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Pupils' Engagement in Modular Learning Modality in Public Elementary Schools in San Lorenzo Ruiz, Camarines Norte

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Abstract:- This study determined the pupils' engagement in modular learning modality in public elementary schools in the Municipality of San Lorenzo Ruiz, Camarines Norte. The problems specifically answered in the research are: (1) What is the profile of the respondents in terms of sex, household member/s who can deliver instructional support, educational attainment of household member/s who can deliver instructional support, occupation of household member/s who can deliver instructional support, monthly family income, available gadgets at home and internet connectivity? and (2) What is the level of engagement of pupils in modular learning modality in terms of behavioral engagement, cognitive engagement, and emotional engagement? (3) Is there a significant relationship between the profile of the respondents and their level of engagement through modular learning modality? (4) What are the factors affecting the pupil's level of engagement through modular learning modality? (5) Is there a significant agreement on the factors affecting the level of engagement among the pupils through modular learning modality? In addition, (6) what intervention plan may be proposed to address the factors affecting the level of engagement of pupils through modular learning modality.

The study used descriptive survey research design as well as the correlation research method to test the hypotheses. Data were gathered and analyzed using percentage, ranking, Point Biserial Correlation, Somers' Delta, and Kendall's Coefficient of Concordance. The researcher used total enumeration consisting of 195 Grade 6 pupils from different public elementary schools in the Municipality of San Lorenzo Ruiz, Camarines Norte.

Based on the data gathered, the following findings were given: (1) Out of 195 respondents, 50.2 percent was male. Mothers ranked first as the household members who can deliver instructional support, with a frequency of 111. Majority were elementary graduates with a frequency of 47. Most of them were part-time workers having a frequency of 76. The family income bracket of Php 5,001-Php 10,000 got 38.5 percent among all the respondents. Furthermore, smartphone and mobile data garnered values of 182 and 147 respectively; and (2) On the level of engagement of pupils in modular learning modality in terms of behavioral engagement, the highest was the "teachers' constant reminder of submission and distribution of Self-Learning Modules help the learners manage their time to finish the tasks, and that they can adequately manage their time in answering the Self-Learning Modules because it is always available to be distributed by their teachers with a weighted mean of 3.57 respectively or interpreted as strongly agree. In terms of cognitive engagement, the performance evaluation regularly and properly conducted by the teacher ensures and measures their learning, with a weighted mean of 3.60 interpreted as strongly agree. Furthermore, in terms of emotional engagement, the parents can motivate the respondents and their siblings to make their project and experiments, with a weighted mean of 3.56 interpreted as strongly agree.

Moreover, (3) in the test for a significant relationship between the profile of respondents and their level of engagement through modular learning modality, significant weak positive relationships were noted between the respondent's level of engagement and guardian or elder sibling as the household member who can deliver instructional support (r_b = 0.193, p=0.007; r_b = 0.193, p= 0.024). As to available gadget at home, cable television is to a high level of learning engagement (r_b = 0.151, p=0.035) while broadband as type of internet connectivity (r_b = 0.255, p<0.001). Sex and monthly family income has no relationship in their level of learning engagement through modular approach (r_b= -0.058, p=0.421; d = 0.044, p = 0.41). Finally, the educational attainment and occupation of the household member/s who can deliver instructional support show no relationship to the respondent's level of engagement (p > 0.05); (4) There are several factors affecting the level of pupils' engagement. Among the

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perceived factors affecting pupils' level of engagement through modular learning modality, the highest was" relationships with teachers" with a mean rank of 8.33. Lowest was difficulty in independent learning with a mean rank of 5.61; (5) Results revealed that there is a slight significant agreement on the factors affecting the level of engagement among the pupils through modular learning modality; and (6) interventions were proposed to enhance the pupils' engagement in modular learning modality which include conducting seminars and training for the household members providing instructional support, regular home visitation of teachers, providing instructional materials, and proper time management of teachers.

Based on the findings, it was concluded that: (1) respondents in selected public elementary have almost the same number of males and females. The majority are provided instructional support by their mother, elementary graduates with part-time work with a monthly family income of 5,001 Php – 10,000 Php. Most of the respondents use smartphones and mobile data to connect to the internet; (2) in the level of engagement of pupils in modular learning modality, availability of Self-Learning Modules and constant reminder of teachers regarding the submission and distribution can help the pupils manage their time correctly and finish the tasks on time. Moreover, conducting performance evaluation regularly and properly by the teacher ensures and measures pupils' learning. In addition, parents' involvement can motivate the pupils to become more engaged in modular learning; (3) there is a weak positive relationship between household members who can deliver instructional support, available gadgets at home, and internet connectivity. Meanwhile, monthly family income has no significant relationship between educational attainment, and the occupation of household members who can deliver instructional support; (4) relationship with teachers was the highest factor that can affect the level of engagement of pupils in modular learning modalities; (5) There is a slight agreement on the factors affecting the level of engagement among the pupils through modular learning modalities, and (6) an intervention was proposed based on the study results to enhance the level of engagement of pupils through a modular learning modality.

Based on the findings and conclusions, the following were recommended: (1) The DepEd and LGUs may coordinate programs to support kids and their parents who lack access to adequate educational resources. Teachers may offer a range of learning resources to aid students in independent learning, and they may keep a line of contact open with students and parents during class hours via SMS or other online platforms; (2) The teachers may establish teacher-student relationship through regular home visitation, proper performance evaluation, and giving feedback; (3) The parents or guardians may assist the students' regarding their queries such as unfamiliar vocabulary words even in Self-Learning Modules; (4) The barangay officials may create health-related follow-ups for each student in their respective barangays; (5) The school leaders may build a modified approach based on the pupils' weakest and strongest engagement; (6) The future researchers may continue to conduct data analysis based on the current data presented and may consolidate findings or search for innovative interpretations and patterns in the data and establish inferences that may be drawn from the affective side to further explain the data or generate new observations.

Keywords:- *Pupil's Engagement, Modular Learning Modality, Public Schools.*

I. INTRODUCTION

The spread of COVID-19 in many parts of the world has disrupted the habitus of humans. The things that they have regarded as normal routines such as going to school or work, buying groceries, and meeting friends among others have been ended because of efforts to contain the transmission of the virus. Formal education is forced to adapt to the new normal. Moreover, there is a high possibility that measures that have been worked out would still be adapted even after COVID-19 ends. However, the reconfiguration of the education system taking into consideration COVID-19 not only focuses on the delivery and process of learning but, more importantly, on the goal of formal education itself in times of emergency and crisis (Labastilla, 2020).

As the world becomes globally interconnected, so do the risks it faces. COVID-19 pandemic has not stopped at the national borders. It affects many people regardless of race, level of education, income, and gender as well as the different aspects of their lives. Even though this pandemic becomes a great equalizer as it chooses no one regardless of one's status in life, it has not been true since its consequences have hit the hardest the most vulnerable people. The education sector is not an exception. Students from privileged backgrounds who are supported by their parents could find their way to alternative learning opportunities. Nevertheless, those students from disadvantaged backgrounds often remain shut out when their schools shut down. This crisis has exposed many inadequacies and inequities in the education system, from access to internet and computers needed for online education and the supportive environments to focus on learning, up to the misalignment between resources and needs (Schleicher, 2020).

This pandemic has resulted to the implementation of Modular Distance Learning as urgent response to ensure the continuity of education. Philippines is in the process of conforming to the new standard form of education, and the continuous innovations of educators. The active involvement of other stakeholders is the driving force for its success (Dangle, 2020).

In response, the Department of Education (DepEd) initiated the Basic Education Learning Continuity Plan (BE-LCP) to deliver and provide the learners the different learning opportunities safely. It issued DepEd Order No. 18, s. 2020 also known as "Policy Guidelines for the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan". The public health emergency brought by COVID-19 urged DepEd to be resourceful, and innovative in terms of delivering quality, accessible, relevant and liberating education.

Furthermore, DepEd has issued Order No.32 s. 2020 also known as "Guidelines on the Engagement of Services of Learning Support Aides to Reinforce the Implementation of the Basic Education Learning Continuity Plan in Time of COVID-19 Pandemic" where the procedures, mechanisms, and standards are stipulated to ensure that the delivery of education to its learners, and that their engagement will not be sacrificed.

In this regard, the Municipality of San Lorenzo Ruiz, Camarines Norte is one of the municipalities that continues to support the implementation of Basic Education in the middle of the pandemic. Comprise of eleven (11) public elementary schools, the total enrolment in the elementary level is 2,502 pupils for the school year 2021-2022. All enrolled pupils in the said municipality chose modular distance learning as the learning delivery mode.

On the other hand, this transition to learning remotely from home brought another pivotal factor that must be considered which is the pupil's engagement. This is defined as the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught. This engagement is critical in their learning because it is a significant component of their progress and development. Furthermore, the students being away from school makes the chance of disengagement to be at higher level. Moreover, a student may display inattention, indifference, boredom, pessimism, and apathy with disengagement that will greatly affect their education (Thompson, 2021).

Student engagement can be thought of as the glue that holds all aspects of learning and development together. Student engagement makes teaching more enjoyable, engaging, and rewarding but it has also been proven to have significant effects on pupils. On the other hand, low student engagement is linked to several other bad outcomes including delinquency, aggression, substance addiction, and school dropout. Although these concerning effects are more common in adolescence, low elementary and middle school involvement might put adolescents to a downward spiral. As a result, encouraging student engagement at all grade levels is crucial (Sutton, 2021).

The researcher conducted the study to thoroughly understand the engagement of the students in the modular learning modality, and the potential factors that might affect their performance in light of the aforementioned premises. This understanding has helped the researcher develop plans and interventions for the betterment of the students' setup in this modality.

After more than a year of implementing modular distance learning, it has been observed that most of the pupils could not submit the Self-Learning Modules (SLMs) on time. According to the parents, they are having hard time convincing their children to focus and answer the SLMs. It is also challenging for parents to teach and guide their children in studying and answering the SLMs because the lessons are complicated, and not easy to understand. Although there is a discussion before doing the activities and tasks, it is brief, and that not all the details needed to understand the lessons well could not be found in the SLMs. Moreover, not all families have abilities to teach and guide their children due to some circumstances such as no internet access, lack of gadgets, as well as no understanding of the given lessons. Furthermore, pupils could not focus and get engaged in studying, and answering the SLMs because they prefer to play and spend more time helping their parents in harvesting coconut, weeding the garden or pineapple farm, and doing the laundry. In this regard, the researcher conducted this study to measure the level of engagement of pupils in modular learning modality in terms of their behavioral, cognitive, and emotional engagements. Moreover, this study determined the factors affecting the pupils' level of engagement through modular learning modality, and the significant agreement on the factors affecting the level of engagement among the pupils through modular learning modality. In addition, an intervention plan was proposed to address the factors affecting the level of engagement of pupils through modular learning modality.

A. Statement of the Problem

This study was conducted to determine the pupils' engagement in modular learning modality in public elementary schools for the school year 2021-2022 in the Municipality of San Lorenzo Ruiz, Camarines Norte. Specifically, this study answered the following questions: (1) What is the profile of the respondents in terms of: (1.1) sex; (1.2) household member/s who can deliver instructional support; (1.3) educational attainment of household member/s who can deliver instructional support;

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(1.4) occupation of household member/s who can deliver instructional support; (1.5) monthly family income; (1.6) available gadgets at home: and, 1.7 internet connectivity? (2) What is the level of engagement of pupils in modular learning modality in terms of: (2.1) behavioral engagement; (2.2) cognitive engagement; and (2.3) emotional engagement? (3) Is there a significant relationship between the profile of the respondents and their level of engagement through modular learning modality? (4) What are the factors affecting the pupil's level of engagement through modular learning modality? (5) Is there a significant agreement on the factors affecting the level of engagement among the pupils through modular learning modality? (6) What intervention plan may be proposed to address the factors affecting the level of engagement of pupils through modular learning modality?

B. Hypotheses

➢ The following null hypotheses were tested in this study:

- There is no significant relationship between the profile of the respondents and their level of engagement through modular learning modality.
- There is no significant agreement on the factors affecting the level of engagement among pupils through modular learning modality.

