

Original Research Article

Quantifying Senior High School Students' Satisfaction in the Implemented Modular Distance Learning

ABSTRACT

Aims: Modular distance learning (MDL) emerged as a solution to meet the constitutional mandate of the schools in the country in upholding the right of all citizens to quality education, amidst COVID-19 pandemic. During its implementation, students were not provided an opportunity to provide feedback about the implementation, which is vital in ensuring that they truly receive quality instruction. To address this, the study was conducted.

Methodology: This study utilized descriptive-comparative and descriptive-correlational design. It was participated by 346 Senior High School Students determined through multi-stage sampling. Generated data were analyzed using mean, standard deviation, Mann-Whitney U test, and Spearman rho rank correlation.

Results: Results have shown that senior high school students are generally satisfied in the implementation of modular distance learning. Inferential results revealed that significant difference exists between grade-levels ($P=.013$). There was no significant difference when students were grouped according to track ($P=.34$), and availability of gadgets for academic use ($P=.12$). Interestingly, findings show that parents' highest educational attainment influence student's level of satisfaction ($P=.000$) in modular distance learning.

Conclusion: The study concludes that instructional and academic support provided by teachers and parents of Senior High School students remain vital, regardless of their grade-level. Furthermore, the experiences they have in the implementation of MDL, which lead to their satisfaction or non-satisfaction in its implementation may be associated to their parents' level of education.

Keywords: Modular Distance Learning, Learning Satisfaction, High School Students, Self-Learning Modules, Parental Support, Pandemic

1. INTRODUCTION

The unprecedented coming of COVID-19 brought profound effects in all sectors of human life around the world, of which education is not an exemption. To meet the constitutional mandate on upholding the right of all citizens to quality education at all times, the Basic Education Learning Continuity Plan (BE-LCP) was formulated in June 2020 by the Department of Education. Results of the survey conducted in the following month showed that among the proposed learning delivery modalities, parents prefer most modular distance learning [1].

In a study made by Reyes [2], it was found that two demographics, that is distance from school, and monthly family income, influence parental challenge and school performance of junior high school students in modular distance learning. A study made by Alvarez [3] revealed that issues unresolved in modular distance learning generally caused the misbehavior of students and failure to submit worksheets. The qualitative study conducted by Pascual [4], focusing on parent-teacher-learner collaboration in modular distance learning showed that parents should relive the concept of being the first teachers, teachers should collaborate with the parents, and learners should develop good study habits. These studies [2-4] provide clues as to which demographic variable may influence learning, the general behavior of students under the modality, and how could teachers and parents enhance students' learning.

These studies however reveal that the students were not provided the chance to give feedback on their experiences in the implementation of MDL. It is important to recognize that as the center of MDL, their feedback is crucial in enhancing the learning modality's implementation. Should this data be acquired, findings could contribute to the limited literature on students' feedback, especially in the local context, which is instrumental in the continuous quality education offered by the school and by the division. Practically, data generated may serve as a basis in developing research-based programs and innovations, that could further the quality of education offered to all senior high school students under the new normal of learning.

1.1 Statement of the Problem

This study aimed to determine the level of satisfaction in Modular Distance Learning (MDL) of Senior High School students in Dr. Vicente F. Gustilo Memorial National High School during the School Year 2021-2022. Specifically, it seeks to answer the following questions:

1. What is the level of satisfaction of senior high school students in MDL for each statement in the questionnaire, categorized according to pre-identified areas?
2. What is the level of satisfaction of senior high school students in MDL when they are taken as a whole and as they are grouped according to demographics (grade-level, track, availability of gadgets for academic use, and parents' highest educational attainment)?
3. Is there a significant difference in the level of satisfaction of senior high school students in MDL when they are grouped according to grade level, track, and availability of gadgets?
4. Is there a significant relationship between the level of satisfaction of senior high school students in MDL and their parents' highest educational attainment?

1.2 Hypotheses

1. There is a significant difference in the level of satisfaction of senior high school students in MDL when they are grouped according to grade level, track, and availability of gadgets.
2. There is a significant relationship between the level of satisfaction of senior high school students in MDL and their parents' highest educational attainment.

