor

performance in modular tasks affects their scores and grades in the subject.

2.4.3 Reading comprehension

In distance learning, teachers can adapt many of the strategies they would use in the classroom to promote reading skills since the new method of instruction often requires learners to work more independently; facilitators should adjust ways to help learners read instructional texts [40].

Domingue [41] studied the effects of COVID-19 on the reading comprehension of learners and presented that the disruptions caused by the pandemic indeed brought learning loss to students, showing no growth in reading fluency and comprehension over the months that distance learning started. Analysis suggested reasons for continued concern over learning losses. Several students have been disconnected from learning during the pandemic, underestimating the true effects. Reading fluency is not assessed, which will result in learners' difficulty catching up and may suffer the consequences well into the future. The paper posts that if students cannot get back on track, delays in the development of reading-related skills may be experienced, making it difficult to access future academic content. It was recommended that educational leaders act immediately to ensure educators have the necessary resources, especially in the most disadvantaged schools.

2.5 The Relationship between Academic Performance in English and Sex

Distance learning may pose challenges to students in terms of satisfaction and academic success. Kupczynski et al. [29] studied the relationship between gender and academic success in distance learning. They examined the relationship between the final grade received in a distance learning course and the student's gender. Differences in distance learning achievement between male and female students were studied through the lens of social identity theory which centers on the concept of identity associated with meanings, self-role, purpose, and expectations. Results presented that differences in achievement between male and female students are present for students with lower overall grades. However, no differences existed among male and female students with mid-level and higher overall grades.

Yu [32] studied the effects of gender on students' learning during the COVID-19 pandemic and presented that the majority of female students (>80%) reported that they are more enthusiastic about the normal and traditional learning methods and have little motivation under the distance learning approach. Males, on the other hand, (>85%) are more active in the online learning method than the traditional face-to-face method, noting that the present instruction offers more convenience in learning. No significant difference was found between males and females in their achievement of academic outcomes.

Several studies have also investigated the effect of learners' demographic backgrounds on distance learning outcomes. According to Richardson and Woodley (2003, cited in Yu [32]), females tend to achieve higher learning outcomes than males due to high persistence and commitment. Alghamdi et al. (2020, cited in Yu [32]) also revealed that females significantly have more positive distance learning outcomes because of stronger self-regulation than males.

Nistor (2013, cited in Yu, [32]), on the other hand, posits that no significant gender differences were revealed in learning outcomes because males appeared more stable in attitudes while females performed well in engagement. Furthermore, no significant gender differences in learning outcomes were found in terms of learning styles.

2.6 Learning Behavior and Academic Performance

Centering on the relationship between learning behavior and academic performance, the way a student approaches learning tasks defines the learning behavior of each student [42].

Thompson (2014, cited in Mary & Jebaseelan, [10]) wrote that among various factors affecting a student's ability to learn, learning behavior plays a major role in the academic achievement of a student. It is emphasized that students' unruly behavior during class, such as inattention and disruption in classes, may have a negative effect on the entire academic process.

McDermott et al. [43] developed a Learning Behavior Scale (LBS) to measure learning behaviors reliably and validly in 5-17-year-olds, yielded from teacher observation. The content of the rating scale was comprised of observable

behavioral aspects unaffected by the student's intentions, feelings, or thoughts. The scale was developed in the context of creating interventions for learning upon identifying behaviors associated with learning. It is said that knowing a student is "smart" does not fully explain performance; knowing a student's intellectual capacity gives limited information for intervention when a "smart" student performs poorly. Some behaviors associated with learning are attentive listening, active participation in activities, accepting corrections, completing a task, and working to please the teacher. Researches present that these behaviors are teachable through conditioning and modeling these interventions.

The Learning Behavior Scale developed by McDermott et al. [43] can be contextualized because of the current learning modality used in the new normal for the crafting of a Learning Behavior Questionnaire needed to identify the level of learning behaviors of students studying under modular distance learning.

Despite these studies, Mary and Jebaseelan [10] present that although learning behavior comes straight from the student, other intervening variables indirectly influence the student's learning behavior. Ragpala [44] highlights that environmental factors, such as noise, ventilation, and lighting in the learners' study area, are noted to affect academic performance. Attitude towards learning is one of the contributing factors affecting learning outcomes, but concerns about family, peers, instructors, technology, time, and health concerns are also given consideration.

In light of the current learning situation, Lee et al. [45] explored the effects of learning behaviors and COVID-19 risk perception on poor academic performance among middle school students since the pandemic began. It presents how behavior, such as self-regulation and motivation, influences academic performance. Examining students who received A to B grades before the pandemic revealed how behavior and attitudes toward learning have changed since the pandemic began, leading to lower grades among students who received high grades before the COVID-19 pandemic. The study explains that since middle school learners are not as mature as adults and the period during middle school is critical in the developmental stage, their behavior may be more likely influenced by the change brought by the pandemic. As the crisis rapidly shifted education to distance learning to avoid

close contact with people, students' learning behaviors may change, which is essential to academic performance. Preferences for the classroom format, learning environment, and self-motivated studying time influenced the poor academic performance of middle school students. Moreover, the learner's risk perception of COVID-19 brings anxiety, stress, and a sense of discomfort, which may be an obstacle to learning, resulting in poor academic performance.