C. Scope and Limitation of the Study

This study focused on assessing the pupils' engagement in modular learning modality in public elementary schools in San Lorenzo Ruiz, Camarines Norte for school year 2021-2022. It was conducted in San Vicente-San Lorenzo District specifically in San Lorenzo elementary schools.

Specific concerns determined in this study were the profile of the respondents as to their sex, household member/s who can deliver instructional support, educational attainment of household member/s who can deliver instructional support, monthly family income, available gadgets at home, and internet connectivity. In addition, this study determined the level of pupils' engagement in modular learning modality based on behavioral, cognitive, and educational engagements which were reflected in several theories on engagement.

The study used the descriptive-correlational survey method. The respondents of this study were the Grade 6 pupils of public elementary schools in the municipality of San Lorenzo Ruiz, Camarines Norte. The researcher proposed an intervention plan based on the observed results of the study.

The study was conducted from January to April 2022. Out of the ten (10) public elementary schools in the Municipality of San Lorenzo Ruiz, three (3) schools were included in this study namely Salvacion Elementary School, Imelda Elementary School, and Mampurog Elementary School, with 195 enrolled Grade 6 pupils for School Year 2021-2022 which was the limitation of this study. Total enumeration was employed due to the limited number of respondents.

D. Significance of the Study

The result of this study would greatly contribute to the pupils, parents, other stakeholders, teachers, school administrators, community, Local Government Unit, Department of Education, researcher herself, and future researchers aiming for the improvement of the lifelong learning achievement of the pupils, as well as strengthening using modular learning delivery modality in this new normal situation that the Filipinos are facing now.

Pupils. The direct beneficiaries of the output of this research will be the pupils. Improvements in the approach of Modular Learning Modality can improve their engagement and involvement in the process of learning. Additionally, this will make them develop sense of responsibility and improve self-study. Pupils can increase their interest and motivation to become more engaged in learning through a modular learning modality. Furthermore, it can make them more aware of how important the learning modules are and give them more effort and time to study and answer their modules.

Teachers. The result of this study will serve as a guide for the teachers to determine the enhancements that they need to make in terms of parent-teachers' communication, monitoring, and activities such as meetings, and open forums to ensure that using the modular learning modality will be effective and beneficial to the pupils. This study can help them identify the pupils who need more attention and help in answering and studying the learning modules. Indeed, the result obtained will give them ideas about different interventions to address the factors affecting the level of engagement of pupils through modular learning modalities.

Parents. This study will provide meaningful understanding of the parents on how to motivate their children, and increase their engagement in learning through modular learning modality. It can also provide deep perception of the factors that can affect the level of engagement of their children in learning, and possible resources that they will need to counteract them. Furthermore, this will help the parents enhance and improve their ways of guiding their children in studying and answering the modules.

School Administrators. This study will guide the school administrators to determine how they should implement curriculum design for the new normal set-up of teaching and learning process for the betterment of pupils'

engagement in modular learning modality. Moreover, the result of the study will help them realize the teachers' needs especially in providing a conducive environment in preparing self-learning modules for distribution and retrieval, as well as the appropriate support to answer the pupils' queries that will result in sustaining a strong and harmonious relationship between the teachers and pupils. Likewise, the result of the study ensures compelling educational opportunities despite the risks and challenges brought by the pandemic.

Department of Education (DepEd). The study will contribute additional inputs and data to serve as a tool for the Department of Education specifically the Division of Camarines Norte in formulating policies and provisions particularly in using modular learning modality in the new normal situation. With in-depth understanding, they may be able to develop and formulate insights on the production of self-learning modules (SLMs) gained from this study to improve pupils' learning and ensure lifelong learning despite the pandemic. Moreover, this study will motivate this agency to extend support services to pupils and families of the community to increase the level of engagement of pupils in modular learning modalities with quality learning opportunities.

Community. The study will provide awareness to the community necessary to remove various barriers that affect the quality of learning by knowing the factors affecting the level of engagement of pupils in modular learning modality in order for them to develop intervention strategies to ensure pupils' learning in their community. Likewise, this study will motivate the community to extend the help they can to those in need particularly some parents who are having hard time teaching their children. The result of this study will help improve and formulate barangay ordinance to help the learning process of the pupils at home.

Local Government Unit (LGUs). The result of the study will be significant to the LGU especially in San Lorenzo Ruiz, Camarines Norte as a significant unit that plays a vital role in the development of a community as well as linking its people and the government. The output of this study will help them assess how to cooperate with the schools, teachers, parents, and pupils to ensure that the modular learning delivery modality would be easier, more effective, and efficient to enhance the level of pupils' engagement in modular learning modality. Through this study, LGU will determine the needs of pupils to enhance their participation in learning through a modular learning modality. As a result, this study will guide the LGU in formulating and implementing policies and guidelines to ensure that the pupils have quality education despite the risks and challenges brought by the pandemic.

Other Stakeholders. The study could help them determine how they can help the pupils become more motivated and interested in studying through a modular learning modality. They can also identify what can be of help to the parents/guardian or anyone who delivers instructional support on how to help them. Moreover, the result of this study can give them opportunities to share what they can with those in need.

Researcher, herself. This study can help the researcher, herself determine the areas to focus on to thoroughly develop methods and strategies to help the pupils study and answer the modules more efficiently and effectively. This study may also help the researcher as an educator, and an associate to the pupils' guardians or parents by having partnership in providing holistic development to the children by identifying what help must be given to the parents or guardians to motivate them in guiding the children while studying at home. Likewise, this will provide insights on how to become a more competent and resourceful teacher during the time of pandemic to ensure that the teaching and learning process continues.

Future Researchers. This study will serve as a reference for researchers by providing information and relevant data to those who will conduct a similar study. In relation to this, they can formulate new research connected with the pupils` engagement in modular learning modalities. Likewise, they may also develop a parallel study to bridge the gap concerning engagement in modular learning modality as the touchstone of their future studies.

II. REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents the discussions of related literature and studies that have relevance to the present study. It also includes the theoretical framework, conceptual framework, and the definition of terms. This chapter, not only give complete understanding of what is already known about the topic but also provides sufficient ideas about the ways and methods of conducting this research efficiently and effectively.

A. Related Literature

The following related literature were taken from various materials and concepts of several authors particularly dealing with pupils' engagement to show the work and theoretical contributions to the improvement of this study. They provided the researcher with additional insights and ideas relevant to understanding the present study.

- *Foreign*

Several works of literature were reviewed to compare the pupils' engagement in modular learning modality with a variety of learning abilities in foreign countries.

There are three types of student engagement. First, cognitive engagement refers to the students' will which includes their willingness to learn as well as their self-esteem. It can be seen in activities such as problem-solving, thinking skills, and implementing learning strategies such as reviewing content and participating in question-and-answer sessions. When students ask for clarification or provide examples, they are cognitively engaged. Students begin to process and own the concepts, skills, and attitudes presented in these situations (Boyking et al., 2020).

Second, behavioral engagement addresses students' behaviors that can be observed while they are learning such as participation, determination, and cooperation with school organizations. It includes not only participation in academics but also in extracurricular activities, and involvement in social learning areas. This engagement is characterized on a self-reported basis which means that students provide their own feedback on lessons, and that their level of engagement is reflected in this feedback (ViewSonic, 2020).

Moreover, Howard et al. (2015) explained the third type which is the emotional engagement of the pupils which talks about their feelings towards the school, teachers, and their peers. The feeling either positive or negative should always be considered. These three engagements are really essential. Emotional engagement can be elaborated into two forms. The first one is the feeling that pupils show during achievement-related activities namely the feeling of interest, happiness, anxiety, and anger. This engagement is also interpreted as a sense of belongingness.

As stated by Bernstein (2021), this engagement is a term with a broad definition. These definitions evolved because of the ever-changing circumstances that the field of education has faced before up to this date. Nonetheless, nowadays, it is defined as a measure or the degree of the level of interaction, attention, optimism, curiosity, and passion that pupils show while learning or being taught. The level of their motivation does not only depend on themselves but was also molded by many factors such as how the educators and the adults guide them.

Furthermore, an article entitled "Promoting Student Engagement in Learning Activities" (Bloom, 1956 as cited in Hughes, 2016) stated that engaged pupils actively attend to and participate in learning tasks. Moreover, they display interest and constantly enjoy the process while at the same time, crucially investing mental effort into their learning, going beyond what is expected, and enjoying the process. Consistent with this, students who have displayed behavioral, emotional, and cognitive characteristics are said to excel in their studies and succeed in their respective fields. To sum up, engagement is essential for academic success and the development of deep and lifelong learners, vital educational goals of higher education.

The challenge of distance learning comes in different forms. According to De La Rosa (2020), engagement was already considered a challenge for some areas and districts. For example, a survey conducted which was participated by the schools of San Antonio in Texas showed that 64 percent of young students were less engaged during distance learning. Due to that, districts and areas must ensure that all pupils and educators are able to access internet sources efficiently for a successful remote learning outcome. On the other hand, in modular learning, materials must be delivered on time and effectively reach students in their homes. However, the vital point in this is to prepare the most effective methods while maintaining the children's engagement.

According to the website of The School in Rose Valley (2019), the deepest engagement of young learners is evident in a learning environment that shows harmonious relationships where they can develop both socially and emotionally. But with the crisis that everyone is experiencing because of online and distance learning, there are fewer to no face-to-face interactions, and that indicates limited hands-on work and unfamiliarity. With that, learners might feel isolated and disconnected. Student engagement was the true challenge in this new normal of education because it is the main fundamental why they learn and achieve success.

As cited by Viega (2012), students' differences are likely to influence engagement in school. Specific personal characteristics such as race, social class, or sex relate to student's engagement in school. Furthermore, moments of school transition, the type of goal orientation adopted in learning and future orientation, self-efficacy, self-concept, subjective well-being, and life satisfaction add to this pool of variables.

In addition, Hernandez (2012) stated that students need to see the intrinsic value of learning with others. Students need to comprehend that time, effort, and self-management are requirements of collaborative work. Furthermore, a sense of responsibility must be developed for their learning which includes being versatile to handle different roles as part of collaborative work, planning, and managing the group work. The teachers should serve as "scaffolding" to support the students in achieving their goals, and turn groups into effective collaborative teams.

Self-directed learning that incorporates self-management, self-monitoring, and motivational dimensions would ensure that the groups meet or submit the requirements in group learning; hence, providing great competence.

However, because of the pandemic, disaster swiftly spawned plenty of additional crises including one in education. That is why alternative learning modes are formulated. According to Mariani (2020), the concept of "module" is inextricably linked to the concept of a flexible language curriculum which should provide a framework for all those involved in education (primarily learners and teaching staff, but also parents and administrators, as well as society in general) to establish clear and realistic language learning objectives. Parents become an essential factor in children's overall learning and education by taking part in and assisting diverse learning experiences and activities outside the school. Broadly considered, parental engagement consists of partnerships between families, schools, and communities, raising parental awareness about the benefits and advantages of being involved in their children's education, and giving them the skills to do so. The work of the Council of Europe has been significant in this respect. Common European Framework sets out guidelines to develop language curricula to increase both mobility and intercultural understanding throughout Europe. Such curricula cannot be defined once and for all. Instead, they must be adaptable enough to satisfy the demands of people of all ages and educational levels. This necessitates establishing linguistic objectives in such a way that they are easily recognizable, similar across educational systems, and efficiently assessed and evaluated.

- *Local*

To have in-depth understanding of this research, local works of literature were reviewed and utilized as part of the study.

Dangle et al. (2020) stated that Philippines is currently adjusting to the new normal system of education, and that the educators' continuous pursuit of innovations and the active involvement of the stakeholders will drive the new setup to success. To be able to provide quality education to every learner amidst this pandemic, the Department of Education effectuates Modular Distance Learning to continue education in the country and still attain its vision and mission. This modality has three types which are the Modular Distance Learning (MDL), Online Distance Learning (ODL), and TV/Radio-Based Instruction (Quinones, 2020). Since classes and learning are no longer held within the four corners of the school rooms but in each learner's house, parents then serve as partners of the teachers in educating the children. They play a vital role as the ones who facilitate learning at home. Their primary aim is to establish connections and relationships toward learning.