1.3 Review of Related Literature

MDL is just one of the four learning delivery modalities stated in the Basic Education Learning Continuity Plan [5,6]. It emerged as the state's response to always uphold the constitutional right of all citizens to quality education. The modular approach is considered as a flexible distance teaching mode [7], since students may attend other responsibilities

before they may opt to work on their modules. Consequently, they have more control over their learning.

Despite the many advantages that the modular approach may offer, there are issues that remain unresolved in the modality, such as communication failure, limited teacher guidance, students' discourteous approach to teachers, and complaints about not understanding the module, generally causing misbehavior of students [3]. The findings of De Claro [8] revealed that the prime challenge encountered by students in modular distance learning is poor time management, followed by lack of assistance from parents, household chores, lack of motivation, and lack of assistance from teachers and school.

A plethora of challenges is also encountered by the parents as para-teachers, emerging from the results of research studies [2,4,9,10]. Perhaps, there is confusion on the parents' end which results in their stress, anxiety, and frustrations. DepEd made it clear that parents' role and responsibility is to "communicate with the teacher the situation, progress, and challenges encountered by their children" and to guide their children in "accomplishing the assessment tasks and or monitoring tools designed by their teacher" [11, p. 3]. To be explicit, teachers remain as the learner's academic supervisor and that their role is to maintain the academic communication between their children and teachers.

Several studies have shown that grade level offers significant differences in students' perceptions of their learning environment [12,13]. These studies especially converged on the results that significant differences in grade level exist in two factors which are teacher-support and task orientation. In addition, the study of Hoang [12] showed that significant differences exist in students' two attitude scales which are the attitude of inquiry, and student self-efficacy. Along with this, another study has found that grade level plays a significant role in students' self-regulated writing strategy [14]. It is important to recognize that these attitude scales and self-regulated learning, in general, are necessary learner characteristics for self-directed learning [15], which is needed in modular distance learning.

The study of Gutierrez [16] which focused on the effectiveness of modular learning in a certain subject revealed that students in the academic track performed better compared to those who are in the technical-vocational and livelihood (TVL) track. For this reason, Gutierrez [16] suggested that to improve the academic performance of students enrolled in the TVL track, teachers must exert extra effort. Along with this, the track was found by Coros and Madrigal [15] to correlate with self-efficacy in learning. Perhaps, the differences in the findings of Gutierrez [16] may be associated with the general self-efficacy levels of students in different tracks.

Castillo [17], in consideration of the data coming from Department of Information and Communications Technology's (DICT) National Information and Communications Technology Household Survey 2019, had put forth concerns on digital divide and inequalities in learning opportunities brought by the pandemic-induced implementation of distance learning. Truly, access to technological infrastructures and devices are vital in the new normal of learning, not only as pointed by Castillo [17] but with other studies [3,7,10,18].

The study of Kintanar et al. [9] whose majority of respondents' parents are high school graduates showed that parents find it difficult to provide academic assistance to their children for they cannot completely understand the concepts and activities in the module. Furthermore, parents do not know how to establish a system that could effectively facilitate instruction to their children [9,10]. Consistent with this are the findings of Panganiban and Madrigal [18] in their qualitative study, which revealed that one of the factors greatly affecting the quality of education in the new normal is the competence of parents to give assistance.

2. METHODOLOGY

2.1 Research Design

Since the study would like to determine if a significant difference exists in the level of satisfaction of students in modular distance learning as they are grouped according to demographic variables and that it would like to identify on which of the demographic variables demonstrate significant correlation to their level of satisfaction in modular distance learning, the study utilized descriptive-comparative and descriptive-correlational design.

2.2 Respondents

Respondents of the study were the 346 Senior High School Students from Dr. Vicente F. Gustilo Memorial National High School, Division of Cadiz City, during the School Year 2020-2021. Taro Yamane formula was used to determine the sample size. The respondents were identified using multi-stage sampling, with the following stages proceeding accordingly: stratified sampling according to year-level, stratified sampling according to track, and convenience sampling. The two stratifications were employed to ensure that there will be equal representation of Senior High School Students relative to year-level and track. Convenience sampling is employed in consideration of the need to secure a parental consent form, and the need to conform with health protocols needed to be observed by the researcher.