3. THEORETICAL FRAMEWORK

This study theorizes that a student's learning behavior directly correlates to his or her learning outcomes or academic performance. Positive learning behavior towards modular instruction can lead to better academic results. In contrast, poor learning behavior towards this distance learning modality may result in low performance at schools, such as the inability to finish tasks on time, failure to submit modules, and low scores in language activities.

This is anchored on Walberg's (1981) Theory of Educational Productivity cited in McGrew [46] which highlights that student learning characteristics such as behavioral, motivational, and affective domains are among the most influential variables, which with intervention could, in turn, meaningfully and positively impact student performance and outcomes. Students who set learning goals, highly motivated, self-aware, confident with their learning abilities, and organized in their approach to learning showed better performance in school.

Taking Walberg's Theory of Educational Productivity into consideration, a student's learning behavior, such as effective effort in finishing tasks, persistence, motivation, and adaptability to new tasks and environment can result in desired learning outcomes. Finding out the extent of learning behavior of students towards learning can be used to design educational reform in programs, strategies, and interventions [3]. Imparting positive learning behaviors through intervention can also protect students from behavioral maladjustments despite the sudden shift of the learning set-up, which leaves them with minimal means of learning resources and holistic support at home [46].

4. CONCEPTUAL FRAMEWORK

In the study, the Grade 7 junior high school students from Sicaba National High School, Caduha-an National High School, Burgos National High School, and Cadiz Viejo National High School in the Division of Cadiz City during the school year 2020-2021 assessed the extent of learning behavior they manifested towards English modular instruction. These learning behaviors are divided into four (4) dimensions: competence motivation, attitude toward learning, attention-persistence, and strategy/flexibility. Similarly, the student's English academic performance in areas of grammar, vocabulary, and reading comprehension during the given school year was identified. Anchored in the notion that students' behavior toward learning affects their academic performance, the two variables were correlated in the study.

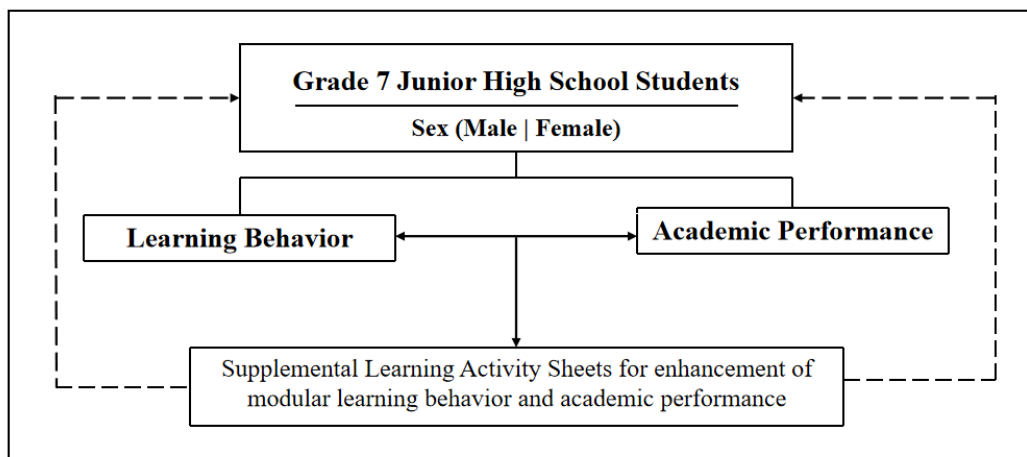


Fig. 1. Conceptual model illustrating the relationship of the different variables in the study

As several studies suggest, demographic variables contribute to varying learning behaviors, which have been noted to be linked to a student's learning performance. Hence, in this study, the learners' sex was identified and assessed to determine whether there is a significant difference between male and female learning behavior. Likewise, it determined whether there is a significant difference between males' and females' levels of English academic performance.

The results of this study served as the basis for crafting an English 7 LAS (Learning Activity Sheet) focusing on grammar, vocabulary, and reading comprehension activities that may strengthen target positive learning behaviors and impact students' academic success.

5. METHODOLOGY

5.1 Research Design

Following the quantitative research approach, this study utilized a descriptive-correlational design in research.