Furthermore, according to Ceka et al. (2016), "Home Education" is the term used to represent the educational impacts of the family on their children. It has been determined that the different family environments also give a variety of experiences to the children as they perform activities related to their studies. They are constantly exposed to influence and expectations from their parents or family members with whom they co-habit. In that sense, each family provides different educational potentials to the learners.

Moreover, when classes began on October 5, 2020, pupils were not the only ones who adjusted to the new learning set-up but their parents as well. They play an essential role in the education of their children that takes place in their own homes this year. The Bureau of Learning Delivery Teaching and Learning Division of the Department of Education issued a handbook to aid the parents or guardians in fully understanding their roles and responsibilities as facilitators of learning. Aside from expounding on all the available learning modalities, this handbook also answered the Frequently Asked Questions to ensure that the parents have full knowledge about their child's chosen learning modality. To motivate parents to help their children, the book also discusses the advantages and benefits of learning at home. Furthermore, the necessary steps to keep children up with the lessons and what the parents must do, where the parents can seek help if they are having difficulty and do not understand the lessons. In addition to that, it also consists of practical tips for parents of learners with disabilities and positive parenting and discipline tips while facilitating children's learning at home provided by the Save the Children Foundation. Ultimately, the handbook aims to align the parents with the different learning modalities instead of face-to-face classes (Hernando-Malipot, 2020).

Bartolome et al. (2017) mentioned that parental involvement talks about the extent or amount of participation and involvement that a parent has given in his/her child's education. Some schools promote the healthy involvement of the parents in their children's studies. Some guardians have doubts and hesitation that they will be involved too much in the process. Many schools conduct school-related activities for the parents to get involved; however, this only promotes parental involvement rather than engagement.

However, Delfino (2019) stated that educational institutions must focus on one critical point to be able to carry out distance learning successfully which is student engagement. It is one of the important factors used to understand the behavior of students in the teaching-learning process. With these behaviors, the academic institutions will be able to provide a sight of instructions, and academic practices should be implemented and

conducted. Given that fact, it is a powerful tool for educators and school leaders to design and form pedagogical techniques to make the most of the learning experiences of their students.

Moreover, according to Dayagbil et al. (2021), the learners' engagement in the teaching-learning process needs to be taken into consideration in the context of flexibility. This is about the design and development of productive learning experiences to expose each learner to most of the learning opportunities. Considering that face-to-face modality is not feasible during the pandemic. Teachers may consider flexible distance learning options like correspondence teaching, module-based learning, project-based, and television broadcast. For learners with internet connectivity, computer-assisted instruction, synchronous online learning, asynchronous online learning, and collaborative e-learning may be considered.

According to Fredricks et al. (2014), student engagement has three dimensions which are behavioral, emotional, and cognitive. Behavioral engagement refers to a student's participation in academic and extracurricular activities. Emotional engagement refers to the negative or positive reaction of a student to his/her peers, teachers, and school while cognitive engagement is all about the thoughtfulness and willingness of one student to master various skills.

In addition to that, Nardo (2017) in her journal "Modular Instruction Enhances Learner Autonomy" stated that the use of modules encourages and enhances young students' cognitive engagement in which they are honed to practice themselves to study independently. It lets students directly evaluate information where they gain mastery of the concepts in the given exercises arranged from the easiest to the hardest. Students practice their behavioral engagement as they try to accomplish the task provided in the module as a sense of responsibility. With little or no assistance from the teachers, they progress and learn independently. They are not only learning but also empowering.

Ambayon (2020) stated in his article entitled "Modular-Based Approach and Students' Achievement in Literature" that by analyzing the modular method of teaching, understand that this is a more effective, recent, and more technology-based teaching method in the present educational field. The modular approach provides more flexibility to distance teaching mode as well to learners.

Eventually, Republic Act No. 10533 which is known as the Enhanced Basic Education Act of 2013 or K to 12 Basic Education Program Law states that the "graduate of basic education shall be an empowered individual who has learned through a program that is rooted on sound educational principles and geared towards excellence. The foundations for learning throughout life, competence to engage in work and be productive, ability to coexist in fruitful harmony with local and global communities, capability to engage in autonomous, creative, critical thinking, capacity, and willingness to transform others and one's self.

B. Related Studies

The researcher utilized books, unpublished dissertations and theses, manuals, and worldwide websites to look for studies on modular learning delivery modality, and pupils' engagement to give additional insights and comparisons. Foreign Below are the studies gathered from previous studies of some foreign authors relative to the pupils' engagement.

- *Foreign*

The study conducted by Sesmiyanti (2018) entitled "Student's Cognitive Engagement in Learning Process" revealed that cognitively engaged students think deeply about newly presented information, and use self-regulated learning strategies to increase their understanding of the material. The self-regulated student can distinguish between facts and skills that they know and possess. He or she can assess the academic task and set study goals. Furthermore, the self regulated learner monitors and regulates his or her cognitions and behaviors, and makes changes to the learning approach as needed to ensure academic success. Moreover, self-regulated learning is considered the highest level of cognitive engagement.

Moreover, the study conducted by Lai et al. (2021) entitled "A multi-level investigation of factors influencing university students' behavioral engagement in flipped classrooms" showed that behavioral engagement predicts a number of critical developmental outcomes. According to the findings of the study, both teachers and peers play an important role in the growth of students' behavioral engagement. Students with negative teacher-student relationships and high status for example well-liked or popular demonstrated lower behavioral engagement over time. Those who had positive teacher-student relationships, on the other hand, had higher levels of behavioral engagement over time. Thus, positive relationships with teachers may also protect students from becoming delinquent.

On the other hand, the study conducted by Parra (2021) entitled "Influence of Teacher-Student Relationship" showed that emotional engagement remained stable over the years. One factor that influences this engagement is the students' relationship between their peers and teachers where real opportunities are provided by the teachers to promote positive influences and guide students with the different phases of the school path.

Significant stability and internal dynamics of the said engagement were found using a longitudinal study among primary and secondary students.

Moreover, the study conducted by Sparf (2021) entitled "I am Magic! Pupils' Engagement when Designing in Learning Programming" showed that indicators of emotional engagement are significant, in a positive sense, especially when pupils can discover and experience something they have not previously encountered or mastered. Negative aspects of both behavioral and emotional engagements are visible when pupils are not challenged in their learning.

Meanwhile, the study of Lee et al. (2019) entitled "Exploring Factors, and Indicators for Measuring Students' Sustainable Engagement in e-Learning" focused to identify and develop indicators for measuring engagement in e-learning. The results showed that student engagement in e-learning was composed of six factors such as psychological motivation, peer collaboration, cognitive problem-solving, interactions with instructors, community support, and learning management. First, the psychological motivation factor represents learners' thoughts or feelings such as interest, expectations, and motivation that is related to e-learning. Learning motivation and learning expectations are essential for a higher level of learning activities in e-learning environments. This finding is consistent with previous studies that motivation and learning expectations are essential for problem-solving activities in the e-learning environment. It is also interesting that items regarding learning satisfaction belong to the motivation factor while satisfaction refers to interest or satisfaction in the learning content in face-to-face learning environment. Satisfaction in the e-learning environment reflects expectations and positive attitudes toward learning.

Furthermore, the study by Zhang et al. (2021) entitled "Adaptability Promotes Student Engagement under COVID-19: The Multiple Mediating Effects of Academic Emotion" found that negative academic emotions can narrow students' cognitive scope by focusing on threats or failure, diverting their limited cognitive resources away from the academic tasks at hand. Students who were best able to adapt to the impact of COVID-19 demonstrated higher levels of academic happiness. Positive academic emotions such as enjoyment can motivate students to participate in academic tasks, thereby improving their performance. Pride is another positive academic emotion that can increase students' long-term motivation to pursue academic goals. The adaptability of students predicted their negative emotions even more, and it was discovered that adaptability had a greater impact on negative academic emotions than on positive academic emotions.

Meanwhile, the study conducted by Martin (2018) entitled "Engagement Matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment", it demonstrates the significance of all three types of engagement strategies in online learning particularly learner-to-instructor engagement. This reinforces the belief that for students to thrive in online learning, institutions must create and provide engaging learning experiences. Many of the strategies received high marks from students and course designers, and instructors can employ any of them to improve interaction in their online classes. According to the findings, Engagement can be increased through both the interactive design of online courses and the facilitation of online courses. Instructor facilitation is critical; therefore, instructors must have time management and engaging discourse strategies.

On the other hand, the study conducted by Rajabalee et al. (2019) entitled "A study of the Relationship between Students' Engagement and their Academic Performances in an e-Learning Environment" established that students' engagement levels in the online class could provide a general indication of whether they will perform well in an independent learning activity. This study confidently infers from a total of nine learning activities that the majority of those who had a high engagement level in the eight previous activities would perform similarly in the final learning activity provided that first, they attempted it and they put forth reasonable effort in the respective specific activity. The application of learning behaviors becomes a significant element in contributing to the calculation of student engagement. Finally, the very strong positive correlation between engagement and continuous learning activities compared to the very weak positive correlation between engagement and the final learning activity mark suggests that engagement in constructivist learning environments might be a better predictor of success than engagement in classic behavioral e-learning models.

Another study about pupils' engagement was conducted by Zepke (2019) entitled "Student Engagement Research 2010-2018: Continuity and Emergence" which revealed that student engagement requires students' own investment in learning, quality teaching, and recognition of experiences in life-wide learning environments. Each theme offers catalysts for action. While framed as all-purpose suggestions for practice, they do not assume a "one size fits all" approach to engaging a generic student. On the contrary, themes and catalysts offer multiple ways to engage in unique and dynamic educational interfaces. It offers a holistic conceptual framework; places engagement in educational interfaces shaped by diverse psychological and socio-cultural influences recognizes the continuity of many of its ideas; and identifies an emergent theme that explicitly connects politics, education, student engagement, and critical teaching-learning practices.

The study by Martin et al. (2022) on "Engaging learners in the emergency transition to online learning during the COVID-19 pandemic" posited that higher levels of parental participation and teacher support are linked to higher levels of student affective engagement, with teacher support having the largest link to student engagement. These findings aid in the comprehension of an emergency remote teaching in various countries where schools and individual households devise a variety of strategies and solutions.

- *Local*

The following local related studies provided insights which are deemed relevant to the study.

The study conducted by Delfino (2019) entitled "Student Engagement and Academic Performance of Students of Partido State University" revealed a high level of student engagement and behavioral, emotional, and cognitive engagement. It also found out that the respondents' academic performance was excellent. The correlational analysis showed that teacher, school, and family factors were positively related to student engagement. In contrast, the Multiple Linear Regression analysis revealed a relatively low percentage of variance (1.8 percent) but showed that the factors were significant predictors of student engagement. Furthermore, the result showed that behavioral, emotional, and cognitive engagements were positively correlated to the students' academic performance.

However, based on the study conducted by Baloran et al. (2021) entitled "Course Satisfaction and Student Engagement in Online Learning Amid COVID-19 Pandemic: A Structural Equation Model", the nature of distance learning is that students' cognitive levels continue to grow, and students must actively participate in learning in order to acquire good knowledge. However, some students' experiences with this new mode of learning are unsatisfactory due to a lack of communication between teachers and students, as well as their persistence and effectiveness. There are times when teachers are unable to comprehend the level of participation of students particularly their level of emotional involvement. As a result of an online learning environment, it is critical to assess and research student engagement, assist teachers in understanding student engagement and intervening at the appropriate time, assist students in reflecting on their learning actions, and facilitate their deep involvement in the learning process. Established on the case study of Alegado (2021) entitled "Reading engagement during the pandemic of Csu-Sanchez Mira (Cagayan, Philippines)", students' access to more than just the learning management system for course delivery is necessary for increasing student engagement. As the complications grow because of the unexpected situations in the education system, limiting students' mobility and access to tangible sources of information.

In addition, the study conducted by Olivo (2021) entitled "Parents' Perception on Printed Modular Distance Learning in Canarem Elementary School: Basis for Proposed Action Plan" revealed that parents mostly agreed to the strategies in the distributing modules, retrieval of modules, time allotment for learning activities, the learning activities in the module, assessment and highly agreed to the observance of safety and health protocols in the distribution and retrieval of modules. However, parents claimed that the time allotment for the completion of learning activities was insufficient since the activities were so many. In addition, some parents claimed that they could not understand some topics in the module, so they could not help their children in answering the learning activities.