Table 1. Distribution of respondents.

Year-level	Track	N	n	Percentage (%)
Grade 11	Academic	1007	137	39.55
	TVL	358	49	14.06
<i>Sub-total</i>		<i>1365</i>	<i>186</i>	<i>53.58</i>
Grade 12	Academic	920	125	36.14
	TVL	261	35	10.25
<i>Sub-total</i>		<i>1181</i>	<i>160</i>	<i>46.39</i>
Grand Total		2546	346	100

2.3 Research Instrument

To assess respondents' level satisfaction on modular distance learning, a researcher-made instrument was utilized. Relevant DepEd Orders were primarily utilized as the basis in formulating the sub-areas and statements in the instrument. The researcher also utilized module evaluation and modular learning questionnaires available online, such as from "Student Experience on a Module Survey" from The Open University (n.d.), "Module Feedback Questionnaire" from The University of Warwick (n.d.), and "Student Evaluation of Module" from The University of Sheffield (n.d.).

The items in the instrument have undergone content validity through a 5-member panel of evaluators. Four of them were master teachers and one was a school principal. Lawshe's [19]. Content Validity Ratio was used since this type of content validity tries to measure each item's usefulness. With the CVR value of 0.99, the instrument was considered valid.

To determine the reliability of the instrument, a trial - run was conducted on thirty (30) senior high school students in Dr. Vicente F. Gustilo Memorial National High School. The instrument was found reliable at Cronbach's alpha coefficient value of 0.927 [20].

The respondents had five alternatives to choose from, with the following descriptions and interpretations:

Table 2 : Modular Distance Learning Satisfaction Scale

Scale	Mean Range	Verbal Description	Verbal Interpretation
5	4.21 - 5.00	Very High	The learner is very satisfied with modular distance learning.
4	3.41 – 4.20	High	The learner is satisfied with modular distance learning.
3	2.61 – 3.40	Moderate	The learner is moderately satisfied with modular distance learning.
2	1.81 - 2.60	Low	The learner is unsatisfied with modular distance learning.
1	1.00 - 1.80	Very Low	The learner is very unsatisfied with modular distance learning.

2.4 Data Gathering Procedure

The researcher adhered to all the minimum health and safety measures, protocols, and standards (including but not limited to wearing of face mask and face shield, social distancing, handwashing, etc.) during data collection. The approval of the Schools Division of Cadiz City, through the Schools Division Superintendent and the Principal of Dr. Vicente F. Gustilo Memorial National High School, was obtained before the conduct of the study. Upon approval, the researcher coordinated with the school's Grade-Level-in-Charge to assist the researcher during data collection. For respondents with access to the internet, google forms were used. A link was provided to each respondent after securing their parental consent. For respondents who have no access to the internet, a hard copy was provided following the schedule of releasing and retrieval of Self-Learning Modules (SLMs). No information that discloses the respondents' identity was released or published without their specific consent to the disclosure.

2.5 Data Analysis Procedure

For the respondents' demographic profile, frequency count and percentage distribution were used. For descriptive problems, the mean and standard deviation was employed. For inferential problems, non-parametric tests were utilized since according to Kolmogorov-Smirnov and Shapiro-Wilk test [$KS=0.083$, $p=0.000$], the data is not normally distributed. Relative to this, the Mann-Whitney U test was utilized in determining significant differences between the level of respondents' satisfaction in MDL as they are grouped according to grade level, track, and availability of gadgets. As to determining the correlation between parents' highest educational attainment and the level of respondents' satisfaction in MDL, Spearman rho rank correlation test was utilized.