The descriptive design of research centers on making a systematic description of a present phenomenon and concerns more with the "what" rather than the "how" and "why" to discover the association between or among certain variables [47]. This design is deemed appropriate for this study as its primary goal is to look into the self-assessment made by Grade 7 public high school students using the modified Learning Behavior Scale to describe their extent of the learning behavior towards modular English instruction. This research design is also relevant in describing the significant differences in the extent of learning behavior towards English modular learning and the level of English academic performance of Grade 7 public high school students when they are grouped in terms of sex.

Meanwhile, the correlational research design focuses on finding the relationship between two or more variables and their causality (Fraenkel & Wallen, 2009 cited in Yessika, [48]). This research design is apposite to the current study as it sought to know whether there is a significant relationship between the student's learning behavior and academic performance.

5.2 Respondents

Utilizing the stratified random sampling method, the researcher identified 242 Grade 7 public

junior high school students enrolled in selected secondary schools in the Division of Cadiz City for the school year 2020-2021 as the respondents of the study. Table 1 shows the distribution of the respondents by school.

Table 1. Distribution of respondents

School	N	n	%
Sicaba NHS	75	28	11.6
Caduha-an NHS	379	141	58.3
Burgos NHS	73	27	11.2
Cadiz Viejo NHS	123	46	19.0
Total	650	242	100.0

5.3 Research Instrument

To gather the data necessary to answer the questions in this study, a modified Learning Behavior Scale (LBS), originally authored by McDermott et al. [43], was used to measure the extent of learning behavior students manifest toward modular learning. Meanwhile, a 45-item teacher-made English questionnaire was given to quantify the students' English academic performance level.

The first part of the questionnaire contains the respondents' personal data, including their sex, as it was relevant to the study. The second part is the modified LBS containing 29 descriptive statements on learning behavior contextualized to fit the present modular learning set-up. This modified LBS is divided into four (4) categories, Competence Motivation, Attitude Toward Learning, Attention-Persistence, and Strategy/Flexibility. The last part of the questionnaire is the teacher-made 45-item English test divided into categories of grammar, vocabulary, and reading comprehension.

To measure the students' extent of learning behavior, this study used a 3-point Likert scale: (2 = Most Often Applies, 1 = Sometimes Applies, 0 = Does Not Apply) for students to describe the frequency with which they manifest a given behavior. This was translated to (2) High, (1) Average, and (0) Low, respectively.

To measure the level of the student's academic performance, a teacher-made 45-item test questionnaire in English 7 containing three (3) parts was used. It includes tests for vocabulary, grammar, and reading comprehension. These domains were based on the Department of Education's Most Essential Learning Competencies (MELCs) guide for teachers.

Chart 1. Interpretative scale for the modular learning behavior

Scale	Verbal description	Verbal Interpretation
2	High	The learning behavior is <i>extensively</i> exhibited by the student during modular learning.
1	Average	The learning behavior is <i>fairly</i> exhibited by the student during modular learning.
0	Low	The learning behavior is <i>poorly</i> exhibited by the student during modular learning.

Chart 2. Interpretative scale for academic performance

Scores	Grade	Description
41-45	90-100	Outstanding (Very High)
38-40	85-89	Very Satisfactory (High)
36-37	80-84	Satisfactory (Average)
34-35	75-79	Fairly Satisfactory (Low)
0-33	Below 75	Did Not Meet Expectations (Very Low)

The researcher used Lawshe's content validity ratio to ensure the validity of the research instrument. The researcher-made English test was presented to nine (9) qualified jurors who are master's and doctoral degree holders in English education. The validators were allowed to determine whether each item was essential or not. The researcher-made test established a content validity index of 1, which was translated as "valid."

The modified LBS was also submitted for validity using the Good and Scates validation form to nine (9) qualified validators, who provided necessary corrections, suggestions, and recommendations to improve the test instrument. The scale yielded a validity average of 5, which was translated as "excellent."

Meanwhile, to ensure the reliability of the research instrument, a pilot testing using the modified LBS and the teacher-made English test was conducted on 30 randomly selected Grade 7 students in a school via Google forms. The data obtained from the pilot testing of the 29-item LBS was subjected to the Cronbach Alpha formula ($\alpha \geq 0.854$), while the 45-item test in English yielded KR20 = 0.742, which interprets as having "high reliability" upon subjecting it to Kuder-Richardson Formula 20.

5.4 Data Collection Procedure

Observing all safety protocols during the pandemic, the researcher secured permission from stakeholders and identified participants to conduct the study. A letter of approval was sent

to the Division Superintendent and school heads of the participating schools. Upon approval, the researcher held an orientation to selected teacher-enumerators to properly administer the research, provided with due service compensation, to ensure that the necessary data were properly collected from the respondents. Prior to the conduct of the study, the respondents and their parents were oriented by the enumerators regarding the purpose and scope of the research and were asked to signify their willingness to participate in the study.