In addition, a study conducted by Collado et al. (2021) entitled "Children's Engagement in Self-Learning Modules (SLMs) amid the Pandemic: A Predictive Analysis on the Role of Internet Access, Household Food Security, and Parental Involvement to Modular Classes" concentrated on critical aspects that influence children's quality of response to a non-traditional learning platform, notably self-learning modules (SLMs) as a mode of service-learning delivery in Philippine public schools. Findings of the study revealed that food security and parental involvement were predictors of students' satisfying engagement in their SLMs, while internet access was not. As a result, whether or not the household has access to the internet, children with parents who take time to be active in their studies and live in houses with ample food are more likely to engage positively in their modular lessons.

Moreover, the study conducted by Dangle et al. (2020) entitled "The Implementation of Modular Distance Learning in the Philippine Secondary Public Schools" showed that teachers in Modular Distance Learning encountered several challenges. Most students cannot study independently. Most students are unable to study alone. The majority of them struggle to follow the instructions in the modules. As a result, modules were frequently late, and the majority of the answer sheets were blank. Teachers lack the necessary resources to reproduce and deliver modules. The printers do not always work properly. In the worst-case scenario, there is no electricity. As a result, they have difficulties printing and mass-producing modules. Some students are unable to complete their modules on time because they spend much of their study time tutoring their siblings and assisting their parents in the field. Teachers believe that students' answers in their modules are invalid and that mastery of the teachings is hard to achieve. Parents are ill-equipped to help their children. Some parents, according to some teachers did not complete their education. Some teachers have poor cellphone reception.

Finally, teachers have a large amount of paperwork to examine and record.

The study conducted by Guiamalon et al. (2021) entitled "Teachers' Issues and Concerns on the Use of Modular Learning Modality" showed that during pandemic, teachers are well-prepared to accomplish their jobs and functions in modular remote learning education. They also have the essential training and skill development to do their duties effectively and efficiently. Parents and guardians can help their children adapt to the new learning mode; however, some of them have limited abilities to facilitate and explain the modules offered to them.

Moreover, a study conducted by Espejo (2018) entitled "Difference in Academic Engagement among College Students as a function of Learning Environment" exposed that even though the positive values of both teacher-controlled and autonomy-supportive learning climates showed positive impact on the tertiary students in the Philippine context, there is still a significant difference between these learning environments. Learners have likely engaged academically when they perceive their learning environment to be more autonomy-supportive than controlling.

On the other hand, the study by Ompoco (2022) entitled "The Use of Modular and Blended Learning Modalities: Basis for the Development of Learning Activity Sheets" showed that the student's academic performance using the Modular Learning Delivery Modality was found to be highly close to mastery, with outstanding results in terms of their grade in the Filipino topic. Learners using the Blended Learning Delivery Modality showed similar levels of achievement. However, a comparison of pupil performance on the two Learning Delivery Modalities found a considerable difference in pupil performance in learning Filipino in favor of the Modular Learning Delivery Modality. These findings indicate that the students' academic performance can yet be improved.

Lastly, a study conducted by Cossid (2021) entitled "Language Contents of Modules and Grade 7-10 Students' Engagement during the COVID-19" revealed that although all variables in the contents of the modules and engagement are rated high and highly engaged respectively, specific statements which are within the border of often and seldom may be given attention. Moreover, the findings of this research show a significant relationship between the language content of modules and students' engagement may allow the module developers to consider that quality of modules is more relevant than quantity and that meaningful activities promote learners' engagement.

C. Synthesis of the State-of-the-Art

The researchers acquired and evaluated previous related studies which provided baseline information and valuable ideas, and led to the design of the current study.

Considering the different types of engagement, the studies of Zhang et al. (2021) on adaptability that promotes engagement under COVID-19, and Zepke (2019) on continuity and emergence of student engagement research contributed to the conceptualization of specific engagements. First is Emotional Engagement which is one of the main focuses of this study. It was mentioned that adaptability could influence student engagement through academic emotion and engagement. It requires students' own investment in learning. Consequently, the said researches tackled only one type of engagement. This study chose to discuss emotional, cognitive, and behavioral engagement in the modular learning modality.

In addition to individual knowledge of the different types of engagement, the study by Lee et al. (2019) on exploring factors and indicators for sustainable engagement considered behavioral engagement because the said study evaluated the different levels of learning regarding the behavioral engagement of pupils and their performance. It is similar to the intention of the present study as this also investigated the behavioral engagement of pupils especially the internal relationship between students' engagement. However, the current study focused on the behavioral engagement of students with modular learning whereas the prior study focused on the virtual reality method or online learning.

There are also a lot of factors that affect the engagement of students. The factors discussed by the studies of Lai et al. (2021), Sesmiyanti (2018) on students' cognitive engagement in learning process, Martin et al. (2022) about students' perceptions on the importance of engagement strategies, and Parra (2021) on student-teacher relationship were analyzed to be able to determine the significant factors that would affect the students. According to the previous studies, students must participate in the learning process, making student engagement crucial to the process, and a positive environment in the classroom needs to be created by both the teachers and the pupils. From these, different indicators were able to relate. One factor that was interpreted and prioritized by this study and the previous studies were the relationship between students and teachers, as well as independent learning connections. The only difference was that the examined studies only focused on one to two engagements while this current study considered the three engagements which were cognitive, emotional, and behavioral engagements.

Moreover, one of the highlights of this study is the focus on students' engagement and its three types which are behavioral, emotional, and cognitive engagements similar to the studies of Sparf (2021) about pupils' engagement when designing learning programming, and Delfino (2019) on students' engagement and academic performance where they pointed out that there were also different factors that could affect student engagement in online learning such as psychological motivation, peer collaboration, problem-solving, interactions with instructors, community support, and learning management. Engagement can be enhanced both in the interactive design and facilitation of the online courses. In addition, learning motivation and expectations were essential to student engagement which was the same way that this study connected these elements on how students engaged in learning. It only differed from the respondents that were chosen to analyze.

In addition, another component was considered which was the topic of the studies conducted by Collado et al. (2021) on children's engagement in Self-Learning Modules, and Olivo (2021) about parent's perception on printed modular distance learning were pupils' involvement in self-learning modules, and parents' perceptions on printed modular distance learning. Their studies were similar to the present study as they considered the factors that were addressed in this study such as internet access, household health, food security, parental involvement, and some of the challenges faced by the parents. These aspects were regarded to come up with the indicators that affect students' engagement in this study. In addition, the studies were similar to the present study because they also focused on the self-learning modules. However, the present study was different from the previous researches because the respondents of the present study were Grade 6 pupils while the previous researches' primary respondents were students' parents.

To explore how the current study would specify its limits and variables under the modular learning modality, studies were taken into consideration with a similar concept. One of these was the research conducted by Espejo (2018) about learning settings that can affect students' academic engagement. Results of the research showed substantial academic involvement varied depending on the type of learning environment. Students thought their learning environment was substantially more academically supportive of their autonomy. The previous study was based on Self-Determination Theory (SDT); however, this study used Engagement theory as its foundation and chose to dig deeper into the pupils' engagement in modular learning modality in terms of behavioral, cognitive, and emotional engagements.

It was apparent that during the implementation of the Modular distance learning mode, various challenges were faced. They were explored and considered by this current study similar to the study conducted by Dangle et al. (2020). The principal difficulties that surfaced were lack of school finances for the creation and delivery of modules, difficulties pupils have with independent study, and parents' lack of expertise in academic guidance for their children although the same learning modality was studied by these researches. The current study's subject of interest was the experiences of Grade 6 pupils during the modular learning modality rather than the viewpoints of secondary school teachers.

Even though modular learning was challenged by different elements, the study of Guiamalon et al. (2021) and this study focused on the idea that teachers were well-oriented and prepared to fulfill their jobs and functions in modular remote learning education during the pandemic. According to the studies, there were also extrinsic elements that influenced both teachers' and students' involvement during this phase. The previous study revolved around the instructors' challenges and concerns with the usage of the modular learning mode and in contrast, this study made the aforementioned challenges one significant factor to be considered in the factors that may affect the students' engagement.

Comparably the studies conducted by Cossid (2021) on language contents' of modules and students engagement, and Rajabalee (2019) on relationsip between students' engagement and their academic performance were similar to the present study. They all focused on the connection between engagement, academic performance, and student satisfaction in using printed modular learning systems. According to the previous studies, three quantifiable indicators were found and deemed pertinent based on the data. These were the quantity of successfully completed learning activities (as measured by the course outcomes), the importance level of successfully completed learning activities, and, activities requiring platform presence. It only differed from the current study due to the chosen respondents where this study specifically selected the Grade 6 pupils as the respondents to evaluate engagement in a modular learning modality.

To be able to learn strategies and navigate the further successful implementation of modalities the studies of Alegado (2021) on reading engagement during pandemic, Baloran et al. (2021) about course satisfaction and students' engagement while Ompoco (2022) on the use of modular and blended modalities were explored. Due to the fact that they discussed the learning delivery modality and developed interventions based on the result of their studies that were also conducted by this study. One intervention that the studies suggested was about the involvement of

parents. It was stated that parents and guardians played a variety of responsibilities in modular learning including Module-ator, Bundy clock, and Home Innovator. In order to help their child, concentrate more on learning, parents must create a positive learning environment for them. It must be a quiet, distraction-free space that was well-ventilated and illuminated. However, the previous researches focused on numerous modalities unlike this study which focused only on the engagement of pupils in modular learning modalities and the factors affecting the engagement of pupils.

It has been noted that similar studies were conducted and focused on pupils' engagement in different modalities such as online learning and face-to-face.

However, very few have conducted a study focusing on modular learning modality and primarily focused on the three levels of engagement of the students namely behavioral, emotional, and cognitive engagements at the same time.

The previous studies mentioned focused more on using modular modality, developing strategies to enhance students' engagement, issues and concerns of implementing modular modality, and developing modules. This provided additional information needed in this study but it proved that no study has been conducted yet on pupils' engagement in modular learning modality for elementary.

Furthermore, some studies also centered on the parents' and teachers' perspectives, making them the primary respondents. To bridge the gap, the researcher conducted this study focusing on evaluating the pupils' engagement in modular learning modality in this time of pandemic towards formulating strategies to enhance the pupils' engagement in modular learning modality.

D. Theoretical Framework

The study was anchored on the engagement theory developed and introduced by Greg Kearsley & Ben Schneiderman in 1999. The core principle of engagement theory talks about students being meaningfully engaged in learning activities through interaction with others and worthwhile tasks. It is a framework for technology-based teaching and learning processes. This theory promotes working collaboratively, project-based learning, and having an authentic focus.

There are three principles in which the theory is based. First is Relate which is learning through collaboration with others. Activities emphasizing team efforts also highlight other skills such as communication, management, planning, and social when the students are able to express their thoughts and ideas, they become motivated to learn. According to the collaborative learning concept, students are compelled to explain and communicate their concerns during the collaborative process. It gives way to the solutions to be facilitated and boosts the kids' motivation to learn, that when students work in groups, they frequently have the opportunity to collaborate with people from various backgrounds which facilitate an appreciation of diversity and numerous viewpoints. Since the students are on modular learning modality, their interaction with others revolves around the closest people available. Activities promote interaction between parents and students, and at the same time, the relationship between teachers and students still takes place. This is where rewards can be used to indulge the extrinsic motivation of the learners.

The second principle is Create which means learning using a project-based approach that promotes a creative and purposeful process. When students accomplish their project, they develop a sense of ownership of the activity that they have done. Students find conducting their projects more engaging than reading sterile textbooks. They feel in charge of their education, lacking traditional classroom instruction. Parents/guardians and teachers have the highest contribution to this method because students need their time and support to do the task. Self-directed learning inquiries must be entertained to achieve the self-efficacy and intrinsic motivation of the students during distance learning where they will improve their behavioral and emotional engagements.