3. RESULTS AND DISCUSSION

3.1 Profile of Respondents

Table 2 shows the demographic profile of respondents. In total, there were 346 Senior High School Students who participated in the study. Since the number of respondents relative to grade-level and track was determined through stratified sampling, it generally shows that there is a slightly greater number of grade - 11 ($f = 186$, $\% = 53.8$) than grade-12, and that they are generally dominated by those who belong to academic track ($f = 262$, $\% = 75.7$). As to the availability of gadgets for academic use, almost all respondents confirmed that they

have them ($f = 335$, $\% = 96.82$). Taking the highest educational attainment of parents of senior high school students, the majority responded that their parents graduated from high school ($f = 118$, $\% = 34.10$).

Table 3. Demographic profile of respondents

Variable	f	%
Grade		
11	186	53.8
12	160	46.2
Track		
Academic	262	75.7
TVL	84	24.3
Availability of Gadgets for Academic Use		
Yes	335	96.82
No	11	3.18
Parents' Highest Educational Attainment		
Elementary Level	16	4.6
Elementary Graduate	14	4.0
High School Level	42	12.1
High School Graduate	118	34.1
College Level	59	17.1
College Graduate	97	28.0
Total	346	100

3.2 Level of Satisfaction in MDL for Each Statement in the Questionnaire

Table 3 shows the level of satisfaction in modular distance learning of respondents for each item in the questionnaire. It can be observed that almost all mean values fall on "High", which indicates that senior high school students are generally satisfied with the content of self-learning modules, of teacher support, parental support, and assessment and feedback in the implemented modular distance learning. This entails however that there could still be room for improvement to move from such level of satisfaction to a higher level.

Item 5 which states that "I am satisfied with the way that my modules stimulate my imagination" showed the lowest mean value. This suggests that the students find it difficult to form virtual images indicated in the modules. While SLMs generally require students to read entries therein since it is learner-centered [17], it remains imperative to recognize that there are various forms of learners and that they may be engaged in learning differently. Hence, it may be helpful to provide diagrams, illustrations, or images for some concepts, whenever applicable and necessary.

Looking at the deviation of scores, there appears to have a pattern of high deviation in the responses of senior high school students in parental support, compared to other areas. Hence, they appear to be divided as to statements indicating their satisfaction when it comes to the support offered by their parents to them. To be explicit, in a real scenario, there are students who have high regard or agreement that their parents provide instructional guidance and academic support to them. On the other hand, there are students who do not find the instructional guidance and academic support from their parents adequate.

Relative to the deviation of scores mentioned in the previous paragraph, a closer look at the mean values under parental support was made. Remarkably, item 18 ($M=3.44$, $SD=1.05$) which states “I am satisfied with the explanation of my parents about concepts in the module which I find difficult, whenever I reach out to them” earned the lowest value. It was followed by item 16 ($M=3.56$, $SD=1.05$) which states that “I am satisfied with the clarifications given to me by my parents, every time I ask about unclear instructions.” This implies that among all statements in this area, this is where senior high school students need the most attention, that is “explanation of difficult concepts” and “clarifications on unclear instructions in the module.” These findings provide an empirical basis as well as an opportunity for education stakeholders, especially the teachers, to create innovative programs which the parents find difficult to satisfy in MDL.

Among all statements, item 11 ($M=3.99$, $SD=0.86$) which states “I am satisfied with the clarifications given to me by my teachers, every time I reach out to them to ask about unclear instructions” earned the highest value. It suggests that senior high school students have high regard on the availability and responsiveness of their teachers on instructional matters arising from confusions in the module. This is concretized by the smallest value of deviation in responses in item 10 ($M=3.88$, $SD=0.82$), which states that “I am satisfied with the time that my teachers extend to me, whenever I need academic guidance and assistance from them.” This shows that majority of senior high school students have relatively high agreement on this statement, that their teachers always remain available to assist them, so that they may have clear understanding of instructions in the modules.