5.5 Data Analysis Procedure

Descriptive analysis was used to determine students' extent of learning behavior in modular learning when taken as a whole and when grouped according to sex. To statistically treat the data, the researcher employed the mean and standard deviation.

On the other hand, a comparative analysis was used to determine whether a significant difference exists in students' level of learning behaviors in modular learning when assessed in terms of sex. The same analysis was used to examine the significant difference between academic performance among males and females.

Kolmogorov-Smirnov was used to determine the normality of the variables. The normality test revealed that the learning behaviors [KS=0.105, p=0.000] and academic performance [KS=0.123, p=0.000] were not normally distributed. Since the variables were not normally distributed, non-parametric statistical tools were used.

Mann Whitney U test was used to determine the significant difference in the extent of learning behavior of students in modular distance learning as assessed by themselves in terms of learning behavior dimensions and their grouping according to sex.

Finally, the correlational analysis was utilized to determine whether there is a significant relationship between students' learning behavior and academic performance. Spearman rank correlation was used to determine the significant relationship between learning behavior and academic performance.

6. RESULTS AND DISCUSSION

6.1 Profile of the Respondents

Table 2 presents the demographic profile of respondents in the selected schools in the district. A total of 242 students served as respondents in the study. When grouped according to sex, 118 respondents were female (48.8%) while 124 respondents were male (51.2%).

Table 2. Demographic profile of the respondents

Variable	f	%
School		
Burgos NHS	27	11.2
Cadiz Viejo NHS	46	19.0
Caduha-an NHS	141	58.3
Sicaba NHS	28	11.6
Sex		
Female	118	48.8
Male	124	51.2
Total	242	100.0

6.2 Extent of Learning Behavior towards Modular English Instructions

Table 3 shows that when the assessment of the Grade 7 junior high school students is taken as a whole, there exists a high extent ($M=1.53$, $SD=0.35$) of learning behavior displayed by the students toward English 7 PMDL. Based on the interpretative scale of learning behavior, "high extent" means that learners extensively and consistently exhibit positive learning behavior when given modular tasks and activities at home. The findings indicate that the Grade 7 respondents during English modular learning manifested positive learning behaviors such as being motivated in doing English activities and exerting effective effort in completing tasks. It

also reflects learners' desirable learning attitudes, such as being open to assistance and corrections provided by their parents and more knowledgeable others at home. The participants were adaptive and flexible in finding new learning resources to finish an English modular output to get positive results.

This is congruent to the findings of Pentang et al. (2022), showing learners' display of positive attitude towards Self Learning Modules (SLMs), such as eagerness to learn with minimal supervision, comfortable with working on modular tasks, confidence in completing outputs, taking time to study, and persistence in finishing all requirements. Similarly, Nardo [14] presented that using modules in language learning positively contributed to the students' behavioral aspect of autonomy and flexibility, encouraging them to work on challenging tasks that foster independent study. However, Bordoos ([23], cited in Pentang et al. 2022) reports that Filipino learners display a negative attitude towards modular learning that may worsen as the pandemic continues. In relation, Dangle and Sumaoang [17] revealed that the implementation of modular learning in the Philippines posted struggles for the learners with self-studying due lack of self-discipline and motivation. Independent studying is a struggle, while 70% of the learners fail to easily follow instructions in the modules, resulting in late submissions and blank answer sheets.

When grouped according to sex, both the male ($M=1.47$, $SD=0.36$) and female ($M=1.59$, $SD=0.32$) respondents revealed a high extent of modular learning behavior. This means that learners in both groups exhibit consistent, desirable behaviors in completing English modular tasks, display interest in learning under the instruction, flexible with the learning shift, goal-oriented, and adaptive when performing new tasks in English modules. Relative to these results is Wang et al.'s [33] study showing no overall difference in the frequency of learning behaviors between female and male learners. The students exhibit an equal extent of varying learning behaviors, each on their own. They showed changing transitional patterns in their learning behaviors, such that female behaviors were more coherent with each other while male behaviors were relatively isolated. Females also tend to be more goal-oriented by reviewing achievement reports before performing instructional activities. On the other hand, males were more stable in attitudes, while females

Table 3. Extent of learning behavior towards modular english instructions

Variable	Competence motivation			Attitude toward learning			Attention-persistence			n	Strategy/ flexibility			Learning behaviors		
	M	SD	Int	M	SD	Int	M	SD	Int		M	SD	Int	M	SD	Int
Sex																
Male	1.44	0.37	H	1.51	0.39	H	1.44	0.43	H	124	1.49	0.38	H	1.47	0.36	H
Female	1.58	0.33	H	1.61	0.35	H	1.55	0.37	H	118	1.60	0.36	H	1.59	0.32	H
Whole	1.51	0.36	H	1.56	0.37	H	1.49	0.40	H	242	1.54	0.38	H	1.53	0.35	H