The third and last principle is Donate. In this principle, the learning of students was provided by an outside focus. These endeavors give emphasis to a meaningful and realistic range of focus. When students engage in realistic activities or projects, they can have an idea about the structure that they may face letting them be prepared when they enter the actual workforce in a given field. The end goal of these three principles is to prosper the intrinsic motivation of a learner. The teachers can assist their students in undertaking related projects that are concerned with the requirements of a third party who serves as the customers. These kinds of activities and projects have a realistic feel to them because they are concerned with the needs of others rather than their own. They would have to consider other people's perspectives in order to do this. This method encourages students to learn more effectively and equips them to enter the workforce in a particular field (Malik, 2021). This principle is adapted for modular learning by arranging activities that students will be able to relate to, setting the learning environment to make the learners engaged even inside the four corners of their homes. The main purpose of this approach is to make them feel both extrinsically and intrinsically motivated showing that the activities and exercises are relevant for them to be more cognitively and emotionally engaged.

Behavioral, cognitive, and emotional engagements are the three categories of student engagement. When students actively participate in the learning process, they are behaviorally engaged. They arrive on time, turn in their assignments, and bring all necessary supplies to class. They also participate to in-class debates, follow their teacher's instructions, and always give their all. When students want to learn as much as they can, they venture into cognitive engagement. Students who have good attitude towards their educational experience pay attention in class, ask thought-provoking questions, and go beyond what they are asked to do, and that is called emotional engagement. When students are treated with respect, they become emotionally engaged and have a positive attitude towards homework.

However, due to the distance learning specifically applying modular learning, students feel different while learning since interaction with others disappear in an instant. This is where techniques must be maintained and modified to still continue serving students' opportunities such as relate, create, and donate which are still available for them. Making them behaviorally, cognitively, and emotionally engaged will let them feel interested and motivated due to the different modes of learning without sacrificing any opportunity but taking advantage of the available resources.

If students are behaviorally engaged, they will be able to complete the task assigned to them, and learn the course objectives in the allotted time. In that sense, the modular modality would not hinder their progress because they will proceed at the same pace whether they are learning through the modality or in a classroom. However, cognitive engagement also needs to be improved. Even though students are not confined to a classroom, they still need to have their curiosity satisfied. This is a crucial area to watch because it determines how much knowledge they have and how deeply it will be ingrained in their minds. If this goal is accomplished, it will eliminate the obstacle that prevents modular learning modality to be as effective as face-to-face learning. Last but not least, is emotional engagement.

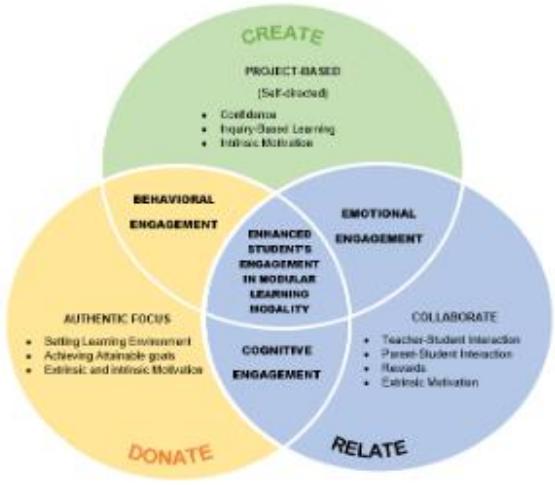

Fig 1 Theoretical Paradigm of the Study

E. Conceptual Framework

The conceptual framework of the study is anchored on the system analysis. The various components or variables are the input, process, and output. The input component includes (1) profile of the respondents inferring sex, household member/s who can deliver instructional support, educational attainment of household member/s who can deliver instructional support, occupation of household member/s who can deliver instructional support, monthly family income, available gadgets at home, and internet connectivity; 2) level of engagement of pupils in modular learning modality in terms of behavioral engagement, cognitive engagement, and emotional engagement; and (3) factors affecting pupils' level of engagement through modular learning modality. The process component includes data gathering through survey questionnaire. These are analyzed and interpreted using the approximate statistical tools, and then presented using tables. The output component refers to the process of the interaction between the results of the input and process components. It is the product of the accomplishment of the system which led to the formation, and the intervention plan to address the factors affecting the level of engagement of pupils through modular learning modality. The feedback represents the cyclic flow of input, and processes which are concerned with each other. It is an aspect of the paradigm that allows the validation, supplementation, replacement, fine-tune or reorganize the process designed to increase student engagement. Figure 2 represents the conceptual paradigm of the study.

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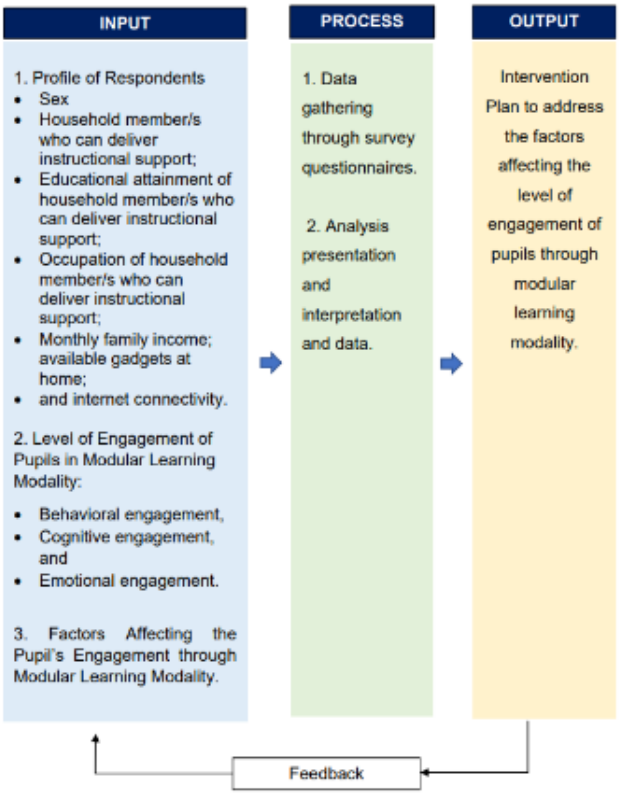

Fig 2 Conceptual Paradigm of the Study

F. Definition of Terms

For easy understanding for the purpose of clarity, the following terms are defined conceptually and operationally in the context of their use in the study.

Behavioral Engagement. It refers to students' involvement in academic activities as well as their efforts to fulfill academic duties (Fredricks et al. 2014). In this study, this refers to the involvement in attendance, extracurricular activity, and work habits in their studies.

Cognitive Engagement. The willingness and ability of students to take on the learning task at hand for example participating in conversations, surfing the internet for facts, or listening to a lecture (Rotgan et al., 2011). In this study, it covers the amount of time, and effort pupils are willing to put into completing the activity with or without instructional support.

Emotional Engagement. This refers to students' school participation and enthusiasm. When pupils are emotionally involved, they are more eager to participate in school and enjoy it more (Walden University, 2022). In this study, it encompasses interest, boredom, happiness, anxiety, and other affective states, all of which can affect the learners' commitment to learning or their ability to put forth the consistent effort.

Instructional Support. This is a process to maximize individual student's success while at the same time, serving as a screening process for students who may be in need of specialized education services. Instructional Support is a positive, success-oriented program that uses specific assessment and intervention techniques to help remove educational or behavioral stumbling blocks for all students in the regular classroom (Roberts, 2022). In this study, this refers to assistance or aid given to students by the available household members to help them in their studies.

Modular Learning Modality. The usage of Modules created by teachers with various tasks and learning activities based on the essential learning competencies (Anzaldo, 2021). In this study, this is the modality that the pupils are using to continue their learning during this time of pandemic in public schools setting.

Parental Involvement. This refers to the amount of participation a parent has when it comes to schooling and her child's life (Ireland, 2017). In this study, this is the involvement of the parents to help, teach, and guide their children in studying and answering the SLMs.

Pupils. This is defined as a person, usually young who is learning under the supervision of a teacher at school or with a private tutor (The Free Dictionary, 2022). In this study, they are respondents and the ones who are directly involved in the modular learning modality since they study and answer the Self-Learning Modules (SLMs).

Pupils' Engagement. This refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught which extends to the level of motivation they have to learn and progress in their education (Bernstein, 2021). In this study, this refers to the engagement of the pupils on how and when they are going to study and answer the SLMs without compromising the timeline given by their teachers as well as their learning.

III. RESEARCH METHODOLOGY

This chapter presents the research design, sources of data, and research instruments. Discussion of this chapter also includes the formulation and validation of the research instruments, procedure in gathering data, and statistical tools utilized to interpret the data obtained in this study.

A. Methods of Research

The study used a descriptive-correlational survey because of its suitability in the current undertaking. It is descriptive in the sense that it describes the existing

condition of the situation during the study which can answer the what, where, when, and how questions. This aims to describe a situation, population, and phenomenon accurately and systematically.

According to McCombes (2020), descriptive research is an appropriate choice when the research aims to identify characteristics, frequencies, trends, and categories. It is useful when not much is known about the topic or problem. Furthermore, descriptive research is a type of research that is used to describe the characteristics of a population. It collects data used to answer a wide range of what, when, and how questions pertaining to a particular population or group. The study assessed the level of pupils' engagement in modular learning modality and the factors that affect the level of pupils' engagement in modular learning modality.

Moreover, survey research design is used in which it is a technique of data collection by means of survey. It is personalized and focuses on the areas that are needed to gain better understanding of the individual and group perspectives relative to the concept which is aimed to analyze. This research utilized see questionnaire checklist to achieve the objective data towards knowing and understanding facts for analysis and interpretation.

Also, the correlation research method is used to test the hypotheses. The method employs statistics to formally examine hypotheses or predictions. The intensity and/or direction of the relationship between two (or more) variables is represented by a correlation. A correlation might have either positive or negative direction. It can help academics construct hypotheses and make predictions by providing insights into complex real-world interactions (Bhandari, 2021). To establish the statistical pattern between interconnected variables in the study which are the profile of the respondents, and factors affecting their engagement to the level of engagement through modular learning modality, correlation research is adapted.

B. Population, Sampling Technique and Sample Size

The population of this study consisted of 195 Grade 6 pupils from the three biggest schools in the Municipality of San Lorenzo Ruiz. Since the population was very small, the researcher used total enumeration. In particular, the locales of the elementary schools in this study were Salvacion, Imelda, and Mampurog Elementary Schools.

C. Description of Respondents

The respondents were 195 Grade 6 pupils enrolled in the selected public elementary schools in the Municipality of San Lorenzo Ruiz for school year 2021- 2022. They used modular learning modality which was important in gathering the desired outcome of the study which was to measure pupils' engagement in the modular learning modality.

D. Research Instrument

The study used the instrument adapted from a related study conducted by Rajaballee and Santally (2020) and Learner Enrollment and Survey Form (LESF) of Department of Education (DepEd) modified by the researcher, and was aligned with the objectives that this study aims, and thereafter checked by the advisory committee and Master Teachers.

The first part was based on the questions related to the demographic profile of the respondents as reflected in the statement of the problem. In the second part, the 4-point Likert scale was used as a questionnaire by the researcher. The respondents chose from a scale of possible answers to a question or a statement. It includes "strongly agree," agree", "disagree", and "strongly disagree". These categories of responses or answers are ciphered in numerical values defined for that specific study.

For this study, the 4-point Likert scale was used to determine the Level of Engagement of Pupils in Modular Learning Modality through Cognitive, Behavioral, and Cognitive Engagements.

Moreover, the third part was based on the factors affecting pupils' engagement in modular learning modalities. It is a ranking question in which respondents were asked to compare and arrange a list of factors in order of their preferences.

To ensure validity, the survey questionnaire was checked by the advisory committee composed of six Master Teachers of San Vicente-San Lorenzo Ruiz District. The types of validity used in this research were Content, and Construct. Content validity ensured that the measurement method matched the construct needed to be measured. Questionnaires were made to measure students' engagement in a modular setup. The indicators were chosen based on the relevant existing knowledge to get the desired results. The questionnaires consisted of items representing what the researcher wanted to measure. Items duly covered the contents and behavioral areas intended to be calculated. Construct Validity evaluated if a measurement technique or tool indeed represented the subject matter. It was supposed to focus on measuring (Hufford, 2021). It was used to check the measurement tool whether it represented the area that must be measured by using indicators associated with it such as the factors influencing students in terms of modular learning. The tests were made by observing the indicators used to measure the current conditions and behavior related to the study's primary focus.