Table 4. The level of satisfaction of respondents in MDL for each statement in the questionnaire, categorized according to pre-identified areas

No.	Content of SLMs (I am satisfied with the...)	Mean	SD	Interpretation
1	clarity of instructions in my learning modules.	3.57	0.86	High
2	way the content of my modules are organized.	3.60	0.85	High

3	relevance of module-content on my strand.	3.89	0.84	High
4	new learnings I get from my learning modules	3.69	0.92	High
5	way that my modules stimulate my imagination.	3.37	0.91	Average
6	examples provided in the modules, that improves my understanding of difficult concepts.	3.60	0.94	High
7	way the content improve my understanding of the previous lessons I learned.	3.64	0.83	High
8	way the content of my modules prepare me for the future endeavors I plan to take.	3.63	0.94	High
9	learning resources provided in my modules (link on website explanation, interactive files, and instructional videos), which are very helpful in understanding difficult concepts.	3.82	0.95	High
Teacher Support (I am satisfied with the...)				
10	time that my teachers extend to me, whenever I need academic guidance and assistance from them.	3.88	0.82	High
11	clarifications given to me by my teachers, every time I reach out to them to ask about unclear instructions.	3.99	0.86	High
12	way my teachers monitor my progress so that I may finish my modules on time.	3.84	0.89	High
13	explanation of my teachers about concepts in the module which I find difficult, whenever I reach out to them.	3.82	0.88	High
14	all the academic support provided to me by my teachers, so that I may learn better in my modules.	3.87	0.83	High
Parental Support (I am satisfied with the...)				
15	time that my parents extend to me, whenever I need academic guidance and assistance from them.	3.78	1.00	High
16	clarifications given to me by my parents, every time I ask about unclear instructions.	3.56	1.05	High
17	way my parents monitor my progress so that I may finish my modules on time.	3.84	1.07	High
18	explanations of my parents about concepts in the module which I find difficult, whenever I reach out to them.	3.44	1.05	High
19	all the academic support provided to me by my parents, so that I may learn better in my modules.	3.76	1.07	High
Assessment and Feedback (I am satisfied with the...)				
20	system of how I could check if my answers are wrong or right in the module.	3.67	0.94	High
21	way my parents update me on how I am progressing according to my teachers.	3.76	0.92	High
22	way my teachers help me understand why my answer in the module is wrong, whenever I need clarifications from them.	3.74	0.89	High
23	immediate feedback of my teachers on how I performed in my modules.	3.68	0.94	High
24	manner on how I am being graded.	3.89	0.87	High
25	over –all assessment and feedback procedures.	3.85	0.90	High
As a Whole		3.73	0.58	High

3.3 Level of Satisfaction in MDL of Respondents When They are Taken As a Whole and According to Demographics

Table 4 shows the level of satisfaction in modular distance learning of respondents when taken as a whole and when they are grouped according to grade level, track, availability of gadgets for academic use, and parents' highest educational attainment.

Notably, the level of satisfaction in modular distance learning of respondents in all areas, consequently as a whole ($M=3.73$, $SD=0.58$), is “High”. This means that senior high school students, in a grand perspective are generally satisfied in modular distance learning. Considering that MDL is a flexible distance teaching mode, giving the students more control over their time, and allowing them to attend to other responsibilities before they work in their modules [7], perhaps, that explains why they are generally satisfied with MDL.

A closer look at the mean score shows that certain demographic variables (grade-12 students, students from TVL track, students who have no available gadgets for academic use, and those whose parents' highest education achieved is elementary graduate), consistently show lower mean scores in satisfaction in modular distance learning in all areas compared to their counter or other demographic, consequently as a whole.

To enhance the level of satisfaction of grade 12 students, teacher support and orientation on activities in the module may be improved [12,13]. To better the satisfaction of TVL students in MDL, education stakeholders may consider initiating activities that enhance the level of their self-efficacy in learning [15,16]. Considering the vitality of the availability of gadgets for academic use [17], perhaps, innovative projects may be initiated through the collaboration of schools with appropriate agencies and other education stakeholders. Finally, considering the role of parents as para-teachers in the new normal of learning, and the influence that the level of their education makes on their capacity and capability to fulfill this responsibility [9,10,18], guidance, assistance, programs, and projects must be provided by the teachers and school administrators, appropriate to their need.