Note: H= High

Table 4. Level of academic performance in English

Variable	Vocabulary			Grammar			Reading comprehension			Academic performance		
	M	SD	Int	M	SD	Int	M	SD	Int	M	SD	Int
Sex												
Male	4.96	2.39	Av	6.19	3.08	Av	10.94	5.50	Av	22.10	9.85	Av
Female	5.03	2.61	Av	6.55	3.19	Av	11.19	5.52	Av	22.77	10.16	Av
As a whole	5.00	2.49	Av	6.37	3.13	Av	11.06	5.50	Av	22.43	9.99	Av

Note: Av=Average

Table 5. Difference in the extent of learning behavior towards modular english instructions

Variables	U	df	p
Competence Motivation	5737.000	-2.928	0.003
Attitude Toward Learning	6218.500	-2.035	0.042
Attention-Persistence	6335.500	-1.817	0.069
Strategy/Flexibility	6083.500	-2.290	0.022
Learning Behaviors Scale	6026.500	-2.372	0.018

Note: the difference is significant when $p \leq 0.05$

performed well in engagement (Nistor, 2013, cited in Yu, [32]).

6.3 Level of Academic Performance in English

Table 4 presents that when the assessment of Grade 7 junior high school learners in the English teacher-made test is taken as a whole, it reveals an average (M=22.43, S=9.99) level of English academic performance among the students in areas of vocabulary (M=5.00, S=2.49), grammar (M=6.37, S=3.13), and reading comprehension (M=11.06, S=5.50). The results indicate that the students achieved only a satisfactory performance during the English 7 test which contains questions on competencies of grammar, vocabulary, and reading comprehension. It implies that during the instruction, the learners fell short in excellently achieving a full grasp of the projected competencies in the modules, which include concepts, activities, and assessments to foster important language skills, especially in the above-mentioned areas which were given during the English modular instruction implemented during the given school year.

Congruent to the findings is the study of Panganiban and Madrigal [6] on pupils' experiences under PMDL. It shows that the difficulty in English language skills of most learners affects learning outcomes as the subject demands students to have prior knowledge of fundamental language skills and proficiency in English. The existence of poor vocabulary causes struggle in understanding texts which hampers the achievement of high performance. Similarly, Sugarman and Lazarin [36] suggested that English language learners may face setbacks in their English language development after months without consistent opportunities to listen, speak, write, and read using the language, knowing that the level of academic English is foundational to educational success. However, Hopp and Thoma [39], in their study examining students' English language acquisition of skills pre and during the pandemic, presented that there were no significant negative effects of the instructional suspension on English language learning among students; English modules among learners show improvement in critical thinking which enhances their knowledge and understanding of the target language [15]. The varying results are somehow due to the diversity of students where English learners' experiences during the COVID-19 pandemic vary, including a broad range of different educational needs,

experiences, and environments, other than their physical and emotional, and health-related concerns [37].

Likewise, when the Grade 7 junior high school learners' assessment in the English teacher-made test was grouped according to sex, both male (M=22.10, S=9.85) and female (M=22.10, S=9.85) respondents attained an average level of academic performance. It can be implied that both groups only scored satisfactorily during English 7 assessment covering areas of grammar, vocabulary, and reading comprehension. The average level of English modular performance reflects the learners' struggle to perform excellently and learn under the given learning setting. Based on the study of Talimodao and Madrigal [35], learners' academic achievement during the PMDL was greatly affected by their inconsistent participation and delayed compliance with outputs. On academic performance between the groups, Alghamdi et al. (2020, cited in Yu, [32]) posted that no differences can be identified between male and female learning performances under the consideration that while females have stronger self-regulation under distance learning contexts, male learners use more effective learning strategies and have better technical skills than female learners.

6.4 Difference in the Extent of Learning Behavior towards Modular English Instructions

Table 5 presents no significant difference in the extent of students' learning behavior in modular distance learning as assessed by themselves in terms of the Attention-Persistence domain [U=6335.500, p=0.069] according to sex. This means that the participants' extent of attention and persistence in completing modular English tasks do not vary among male and female learners. Respondents of both groups exhibit adequate mindfulness when studying under English modular learning. They show equal focus when given instructions and heed to complete given tasks in English learning activity sheets.

This is vertical to the findings of Ibyatova et al. [15], which show that a modular approach to teaching English encourages the students to learn under the instruction, allowing them to focus and strive to perform better in the succeeding English modules. They focus on self-monitoring and learning regulation to ensure that all the lessons and activities are completed on

time since modular learning does not require tight class schedules and regular attendance [28]. On the other hand, a significant difference in the extent of learning behavior of students in modular distance learning [U=6026.500, p=0.018] as assessed by themselves in terms of Competence-Motivation [U=5737.000, p=0.003], Attitude toward Learning [U=6218.500, p=0.042], and Strategy/flexibility [U=6083.500, p=0.022] according to sex was revealed. The results showed that females rated significantly higher than males in terms of these learning behavior domains. The result on Competence-Motivation indicates that female participants show greater effort and motivation in completing English modular activities amidst difficulty. They are confident when performing novel modular tasks, persist in completing language activities, work with the vision for success or high grades, and confidently participate with the drive to get things done. Similarly, Fandiño [19] reported that behavior regulation and motivation could be varied among individuals. Personal motive and drive empower learners and allows good functioning.