To ensure reliability, the researcher chose schools with the same respondents. Internal consistency reliability was observed in the three schools which was a measure of

how well the test addressed the constructs and delivered reliable results. Reliability is the degree of consistency in which an instrument measures the attribute that is designed to be measured. The measurement is reliable if similar results are consistently achieved under the same methods and circumstances. Validity states how accurate the degree or method measures what it is supposed to measure. High reliability is one criterion that measurement is valid then. If a method is not reliable, probably it is not valid (Middleton, 2019). Then, the questionnaires' reliability was checked using Cronbach's Alpha to measure its internal consistency.

Furthermore, the Cronbach's alpha coefficient shows the value of reliability as 0.717 which indicates an acceptable internal consistency within the items of the questionnaire based on the interpretation of the said measurement. It was found that the questionnaires can be used in the study to produce stable and consistent results.

After completion of the questionnaire, the first draft was presented to the advisory committee for comments and suggestions. Suggested revisions were incorporated in the final copy. The administration of the questionnaire followed after the permit to conduct the study was approved. Furthermore, to ensure that the questionnaire is reliable, the researcher distributed 15 questionnaires to the pupils who were not included as respondents of the study to check whether they can be able to answer the content properly. Fortunately, based on the acquired returned survey questionnaire, 195 or 100 percent of the respondents answered and served as the actual number of respondents which was utilized for analysis and interpretation.

E. Data Gathering Procedure

The researcher observed a step-by-step procedure in gathering data in order to carefully plan and minimize the time and effort in finalizing the content of the manuscript. A letter of request was sent to the office of the Schools Division Superintendent (SDS) to conduct the survey on selected public elementary schools in the Municipality of San Lorenzo Ruiz. After securing the approval of SDS, a letter request was sent also to the principals of the selected elementary schools signed by the researcher and the thesis adviser.

Before the primary data was gathered, permission to allow the researcher to conduct a study was presented to the parents of the respondents, and to the respondents themselves. After the permission was approved, the researcher commenced the survey. The collection of data was in questionnaire survey form. A letter of request to validate the survey questionnaire was also sent to the Master teachers.

During the gathering of data, oral instructions were given in order for the respondents to understand the instrument clearly. Lastly, the data collected were checked, tallied, and tabulated. These were presented, analyzed, and interpreted through the application of proper statistical tools.

F. Statistical Treatment of Data

The data gathered were interpreted following statistical treatments such as Percentage, and Weighted Mean. Percentage was used to determine the frequency counts and percentage distribution of personal related variables of the respondents. Average Weighted Mean was employed to determine the assessment of the respondents in connection with their personal profiles.

The percentage was utilized to interpret the profile of respondents in terms of sex and monthly family income while ranking was used to interpret the profile of the respondents in terms of household member/s who can deliver instructional support, educational attainment of household member/s who can deliver instructional support, occupation of household member/s who can deliver instructional support, available gadgets at home, and internet connectivity.

Somers' Delta (d) was used to determine the relationship which may exist between the respondent's level of engagement through modular learning modality and their profile as to monthly family income while Point Biserial correlation (rb) was utilized to determine the relationship as to sex; available gadgets at home; type of internet connectivity; and identity, educational attainment as well as occupation of the household member/s who can deliver instructional support. Somers' Delta (Somers' D) is a measure of agreement between pairs of ordinal variables. Ordinal variables are ordered like best to worst or smallest to greatest (the Likert scale is one of the more popular ordinal scales. To determine a correlation between dichotomous (binary) nominal data and ordinal (ranked) data, rank-biserial correlation was employed (also known as rank biserial r or rrb) a special case of Somers' D. Moreover, the strength and extent of the link between this continuous variable and a dichotomous variable are assessed using a point-biserial correlation.

Furthermore, Kendall's Coefficient of Concordance (W) was used to determine if there is a significant agreement among the respondents on the factors affecting the engagement of pupils in modular learning modality. Kendall's W statistic (sometimes called the Coefficient of Concordance) is a non-parametric statistic used to assess agreement between different raters and ranges from 0 to 1.

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IV. ANALYSIS AND TREATMENT OF DATA

This chapter provides the results of the data analysis based on the data gathered and processed in response to the problems of the study. Likewise, this chapter assessed the pupils' engagement in modular learning modality.

A. Profile of Respondents

The profile of the respondents provided better understanding and viewpoint of demographic attributes of the respondents *concerning Tables 1 to 7.*

- *Sex.*

Sex profile of the respondents, as shown in Table 1 shows that the frequency of the respondents is almost the same. Ninety-eight (98) out of 195 respondents are males or 50.2 percent while females are 97 or 49.8 percent. It further shows that the difference between male and female respondents is 0.4 percent.

TABLE I. SEX PROFILE OF THE RESPONDENTS

Sex	Frequency	Percentage
Male	97	49.8
Female	98	50.2
Total	195	100.0

The outcome of the table suggests that both sexes have equal access to educational opportunities, with only one digit separating their total individual numbers. It implies that the outcomes would exclusively base on both male and female perspectives and not solely from one specific sex.

Result implies also that during the school year 2021-2022, the number of enrollees in public elementary schools almost have the same number in terms of sex. According to the data of Phil Atlas (2022), in San Lorenzo Ruiz, there are 10,490 registered voters or electorate in 2019, with 5,202 men and 5,288 women which shows close difference between the measured numbers for males and females, even registered voters in the same municipality.

It was also supported by the report of UNESCO (2021) that more young people have enrolled in school, and the gender gap between males and girls in educational attainment has narrowed. "Globally, on average, gender parity was reached in elementary, lower secondary, and upper secondary education which indicates that an equal number of men and women are exposed to the same curriculum.

- *Household Member/s who can Deliver Instructional Support.*

Table 2 shows that 111 out of 195 respondents have chosen their mothers as the ones who give instructional support to them. Meanwhile, the least chosen categories are extended family members and independent learning which received eight points each.

TABLE II. PROFILE OF THE RESPONDENTS IN TERMS OF HOUSEHOLD MEMBER/S WHO CAN DELIVER INSTRUCTIONAL SUPPORT

Household Members	Frequency	Rank
Mother	111	1
Father	48	2
Guardian	18	5
Elder Siblings	43	3
Grandparents	20	4
Extended Family Members	8	6.5
Independent Learning	8	6.5

The result implies that the primary household member who give instructional support to the learners are the mothers. They are more involved with their child's developmental milestones specifically their education just how they are labeled as the first teachers of their children. The table's result also indicates that mothers are providing instructional support for their children to learn about their motherly instinct, and they are more hands-on in taking care of their children.

Mothers are mostly in charge of the upbringing and education of their children while males are more accountable to supporting their wives and children. Even though father engagement in a child's care and education might directly benefit the child's development, in the end, dads' involvement is more centered on material pleasure (Hernawati et al., 2021).

According to the study conducted by Bhamani et al. (2020), during this pandemic, majority of the students are guided by their mothers in distance learning. Moreover, several moms have been interacting with the community on Facebook groups on how to keep kids participating in worksheets and activities. Those who are already comfortable with technology and internet resources considerably more successful in establishing a schedule of learning at home with their kids, adding school-provided activities and homework assignments, and using more online reading materials and activities for at-home use.

On the other hand, Table 2 shows that extended family members got the lowest rank. It implies that few extended family members can deliver instructional support to the pupils. As Jaeger (2012) cited, extended family members' (i.e., grandparents, aunts, and uncles) socio-economic characteristics on educational success has little direct effect. Also, extended family members' characteristics have little effect on educational success on average.

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The extended family is a crucial structure for the well-being of people and households in emerging nations through influencing their decisions. These family members for instance, grandparents, aunts, and sisters can offer advice on how to raise children whereas siblings, parents, and uncles can donate resources (both monetary and in-kind) for investments like enterprises or education. However, they are not directly involved in child's education such as providing instructional support because they are concentrated to other ways of being involved (Malde, 2014).

In addition, independent learning also got the lowest rank, like the extended family members. This result was similar to the previous study conducted by Dangle et al. (2020). Their study revealed that most pupils could not study independently due to reasons that they teach their siblings and help their parents. Due to large number of activities, diversions, and lack of attention, the students' biggest obstacles have been self-studying, poor internet connection, lack of sleep, and time to answer all of the modules.

Moreover, according to Roberts (2022), children with no one to help them lack the instructional support needed to maximize individual student progress while also functioning as a screening tool for individuals who may require specialized education services. Instructional support is a positive, goal-oriented program that uses thorough evaluation and intervention approaches to help all children in the average classroom overcome educational or behavioral barriers.

- *Educational Attainment of Household Member/s who can Deliver Instructional Support.*

As shown in Table 3, elementary graduates got the highest rank among the educational attainment with a frequency of 47. Meanwhile, Masters with units got the lowest rank having a frequency of 1.

TABLE III. PROFILE OF THE RESPONDENTS IN TERMS OF EDUCATIONAL ATTAINMENT OF HOUSEHOLD MEMBERS/WHO CAN DELIVER INSTRUCTIONAL SUPPORT

Educational attainment	Frequency	Rank
Elementary Graduate	47	1
Elementary Level	21	6
Secondary Graduate	37	4
Secondary Level	40	3
College Graduate	42	2
College Level	27	5
Vocational Graduate	10	7
Masters with Units	1	9
Uneducated	2	8

Based on the result shown in the table above, most of the instructional support providers are elementary graduates, which implies that majority of the parents or guardians who assist the students are elementary graduates.

Due to socio-economic status of certain families in rural areas and lack of financial flexibility in rural districts to devote funds to address the challenges, rural pupils also frequently lack access to high-quality early reading programs. Most of them ended up finishing elementary level only, and forced to earn early (Bailey, 2021). Moreover, according to Khan (2018), majority of them believe that they have enough time to study or that delaying their study time would not hurt them. They postpone their education and set earning money as their priority to help in their financial needs.

According to Clearinghouse Technical Assistance Team (2020), parents' educational level is one of the factors in the academic standing of their children. Children's behavior in their studies is strongly influenced by their environment especially those they look up to such as their parents. The educational level of their parents tells a lot about the current social status of the parents themselves and their families.

The table also shows that the lowest rank is having Master's degree in education. That means members of the family who can Deliver Instructional Support did not attend graduate school due to the fact that most of the parents who have postgraduate degrees are busier than those who do not have. On the other hand, Master's degree for some people especially in rural areas are not common.

According to Fain (2019), people who live in rural counties are often considerably less likely to get a college degree or even master's degree than people who live in urban and suburban regions due to multiple reasons such as the quality of education in some areas and socio-economic status.

Occupation of Household Member/s who can Deliver Instructional Support. Table 4 shows that the part-timer worker got the first rank with a frequency of 76. Meanwhile, unemployed due to community quarantine got the last rank, with a frequency of 10.

Connecting the two results of Tables 3 and 4 imply that elementary graduates who can deliver instructional support most likely are working part-time which agrees with the articles posted by Pelta (2020) and WayUp (2021) which elaborate that job opportunities are directly proportional to the degrees and skills of the workers. The apparent reason why those who did not graduate college and had a degree such as elementary graduates, tend to have a job that is an entry level or a part-time job because

the majority of the full-time jobs require a specific bachelor's degree.

TABLE IV. PROFILE OF THE RESPONDENTS IN TERMS OF OCCUPATION OF HOUSEHOLD MEMBERS WHO CAN DELIVER INSTRUCTIONAL SUPPORT

Occupation	Frequency	Rank
Full-Time Worker	68	2
Part-Time Worker	76	1
Unemployed due to community quarantine	10	6
Self-employed	17	5
Not Working	25	4
Student	27	3

Moreover, based on the result in Table 2, the household member/s who can deliver instructional support are the mothers. According to Psychol (2011), a mother's part-time employment is helpful for several reasons. The classification of part-time work schedules is meaningful and distinctive from full-time work. In some rural areas, the typical jobs available for elementary graduates are farmers, often tenants or proprietors of tiny plots of land as part-time or seasonal workers, fast food chain crew, cashiers, and working as hired labor.

However, college-graduate parents are working full time because of the wide range of opportunities for them connected to their finished degrees. Two thirds of all employment require post-secondary education, college graduates, and working as government employees.