Table 5. Level of satisfaction of respondents in MDL when taken as a whole and when they are grouped according to demographics

Variable	Satisfaction in MDL		
	Mean	SD	Interpretation
Grade-level			
11	3.78	0.62	High
12	3.67	0.53	High
Track			
Academic	3.75	0.58	High
TVL	3.67	0.59	High
Availability of Gadgets for Academic Use			
Yes	3.74	0.58	High
No	3.48	0.57	High
Parents' Highest Educational Attainment			
Elementary Level	3.81	0.49	High
Elementary Graduate	3.44	0.49	High
High School Level	3.70	0.50	High
High School Graduate	3.66	0.56	High
College Level	3.77	0.66	High
College Graduate	3.82	0.61	High
As a Whole	3.73	0.58	High

3.4 Difference in the Level of Satisfaction of Senior High School Students When They Are Grouped According to Grade Level, Track, and Availability of Gadgets

Table 5 shows the significant difference in the level of satisfaction of senior high students in modular distance learning (MDL) when they are grouped according to grade level, track, and availability of gadgets for academic use.

Results show a significant difference in their level of satisfaction in MDL when they are grouped according to grade level [$U=12576.00$, $p=0.013$], hence the alternative hypothesis is accepted. As to track [$U=10235.50$, $p=0.335$] and availability of gadgets for academic use [$U=1338.50$, $p=0.122$], results show that there are no significant differences. In this regard, the alternative hypothesis for these variables is rejected. Thus, there is no significant difference in the level of satisfaction of senior high school students when they are grouped according to track and availability of gadgets for academic use.

The difference in satisfaction between grade levels entails that the common notion that, since they are at a higher level, they do not need much support from their teachers, must be suspended. Suspended in the sense that they are to be allowed to work independently, but there must be readily available academic support every time they need it. It is important to note that grade-level also creates differences in self-regulated learning [14], which is a necessity for self-direction [15], hence before deploying the students to work by themselves, teachers are to provide clear instruction, remain reachable, and be responsive, in times that the students need academic assistance from them [12,13].

Though the findings of Gutierrez [16] showed that MDL is more effective for students in academic track than those in TVL track, the present study showed that it may not be influenced by the level of their satisfaction in MDL itself. The paper maintains that the findings of Gutierrez [16] may be influenced by other constructs such as self-efficacy in learning [15].

Since the study initially revealed that almost every senior high school student in the school has gadgets, available for academic use, it may explain why the difference in mean scores between the two classifications remains insignificant. Though there are concerns about the digital divide and inequality of access to educational opportunities, brought by pandemic-induced modular distance learning [17], the findings suggest that the senior high school students in the study's context are not that very much affected. Hence, any inefficiencies or issues which may arise regarding the implementation of MDL cannot be directly attributed to access to technological infrastructures.

Table 6. Difference in the Level of Satisfaction of Senior High School Students in Modular Distance Learning (MDL) when they are grouped according to Grade-Level, Track, and Availability of Gadgets for Academic Use

Variable	N	Mean Rank	U	Z	P
Grade					
11	186.00	185.89	12576.00*	-2.485	0.013
12	160.00	159.10			
Track					
Academic	262.00	176.43	10235.50	-0.964	0.34
TVL	84.00	164.35			
Availability of Gadgets					
Yes	335	175.00	1338.50	-1.545	0.12
No	11	127.68			

Note: significant when $p \leq 0.05$

3.5 Relationship between Parents' Highest Educational Attainment and Level of Satisfaction of Senior High School Students

Table 6 shows the relationship between parents' highest educational attainment and senior high school student's level of satisfaction in modular distance learning (MDL). Results show a significant relationship between parents' highest educational attainment and senior high

school student's level of satisfaction in $[p(344)=0.113, p=0.035]$, hence alternative hypothesis between them is accepted.

Consistent with the findings of Kintanar et al. [9], the parent's highest educational attainment in the present study is also high school graduates. The findings likewise cohere with the findings of Kintanar et al. [9], that parents find it difficult to provide academic assistance to their children for they cannot completely understand the concepts in the learning modules. Furthermore, they may not have sufficient knowledge on how to facilitate instruction to their children as para-teachers [9,10]. In this regard, teachers and school administrators should provide considerable assistance to parents, relative to their highest educational attainment, so that they could perform their responsibilities well as partners of the school in the effective implementation of modular distance learning [18].