In Attitude towards Learning domain of behavior, the findings also show that female participants reveal a significantly higher extent of behaviors showing cooperation with peers and learning guardians, openness to corrections, and excitement with learning English skills under the modular setting. Female learners exhibit a positive mindset, skip frustrations, and constructively welcome assistance when a task is too difficult [49-51].

Lastly, the female participants in the study rated significantly higher as well in the learning behavior domain of Strategy/Flexibility. This includes being adaptive and flexible in completing English modular tasks when

resources are low, more independent in answering English activities at home, following correct instructions, and thinking of unique ideas to finish a given English modular activity [52,53]. This is similar to the findings of Perkowski [30], showing that female learners have positive signs of performing better in terms of self-efficacy, a construct related to the learner's motivation and belief about his or her ability to act on desired behaviors to accomplish a certain task or goal. Similarly, Richardson and Woodley (2003, cited in Yu, [32]) revealed that female learners showed more persistence and commitment to tasks than male learners. Being goal-oriented by reviewing achievement reports before performing instructional activities was also evident among female learners in the study of Wang et al. (2021).

6.5 Difference in the Level of Academic Performance in English

Table 6 indicates that there is no significant difference in the level of academic performance [U=7127.500, p=0.729] of students in the areas of vocabulary [U=7266.000, p=0.926], grammar [U=7096.500, p=0.685], and reading comprehension [U=7103.000, p=0.695] according to sex. This means that the variable sex does not contribute to the English academic performance of the participants in the above-mentioned areas. Relative to these findings is Brown et al.'s (2014) study on the relationship between gender and academic success in distance learning. The differences in distance learning achievement between male and female students were studied through the lens of Social Identity Theory which centers on the concept of identity associated with meanings, self-role, purpose, and expectations. Although differences existed in the achievement of male and female students with lower overall grades,

Table 6. Difference in the level of academic performance in English

Variables	U	df	p
Vocabulary	7266.000	-0.093	0.926
Grammar	7096.500	-0.405	0.685
Reading Comprehension	7103.000	-0.392	0.695
Academic Performance	7127.500	-0.347	0.729

Note: the difference is significant when p<0.05

Table 7. Relationship between learning behaviors and academic performance in English

Variable	p	df	p
Academic Performance x Learning Behaviors Scale	0.077	240	0.235

Note: the correlation is significant when p≤0.05

no differences existed among male and female students with mid-level and higher overall grades. Additionally, Yu's [32] study on the effects of gender on students' learning outcomes during the COVID-19 pandemic found no significant difference between males and females, even though the majority of female students reported to be more enthusiastic toward traditional learning methods while males were more active during distance learning.

6.6 Relationship between Learning Behaviors and Academic Performance in English

Table 7 points out that there is no significant relationship between the learning behavior and the academic performance [$p(240)=0.077$, $p=0.235$] of Grade 7 public high students under the English modular learning modality in the school year 2020-2021. This result implies that the participants' learning behavior toward modular English instruction does not contribute to the student's academic performance in the subject matter. The learners manifested a high extent of learning behavior while only achieving a satisfactory level of academic performance. It can be implied that greater interplaying factors affect learners' academic results during modular learning in English.

In Walberg's Theory of Educational Productivity, upon which this study is anchored, McGrew [46] cited important findings from Walberg et al.'s (1986) further large-scale research on the model, presenting that different learning factors were hypothesized to interact and account for school learning. It articulates that student learning behavior is important for the success of the learning process, but they only comprise a portion of the whole learning equation. Notably, some student behavioral variables, such as motivation and attitudes, had indirect effects on learning, which means that it is indeed an influencing factor but just "went through" because of other mediating variables. Furthermore, it highlighted primary variables that affect learning outcomes, such as student ability and motivation, quality and quantity of instruction, learning-conducive classroom, education-stimulating home setup and peer group, and exposure to mass media and technology. Generally, Walberg's model, as cited by McGrew [46], capsulizes that the above-mentioned core factors affecting learning outcomes must appear necessary and insufficient by themselves for learning.