Lastly, the lowest result is unemployed due to community quarantine. It received a frequency of 10. It implies that in the middle of pandemic, majority of the parents and guardians still worked part-time, and full-time jobs. According to Parker et al. (2022), people continued to work even though offices and establishments were closed. Some jobs were converted to work from home. However, some employees tried to seek another job that can be done online to still generate income.

- *Monthly Family Income.*

The monthly family income profile shown in Table 5 shows that majority are within the range of 5,001Php – 10,000Php, having a frequency of 75 which is 38.5 percent, with the lowest range of 15,001Php and above, with frequency of 24 which is 12. 3 percent.

TABLE V. MONTHLY FAMILY INCOME

Monthly Income (Php)	Frequency	Percentage (%)
1,000 - 5,000	68	34.9
5,001 - 10,000	75	38.5
10,001 - 15,000	28	14.3
15,001 & above	24	12.3
Total	195	100.0

Based on the result, it implies that most of the families who have an average monthly family income enrolled their children in the public elementary schools. Since public schools are supported by the government, families with ordinary incomes take advantage of the chance to send their children to school without worrying about spending a lot of money (Livingston, 2021).

According to the report of Philippine Statistics Authority report (2015), in order to cover both their basic food and non-food needs, a family of 5 really needs "at least P9,140 on average per month." This implies that families with average income allocate their money solely to their priorities in order to have adequate amount of money and ignore luxuries.

However, the highest bracket of income ranked the lowest. It is connected to the result wherein most of the respondents' guardians or parents are working part-time. According to Glass Door Website (2022), the average hourly pay of part time worker is roughly 70 pesos, sums up with an average of 5000 to 10,000 a month. Additionally, according to the new data provided by the Department of Labor and Employment (2022), the recent Minimum Wage in V - Bicol Region for Agriculture - Non-Plantation is Php345.00 per day; for Agriculture - Plantation is Php345.00 per day; and For Non-Agriculture is Php345.00 per day. This only agrees to the monthly income of P5001 – P10000.

Drajea et al. (n.d.) stated that it is believed that income is merely one factor in accounting for children's educational experiences. On the other hand, low income has been shown to have a negative impact on children's cognitive development. Evidence suggests that low-income children lag behind their peers in cognitive development and are a year behind in vocabulary when they start school, with long-term consequences such as early deficits may alter low-income children's attitudes toward school and ambitions for academic achievement. Furthermore, evidence suggests that poverty, as measured by family resources, significantly impacts children's ability to respond to educational opportunities.

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As explained by Gorard et al. (2012), children from poorer families tend to do less well at school and beyond. It is crucial to know whether this situation can be improved by activities to enhance the beliefs and behavior of the most educationally marginalized families.

➢ *Available Gadgets at Home.*

Table 6 presents the devices used by the students. The smartphone got the highest ranking, with a frequency of 182. On the other hand, the desktop computer got the lowest rank with a frequency of 8.

TABLE VI. PROFILE OF THE RESPONDENTS IN TERMS OF AVAILABLE GADGETS AT HOME

Available gadget	Frequency	Rank
Cable TV	127	2
Non-cable TV	54	3
Basic cellphone	48	4
Smartphone	182	1
Tablet	34	6
Radio	47	5
Desktop computer	8	8
Laptop	23	7

Legend:
3.26 – 4.00 Strongly Agree
2.51 – 3.25 Agree
1.76 – 2.50 Disagree
1.00 – 1.75 Strongly Disagree

This implies that most pupils use smartphones to help them answer the self-learning modules. Smartphone use is progressively developing into an engaging educational tool. The usage of this device lets students access information and interact digitally, access course materials, and use online learning systems. Moreover, such phone is affordable and easy to use compared to other gadgets. Furthermore, desktop computer is costly and need big space to put on, that is why it got the lowest rank.

As reported by Darko-Adje (2019), smartphones nowadays play a large and remarkable role in teaching and learning. This gadget is regarded as the most effective one because it has practically everything one could possibly need and is reasonably priced and cheaper than computers available in the market. For that reason, it will be redundant to use another gadget such as a computer which role can be already found in smartphones. Additionally, smartphones ranked the highest due to its affordable market price compared to a computer which ranked the lowest, and the flexible services that it can provide to the students with its cheap price. This device is also labeled a "tiny computer in your pocket." Smartphones make the students' lives easier for learning, access the internet to meet their information needs via learning management systems, and access academic databases and websites through electronic learning (e-learning,) and mobile learning (m-learning). According to Ilci (2014), mobile learning has become a new achievement in technology and education. It provides educators and learners with a wide range of opportunities. With these gadgets, the potential for effective learning and teaching is achievable.

➢ *Internet Connectivity.*

The data presented in Table 7 shows that mobile data got the first rank with a frequency of 147 while computer shops got the last rank with a frequency of 2.

TABLE VII. PROFILE OF THE RESPONDENTS IN TERMS OF INTERNET CONNECTIVITY

Internet connectivity	Frequency	Rank
Mobile data	147	1
Broadband Internet	76	2
Computer shop	2	6
Piso Wi-Fi	67	3
Other places	15	4
None	13	5

Legend:
3.26 – 4.00 Strongly Agree
2.51 – 3.25 Agree
1.76 – 2.50 Disagree
1.00 – 1.75 Strongly Disagree

This result implies that students prefer utilizing mobile data over the other connections mentioned above since it is readily available and affordable price when it comes to accessing the Internet for their studies. Additionally, mobile technology offers an Internet access that is relatively inexpensive and less technologically advanced than fixed Internet access.

As stated by Thorne (2019), mobile data is most convenient, easy to use, and easy to access even in far-flung areas. It can help a lot of the pupils to browse the internet whereas, computer shops are inaccessible, especially in the rural areas. Mobile data is an efficient source of the internet since it can be accessed anywhere and anytime. Due to its wide choices and types, it will be easier to access sources using this mode without spending a lot.

Furthermore, computer shops were temporarily stopped with their operation because it was believed that coronavirus transmissions may occur at computer or internet stores due to the cramped cubicles. On the other hand, those shops who were still open increased their hourly charge to the users to cope with the crisis (Lalu, 2020).

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In addition to that, according to Icogo (2020), mobile data in the Philippines is considered one of the cheapest in the world for as low as 11 pesos. Some packages can be claimed and used already in learning. This agrees with the result data shown in Table 5 for a family having monthly income of 5,001 - 10,000 Php. It is admissible that it suits this monthly income range for this type of internet connectivity.

B. Pupils' Level of Engagement in Modular Learning Modality

This section elaborates the discussion and understanding of the level of pupils' engagement in modular learning modality as shown in Tables 8 to 10. Analysis and interpretation including the implication and relation to other findings and from different theories are explained to give light to the current study.

Behavioral Engagement. The degree of behavioral involvement of students in the modular learning modality is shown in Table 8. With general weighted mean of 3.48, all respondents strongly agree on the indications, demonstrating their ability to deal with all of the circumstances suggested by the indicators. The fourth indicator that deals with properly managing time in answering the Self-Learning Modules because it is always available to be distributed by the teacher and the seventh indicator which indicates the teacher's constant reminder of submission and distribution of Self-Learning Modules that help manage time to finish the tasks, had the highest weighted mean of 3.57 in the results. The two lowest indicators having general weighted means of 3.25 and 3.44 respectively are the second indicator which deals with being able to allot at least two hours a day to study the Self – Learning Modules while the third indicator deals with the on-time submission of outputs since parents/family help them understand the discussions and answer the activities.

The highest indicator shows that pupils' behavioral engagement is seen when there is collaboration. It implies that students' individual engagement is affected by how they feel when they are learning with other people because they feel recognized, understood, and respected. According to Esman (2021), the teachers collaborate with the students for their self-development and responsibility. They provide materials and guidance for collaborative learning and individual learning. Due to pandemic, they are also the ones managing the distribution of the materials and facilitating the learners' progress. The constant reminder lets the students feel that someone pushes them to strive and finish what they should finish.

TABLE VIII. LEVEL OF ENGAGEMENT OF PUPILS IN MODULAR LEARNING MODALITY IN TERMS OF BEHAVIORAL ENGAGEMENT

Indicators	Weighted Mean	Adjectival Rating
1. I can focus on studying the lessons in Self – Learning Modules even if there's a lot of distraction like household chores because my parents/family help each other.	3.47	Strongly Agree
2. I can allot at least two hours a day to study the Self – Learning Modules.	3.25	Agree
3. I can submit the outputs on time since my parents/family help me to understand the discussions and answer the activities.	3.44	Strongly Agree
4. I can properly manage my time in answering the Self – Learning Modules because it is always available to distribute by my teacher.	3.57	Strongly Agree
5. Submission deadlines for Self – Learning Modules are not pressure on me because my teacher see to it that I have ample of time to answer.	3.52	Strongly Agree
6. I am able to complete the tasks in Self – Learning Modules even when there is less face-to-face contact.	3.51	Strongly Agree
7. My teacher's constant reminder of submission and distribution of Self – Learning Modules can help me to manage my time to finish the tasks.	3.57	Strongly Agree
8. I am able to assume my own responsibilities of improvement by the independence of starting, stopping at any time and progressing at my own speed.	3.49	Strongly Agree
9. I respond promptly to the queries of my teacher.	3.45	Strongly Agree
10. I can still finish my tasks on time even when I have issues and concerns regarding on Self – Learning Modules because received support from my parent/guardian and my teacher.	3.52	Strongly Agree
General Weighted Mean	3.48	Strongly Agree

Legend:
3.26 – 4.00 Strongly Agree
2.51 – 3.25 Agree
1.76 – 2.50 Disagree
1.00 – 1.75 Strongly Disagree

However, the lowest mean indicator is about the two hours at least dedicated time a day to study the Self–Learning Modules. As stated by Selvaraj (2021) in her article, self-learning is arguably one of the most complicated forms of studying. If there is no guidance from parent/s or teacher/s, that becomes a factor for a child not to be interested.

Cognitive Engagement. Table 9 shows the level of engagement of pupils in modular learning modality in terms of cognitive engagement that all the respondents strongly agree on the indicators with general weighted mean of 3.51. Moreover, the indicator "teacher conducted performance evaluation regularly and properly monitored to ensure and measure pupil's learnings" received the highest weighted mean with a value of 3.60. The second indicator that received the highest weighted mean is "following instructions given in the Self-Learning Modules to complete the tasks on time and properly". Moreover, the two lowest indicators "answering questions and doing activities in the Self-Learning Modules after studying the discussions and provision of standard content" are based on the grade level of the pupils. These indicators got the weighted means of 3. 42 and 3.40 respectively.

The highest indicator having a weighted mean of 3.60 is the tenth indicator which talks about teachers' performance evaluation and regular monitoring to ensure student's learnings. It implies that students become more engaged due to the fact that there is an authority helping and guiding them to measure their learnings and this is where they align their self-regulation, discipline, and self-direction which helps them to be intrinsically motivated.

TABLE IX. LEVEL OF ENGAGEMENT OF PUPILS IN MODULAR LEARNING MODALITY IN TERMS OF COGNITIVE ENGAGEMENT

Indicators	Weighted Mean	Adjectival Rating
1. I am capable of learning most of the lesson in the Self – Learning Modules.	3.53	Strongly Agree
2. I ask my teacher about the lessons I cannot understand well through online messages and SMS.	3.54	Strongly Agree
3. I follow the instructions given in the Self – Learning Modules to complete the tasks on time and properly.	3.59	Strongly Agree
4. I can easily understand lessons in the Self – Learning Modules with the help of my parents/family.	3.57	Strongly Agree
5. I can answer the questions and do the activities in the Self – Learning Modules after studying the discussions.	3.42	Strongly Agree
6. My difficulties and deficiencies are well-tolerated and given considerations by my teacher.	3.46	Strongly Agree
7. The provision of standard content is based on my grade level.	3.40	Strongly Agree
8. The learning takes place within my activities and in accordance with my own circle.	3.48	Strongly Agree
9. The Self – Learning Modules are designed to be easy to understand and well-developed.	3.47	Strongly Agree
10. My teacher conducted performance evaluation regularly and properly monitored to ensure and measure my learnings.	3.60	Strongly Agree
General Weighted Mean	3.51	Strongly Agree

Legend:
3.26 – 4.00 Strongly Agree
2.51 – 3.25 Agree
1.76 – 2.50 Disagree
1.00 – 1.75 Strongly Disagree

It agrees with the result generated by the study of Jou (2022) that students' recent experience on modular learning modality had an impact on their actions and experiences. The experiences of the students significantly impacted the effectiveness and comprehension of students participating in distance learning modules. Students' performance and learning were significantly impacted by instructor interaction. This explains how interaction with the instructor is essential.