Table 7. Relationship between parents' highest educational attainment and level of satisfaction of senior high school students in MDL

Variable	ρ	df	P
Parents' Educ'l Attainment x Level of Satisfaction on MDL	0.113*	344	0.035

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

4. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary of Findings

Senior high school students are generally satisfied in modular distance learning, when taken as a whole and in all areas, innumerably, content of learning modules, teacher-support, parental support, and assessment and feedback.

There was a significant difference in the level of satisfaction of senior high school students in modular distance learning when they are grouped according to grade level. Based on their mean scores, grade 12 students have significantly lower satisfaction on modular distance learning compared to grade 11 students.

There was no significant difference in the level of satisfaction of senior high school students in modular distance learning when they are grouped according to track and availability of gadgets for academic use. It indicates that whether the student belongs to academic or TVL track, or that they have available gadgets or none, the level of their satisfaction in modular distance learning remains considerably equal.

There was a significant relationship between the level of satisfaction of senior high school students in modular distance learning and their parents' highest educational attainment. This indicates that the level of education of parents do influence their children's satisfaction in modular distance learning.

4.2 Conclusions

Senior high school students in Dr. Vicente F. Gustilo Memorial National High School are generally satisfied with the implementation of modular distance learning in school. They are generally satisfied with how they are learning from the content of the learning modules, from the support they receive from their teachers as well as from their parents, and as to how they

are being assessed and provided feedback on their learning progress. As to demographics, grade 12 students should be provided with sufficient support especially in clarifying activities and concepts in the content of learning modules and in enhancing the support they are receiving from their parents. Since the study revealed that there is a correlation between parents' highest educational attainment and students' satisfaction in modular distance learning, it follows that the experiences they have in the course of the implementation of MDL, which lead to their satisfaction and non-satisfaction of it, may be associated to their parents' level of education.

4.3 Recommendations

Given the findings and conclusions of the study, the following recommendations are suggested:

The school administrators, while maintaining this high level of satisfaction of students, may initiate additional programs and innovative projects bring this level of satisfaction of students to a higher level. The programs should especially focus on developing the capacities and capabilities of parents as para-teachers, and as partners of the school in the effective implementation of modular distance learning. Teachers are suggested to initiate innovative projects that foster parents' effective facilitation of instruction at home, considering that it is the parents who serve as their extension at home. Parents, as para-teachers at home should strive to maintain the communication line between the teacher and their children. Along with this, they should keep the teachers informed as to how their children are progressing from their learning modules at home, and what are the challenges encountered by them as well as by their children during their module completion.

Future researchers are encouraged to replicate the study, so that they would have a clear grasp as to how their students are taking the implementation of modular distance learning, and for them to have empirical basis for their programs, projects, and innovations which will continually ensure the quality of instruction that each Filipino students withing their reach, receive. Relative to their locale, they may also include additional demographic variables since the study was limited only to grade, level, track, availability of gadgets for academic use, and parents' highest educational attainment. Considering the influence of parents' highest educational attainment, it may be useful for future studies to also investigate the influence of family income on the satisfaction of students in modular distance learning.

ETHICAL CONSIDERATIONS

Due to COVID-19 protocols, parental consent form, orientation to respondents regarding the purpose and scope of the study, the nature, and parts of the questionnaire, and most especially, the affirmation of their willingness to participate in the study was included in the introductory part of the instrument.

REFERENCES

1. DepEd, 2020. *Official Statement on LESF*. Accessed 18 September 2021. Available: <https://www.deped.gov.ph/2020/07/30/official-statement-on-lesf/>
2. Reyes RR. Parental Challenges and School Performance of Junior High School Students in Distance Learning Modality. *International Journal of Research in Engineering, Science and Management*. 2021 Jul 8;4(7):71-6.