Moreover, in the recent study by Ragpala [44], attitude towards learning is one of the contributing factors affecting learning outcomes. However, concerns about family, peers, instructors, technology, time, and health are also considered. These factors are relevant because learners have maximum exposure to social media and online games but minimal communication with learning peers and school instructors. On the contrary, a study by Pentang et al. (2022) on behavior-performance correlation revealed a highly significant strong-positive correlation between the variables implying that the more learners display a positive response to the instruction, the better their performance will be. However, this result is not always a guarantee for academic success, considering other factors that may influence both the learner's attitude and performance.

These mentioned factors mostly emerged as the pandemic started. Considerations on parents' academic readiness, digital gap, and production and delivery of quality modules may result in poor learning outcomes [17]. Furthermore, despite the excellent quality in the implementation of PMDL where adherence to the DepEd national standards were met, considerations on parental incapacity as learning guides, inconsistent participation of learners, compliance, types of assessments, activities, and outputs still post as hindrances in achieving desired learning outcomes [35]. Taking the aforesaid findings into consideration, learning behavior considerably showed no strong influence on academic achievement in this study that several intervening factors might buy (Walberg, 1986 cited in McGrew; Dangle & Sumaoang, [17]; Ragpala, [44]; Talimodao & Madrigal, [35]), which were not part of the research scope. Nevertheless, it is still a concern that needs not to be disregarded.

7. SUMMARY AND CONCLUSION

7.1 Summary

The assessment of Grade 7 public high school students, when taken as a whole, revealed a high extent of learning behavior towards modular English instruction. The findings obtained a similar result of high learning behavior extent when the learners were grouped according to sex.

On the matter of academic performance, the assessment of Grade 7 public high school

students, when taken as a whole, presented an average level of academic performance under modular English learning. Similarly, it presented that both male and female learners display an average level of academic performance when grouped according to sex.

There exists no significant difference in the extent of learning behavior toward English modular instruction in the behavioral domain of Attention-Persistence among males and females. However, a significant difference was found in terms of Competence-Motivation, Attitude towards Learning, and Strategy-Flexibility when the learners were grouped in terms of sex.

There is no significant difference between male and female learners' levels of modular English academic performance in vocabulary, grammar, and reading comprehension competencies.

Finally, the study found no significant relationship between the learning behavior and academic performance of the Grade 7 learners under the modular English instruction in the SY 2020-2021.

7.2 Conclusion

The findings of the study unraveled that there is a high extent of learning behavior manifested towards modular English instruction among Grade 7 public high school students from four (4) selected schools in a district within the Division of Cadiz City when their assessment was taken as a whole and when grouped according to sex. This means that during the educational shift where schools in the locality adopted the PMDL setup, the Grade 7 respondents exhibited desirable learning behaviors while studying English modular concepts, performing language activities, and mastering the expected competencies. These positive learning behaviors cover the manifestation of motivation toward modular learning in English, attention, interest in new language concepts and tasks, persistence to perform desired English outputs, and adaptability to the new learning experience. Both male and female Grade 7 learners display a high extent of English modular learning behavior, implying that both groups display the same aforementioned learning behaviors expected while under the distance learning setup. In terms of the level of academic performance, the assessment of Grade 7 learners in the English teacher-made test when taken as a whole and when grouped in terms of sex revealed an average level of English modular academic performance. During the PMDL delivery of English 7, the learners only

satisfactorily attained competence in grammar, vocabulary, and reading comprehension, which were delivered within the school year. This implies that the learners could not fully reach the expected English language objectives covered within the school year under PMDL. Different factors during the pandemic may have affected the learners in fully achieving the expected competencies, such as suitability of assessment, instructional delivery, lack of supervision from parents and guardians at home, household distractions, and other existing variables that may have influenced distance language learning.

Meanwhile, no significant difference was found in the extent of learning behavior of learners toward English modular instruction in the domain of Attention-Persistence when they are grouped by sex. In other words, since the mean difference between these variables is not that notable, the extent of attention to and persistence in completing modular English tasks do not vary among male and female Grade 7 learners. Both groups dedicate attention when given English modules to study and persevere in accomplishing tasks. However, there is a significant difference in the learners' extent of learning behavior towards English modular distance learning in terms of Competence-Motivation, Attitude toward Learning, and Strategy/Flexibility according to sex. Females rated significantly higher than males in terms of these learning behavior domains. In other words, female learners, compared to males, manifest a greater extent of motivation in completing English activities, interest in learning the target language, and flexibility and adaptability in performing new English modular tasks at home.

Moreover, it was presented that there is no significant difference in the level of academic performance of the participants in terms of the areas of vocabulary, grammar, and reading comprehension according to sex. This means that sex is not a contributing factor in the modular academic performance in English of the participants when assessed upon the above-mentioned language competencies.

Lastly, this study found no significant relationship between the learning behavior and the academic performance of the respondents. This result implies that the participants' learning behavior towards modular English instruction does not directly contribute to their academic performance in the target subject matter.