3. Alvarez MY. Issues And Concerns Of Teachers In Mindanao State University-Sulu Towards Modular Distance Learning Approach: An Analysis. *Indonesian Community Empowerment Journal*. 2021 Jun 24;1(2):51-69.
4. Pascual EA. Parent-Teacher-Learner Collaboration in Modular Distance Learning. *Parent-Teacher-Learner Collaboration in Modular Distance Learning*. 2021 Sep 3;83(1):14-.
5. DepEd Order No. 12 series of 2020. *Adoption of the Basic Education Learning Continuity Plan for School Year 2020 -2021 in Light of the COVID-19 Public Health Emergency*. Accessed 18 September 2021. Available: [deped.gov.ph/2020/06/19/june-19-2020-do-012-2020-adoption-of-the-basic-education-learning-continuity-plan-for-school-year-2020-2021-in-the-light-of-the-covid-19-public-health-emergency/](https://www.deped.gov.ph/2020/06/19/june-19-2020-do-012-2020-adoption-of-the-basic-education-learning-continuity-plan-for-school-year-2020-2021-in-the-light-of-the-covid-19-public-health-emergency/)
6. DepEd Order No. 18 series of 2020. *Policy Guidelines for the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan*. Accessed 18 September 2021. Available: <https://www.deped.gov.ph/2020/07/20/july-20-2020-do-018-s-2020-policy-guidelines-for-the-provision-of-learning-resources-in-the-implementation-of-the-basic-education-continuity-plan/>
7. Sejpal K. Modular method of teaching. *International Journal for Research in Education*. 2013 Feb;2(2).
8. De Claro WN. Challenges and Barriers Encountered by G10-Agoncillo Learners in the Implementation of Modular Distance Learning at Taal National High School. *International Journal of Research in Engineering, Science and Management*. 2021 Aug 3;4(7):409-13.
9. KINTANAR FC, ELLADORA ST, CUIZON FR. PLIGHT OF THE PARENTS OF THE FILIPINO LEARNERS IN THE IMPLEMENTATION OF THE MODULAR DISTANCE LEARNING.
10. Agaton CB, Cueto LJ. Learning at Home: Parents' Lived Experiences on Distance Learning during COVID-19 Pandemic in the Philippines. *International Journal of Evaluation and Research in Education*. 2021 Sep;10(3):901-11.
11. DepEd Order No. 31, Series of 2020. *Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan*. Accessed 18 September 2021. Available: <https://www.deped.gov.ph/2020/10/02/october-2-2020-do-031-s-2020-interim-guidelines-for-assessment-and-grading-in-light-of-the-basic-education-learning-continuity-plan/>
12. Hoang TN. The effects of grade level, gender, and ethnicity on attitude and learning environment in mathematics in high school. *International Electronic Journal of Mathematics Education*. 2008 Apr 4;3(1):47-59.
13. Peer J, Fraser BJ. Sex, grade-level and stream differences in learning environment and attitudes to science in Singapore primary schools. *Learning Environments Research*. 2015 Apr;18(1):143-61.
14. Bai B, Wang J. Hong Kong secondary students' self-regulated learning strategy use and English writing: influences of motivational beliefs. *System*. 2021 Feb 1;96:102404.
15. Coros JD, Madrigal DV. Self-Directed Learning, Self-Efficacy in Learning, and Academic Motivation of Public Senior High School Students.
16. Gutierrez IB. Comparison on the Effectiveness of Modular Learning in General Mathematics among the Senior High School Strands. *Southeast Asian Mathematics Education Journal*. 2021 Dec 8;11(2).
17. Castillo P. Education in the time of COVID: Who has the opportunity to learn?.
18. Panganiban GL, Madrigal DV. Grappling with the learning modules: Experience of Public Elementary Pupils Attending English Written Modular Classes. *Technium Social Sciences Journal*. 2021 Jun 8;20:263-74.
19. Lawshe, C.H., 1975. A quantitative approach to content validity. *Personnel psychology*, 28(4), pp.563-575.

20. Taber KS. The use of Cronbach's alpha when developing and reporting research instruments in science education. Research in science education. 2018 Dec;48(6):1273-96.

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