Given the findings, it can be concluded that there might have been an interplay of other existing factors (Walberg, 1986; Talimodoa & Madrigal, 2021) [17,44] that have affected the learners' English academic achievement during the modular learning setup greater than their learning behavior. Based on several reviewed studies, the whole learning process covers a broad spectrum of intervening factors that influences learning, and the behavioral aspect is only a portion of it. Also, the previous studies [42,10] revealing relationships between the two above-mentioned variables occurred during the face-to-face learning setup where teachers, peers, and other stakeholders are important mediating factors that positively helped and influenced both academic achievement and learning behavior of students opposite to the current distance learning setup where independent learning and self-regulation is more required.

Finally, with the findings of the study revealing an already high manifestation of positive learning behavior of Grade 7 students under English modular learning but only achieving an average level of academic performance, teachers may opt to conduct English diagnostic tests to look into the strengths and weaknesses of learners to improve low English performance. Also, looking into the modular implementation, appropriateness of assessments, English modular packages, teachers' instructional supervision amid distance learning, and stakeholder partnership are pivotal in reaching optimum academic performance at school while maintaining the display of positive learning behavior.

8. LIMITATIONS OF THE STUDY

This study considers several limitations. First, the environmental constraints during the conduct of the study. The pandemic hindered the researcher from fully supervising the manner of data gathering which left school enumerators and parents at home to act as guardians to the respondents which may have caused inconsistencies in instruction and also comprehension of questions. Second, the test tool used was considered. The original Learning Behavior Scale was a teacher-observed survey questionnaire, unlike the present self-assessed questionnaire by the learners. Results on studies related to this variable may vary according to the test tool utilized. Lastly, several factors during the pandemic may have interplayed the respondents' distance learning performance. Different results

may yield considering aspects such as varying socio-economic status, geographic location, and digital gap of learners.

9. PRACTICAL APPLICATIONS

Following the results of the study which show insignificance in the relationship between the learning behavior and academic performance of students amidst English modular learning, it still shed light on the learners' status during pandemic where positive behaviors were displayed, however learners still fell short in achieving higher academic performance in consideration of stronger interplaying factors. Thus, this result may serve as basis to revisit the PMDL implementation, and craft contextualized English 7 materials and enhancement programs to fill the language gaps of learners during the school year.

10. DIRECTION FOR FUTURE RESEARCH

Given the findings of this study, the researcher ventures on coordinating with fellow language instructors and education supervisors to craft quality English supplementary learning materials, learning activity sheets, and language innovations that can effectively reach learners needing mastery in grammar, vocabulary, reading comprehension, and other essential competencies that will allow them to achieve a higher level of academic achievement while maintaining the consistent display of desired learning behavior may it be in modular or face-to-face learning. The researcher also hopes to explore more research works related to this construct. Specifically, to employ another relevant research approach to generate a more in-depth understanding of the complex behavioral aspect of learners and how it affects learning. Finally, a replication of the study in a face-to-face learning setting is sought after.

11. RECOMMENDATIONS

In view of the findings of this study, the following recommendations are hereby presented.

11.1 Instructional Materials (IMs) specialists like Education Program Supervisors (EPS) in English

They may utilize the results of the study as the basis for crafting quality English learning materials in the form of modules and learning activity sheets, which can effectively transfer

competencies in grammar, vocabulary, reading comprehension, and other essential competencies that will allow learners to achieve a higher level of academic achievement in English while maintaining the consistent display of desired modular learning behaviors among them.

11.2 English Language Teachers

They may use the findings of this investigation to provide supplemental learning activities and learning materials to reinforce students' learning and deliver the needed linguistic competencies while at home. Teachers must also focus on providing strategic supplemental activities to strengthen behaviors of competence-motivation, attitude toward learning, and strategy-flexibility across male and female learners to allow the higher display of positive learning behaviors.

11.3 School Administrators

They may develop contextualized innovative programs that will help cater to the varying needs of students with problems coping with modular distance learning. These programs may focus on effectively delivering the most essential learning competencies in English to help students reach a higher level of academic performance.

11.4 Future Researchers

They may consider the findings of the study to explore more research works related to this construct. Specifically, it is recommended that they employ 52 another relevant research approach, such as a case study, to generate a more in-depth understanding of the complex behavioral aspect of learners and how it affects learning. Other researchers may also replicate the study to a face-to-face learning setting. Also, future studies may explore using a teacher-assessed or parent-assessed test tool to observe students' learning behaviors since LBS was originally constructed for this purpose. However, because of distance learning, this study modified the tool for students' self-assessment. Finally, it is recommended that future research ventures revisit the English modular instruction with a broader educational scope and identify other underlying factors that contribute to the holistic learning of the students.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The researcher adhered to the Philippine Health Research Ethics Board (PHREB) ethical guidelines and addressed the general principles of respect for person, beneficence, and justice to ensure the ethical soundness of the study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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