The pupil's interaction with the teacher demonstrates that the teacher can give the student advice and feedback. Understanding has a significant impact on the academic success and satisfaction of students.

Furthermore, the second highest indicator is about time completion of self-learning modules. It implies that because of deadlines and specific time range to allot in answering the modules, students were able to engage themselves behaviorally. This go along with Rollings' (2019) statement that time limits are fixed as a core

component of education and learning. There are these positive effects including teaching-student time management, and at a young age, it builds a heightened academic satisfaction. Time on task is one of the dimensions of cognitive engagement. It reflects the mental energy of a student in learning. It stimulates the other factors of the said engagement such as effort and persistence though face-to-face learning actual time on task might prompt it effectively. However, time frame or allotment in blended learning is labeled as one influential factor that drives student engagement.

Furthermore, one indicator which got a low weighted mean is about answering questions in Self-Learning modules. A low frequency suggests that it is one of the situations which receives the least level of engagement from the students. According to Magni et al. (2013), this is intertwined with another variable in cognitive engagement such as deep concentration or absorption. This individual interest is stirred by having an entertaining or catchy lecture. Due to the fact that students often do Self-learning modules themselves, it creates a weak engagement because it does not provide the enjoyment of external stimuli.

The last indicator which has the lowest weighted mean is the provision of the standard content that suits the learners. It indicates that some of the students think that the material does not fit their level and that put forward the idea that the engagement they show reflects on the factors that cognitive engagement is involved. According to Amerstorfer et al. (2021), with minimal absorption and understanding, it lowers the engagement that the student gives.

Emotional Engagement. Table 10 shows the level of engagement of pupils when it comes to emotional engagement which suggests that the majority of them strongly agree, with a general weighted mean of 3.45. Further, investigation in the table revealed that the indicators having the highest means were 3.56 on parents' ability to motivate the pupils and siblings to make projects and experiments, and 3.55 for developing sense of responsibility in accomplishing the task provided in the Self-Learning Modules because the teacher gives feedback on the outputs. However, the least interpreted weighted means are "learning better at home because of assisting of parents/family" with 3.32 and "become engaged with classmates through online messages" with 3.18.

The highest weighted mean rendered is 3.56 on "discusses the relationship of the parents and siblings with the learners and the motivation that they give, specifically in-class activities or work". This implies that this indicator provides a positive emotion to the student through the assistance of those people around them. It broadens the scope of action, attention, and cognition. According to Terada (2018), in that way, learners see the interconnections and relatedness of the process that they do that make them more interested. This agrees with the study conducted by Turner (2012). Based on the findings, students who can openly share their experiences in school with their parents such as grades, what they learn in class, how they succeeded and some solved activities, and their academic/social issues exhibit greater emotional investment while learning.

TABLE X. LEVEL OF ENGAGEMENT OF PUPILS IN MODULAR LEARNING MODALITY IN TERMS OF EMOTIONAL ENGAGEMENT

Indicators	Weighted Mean	Adjectival Rating
1. My parents can motivate me and my siblings to make a project and experiments.	3.56	Strongly Agree
2. I can learn better at home because my parents/family is assisting me.	3.32	Strongly Agree
3. I always look forward for the home visitation of my teacher for her to monitor and evaluate my progress.	3.41	Strongly Agree
4. I develop my self-motivation because of feedbacks given by my teacher and it can help me to improve and enhance my learnings.	3.49	Strongly Agree
5. I develop my sense of responsibility in accomplishing the task provided in the Self – Learning Modules because my teacher gives feedback on my outputs.	3.55	Strongly Agree
6. I am satisfied and motivated in the use of Self-Learning Modules as basis on my education	3.40	Strongly Agree
7. Through Self-Learning Modules I am able to continue my learnings even without face-to-face classes.	3.54	Strongly Agree
8. I encourages my parents/guardian to participate in school activities if there is a schedule like meetings.	3.52	Strongly Agree
9. I am able to observe proper etiquette in my interaction with my teachers and classmates when making inquiries through online messages.	3.50	Strongly Agree
10. Through Self – Learning Modules I am able to engage with my classmates through online messages.	3.18	Agree
General Weighted Mean	3.45	Strongly Agree

Legend:
3.26 – 4.00 Strongly Agree
2.51 – 3.25 Agree
1.76 – 2.50 Disagree
1.00 – 1.75 Strongly Disagree

The second highest indicator is the connection between responsibility in accomplishing the task and feedback of the teachers on the outputs. This implies that it also impacts student's emotions positively that build up their confidence and self-assurance which are part of the dimensions of Positive Emotional Engagement. It conveys the points discussed in the study conducted by Shea et al. (2012) that with confidence, the learners tend to give more effort to academic tasks once they feel and believe that they have the capacity to succeed. This confidence may act as an indicator and a facilitator of engagement.

However, one of the two lowest indicators is "learning better at home because parents/family members assist the students". It implies that students' feeling when they are learning at home is different from when they are attending face-to-face classes. Students feel different and satisfied having the traditional way of having classes. For face-to-face learning to take place, they must be present at a specific time, and place. It frequently calls participation or interaction as well. Most people find that getting into the right frame of mind for learning and focusing requires going to a specific place at a specific time. For each of these reasons, students favor in-person instruction over online instruction. Face-to-face learning is extremely popular because of this.

The second indicator is about the engagement of one student with his/her classmates through online messaging. It implies that students have little to no communication with their classmates. According to Kwaske et al. (n.d), due to blended learning, students tend to study alone in their homes. They seldom interact with their peers, even in online messaging. It was brought by numerous factors. Availability of gadgets and internet connectivity are major parts of it. Those create a significant difference in their learning because students' discussions typically motivate deeper.

After all, they relate to the struggles and experiences of each other which can be in the form of feedback, suggestions, or even praise coming from a classmate, or the idea of relatedness and support. This affectionate bond with peers, leads them to be more engaged. Rarely experiencing this may create a discrepancy in their engagement which agrees with the research and theory on belongingness, self-determination, and social support that these are relevant for understanding peer relations for engagement.

C. Significant Relationship between the Profile of the Respondents and their Level of Engagement through Modular Learning Modality

Somers' Delta (d) was used to determine the relationship which may exist between the respondent's level of engagement through modular learning modality and their profile as to monthly family income. Point Biserial Correlation (rpb) was used to determine the relationship as to sex; Rank Biserial Correlation (rrb) for available gadgets at home; type of internet connectivity; and identity, educational attainment as well as the occupation of the household member/s who can deliver instructional support. The table below shows the result tested at 5 percent level of significance.

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TABLE XI. SIGNIFICANT RELATIONSHIP BETWEEN THE PROFILE OF RESPONDENTS AND THEIR LEVEL OF ENGAGEMENT THROUGH MODULAR LEARNING MODALITY

Profile	Level of Engagement					
	Behavioral		***Cognitive***		***Emotional***	
	Test Statistics	*p-value*	*Test Statistics*	*p-value*	*Test Statistics*	*p-value*
Sex	-0.018	0.802	-0.033	0.649	0.089	0.217
Household member/s who can deliver Instructional Support						
Elder Siblings	0.129	0.071	0.105	0.143	0.153	0.032*
Extended Family Members	-0.072	0.0317	-0.130	0.07	-0.173	0.015*
*Educational attainment of household member/s who can deliver Instructional Support						
Secondary Level	0.168	0.019*	0.167	0.02*	0.154	0.031*
College Level	0.010	0.888	0.072	0.315	0.146	0.041*
*Occupation of household member/s who can deliver Instructional Support						
Student	0.031	0.67	0.052	0.468	0.144	0.044*
Available gadgets at home						
Cable TV	0.158	0.028*	0.143	0.046*	0.164	0.022*
Smartphone	0.143	0.046*	-0.113	0.116	-0.118	0.102
Internet connectivity						
Piso Wifi	0.098	0.174	0.003	0.971	0.167	0.020*

*Significant Relationship at 0.05 Significant Level

The result shows that sex of students is not significantly related to the level of engagement. Hence, there is no relationship between sex and student's cognitive engagement (rrb = -0.033, p=0.649). This is supported by the study conducted by Amir et al. (2014) that sex does not have a correlation to their willingness to learn in class since students have their own strengths and weaknesses that vary. These strengths are able to cover their weaknesses in learning, turning the said engagement to be detached from the idea of female or male. Moreover, the null hypothesis that there is no connection between sex and student's emotional engagement will be accepted (rrb = 0.089, p = 0.217). According to the U.S. Agency for International Development (2008), their study suggests that all students especially in the early years of learning are given equal opportunities in school. They are able to maintain their abilities to learn regardless of whether they are males or females, and that makes them emotionally engaged because of the environment that makes them feel that they belong. Also, the null hypothesis about the connection between sex and behavioral engagement will also be accepted (rrb = -0.018, p=0.802). According to the study by Gutafson (2018), both males and females are able to participate in the different school activities regardless of their sex. They are always determined which is the core indication that students are engaged behaviorally.

A statistically significant weak positive relationship was noted between the respondents' level of behavioral engagement and their elder siblings as the household member who can deliver instructional support (rrb = 0.129, p = 0.071). This agrees with the idea of the study conducted by Krejcova et al. (2019) that students' early years development of behavior is highly influenced by their siblings. Elder siblings provide opportunity and help to accomplish one's task because they share the same behaviors during these years that students may not probably acquire when they are only guided by teachers and parents. On the other hand, elder siblings' relationship with cognitive engagement of students showed (rrb = 0.105, p = 0.143) and implies that the said engagement conveys a deep processing in which an interaction with a closer family member is needed. This is where their siblings are ideal to intervene creating another connection towards learning. Moreover, regarding emotional engagement (rrb = 0.153, p = 0.032), elder siblings provide more enjoyable learning with the students due to their personal knowledge about the interest of their siblings that

they are teaching, letting students feel positive emotions while learning.

Also, it can be noted that extended family members have significant negative relationship with level of cognitive learning engagement (rrb = -0.130, p = 0.07). This implies that an extended family member in the household is associated with low level of cognitive learning engagement. It is also the same with the emotional engagement with negative relationship (rrb = -0.173, p = 0.015). This is related to the study conducted by Baker et al. (2016) that some family members may induce pressure and may let students feel negative emotions because of just being overly involved.

Table 11 shows that the respondents' level of behavioral learning engagement was found to have a significant weak relationship with secondary level (rrb = 0.168, p=0.019). According to Iqbal (2015), better learning environment is given to students with educated parents at home. Parents are capable of instructing their kids themselves. Children are given facilities at home to help them reach their goals, and that kids were able to participate in such educational activities. Furthermore, it also shows that the respondent's level of emotional learning engagement is positively related with the secondary level education profile of household members who can deliver instructional support (rrb = 0.154, p = 0.031). Dubow et al. (2010) found that parental educational levels are associated with more positive educational ambitions or educational achievement. This is how they become emotionally engaged. In terms of cognitive engagement, the relationship is the same having a slight relationship (rrb = 0.167, p = 0.02). It implies that students are willing and able to do the task at hand with the help of the household member who attained secondary level of education.

Based on the results from Table 11, there is no relationship between the college level educational attainment of household members who teach the students and the behavioral (rrb = 0.010, p = 0.888) and emotional engagement (rrb = 0.146, p = 0.041). On the other hand, it has a slight significant connection with the cognitive engagement (rrb = 0.072, p =0.315). According to Khan (2015), a child's parents' education can be a powerful motivator and lay the road for their future. It is widely acknowledged that children of educated parents are more capable, resourceful, and experienced than children of uneducated parents.

There is no relationship between the occupation of household members who give them educational support in two types of engagement: behavioral (rrb = 0.031, p = 0.67 and emotional rrb = 0.052, p = 0.468. According to Durisic et al. (2017), the educational attainment and occupation of the guardian do not vary at all because this area is not a big factor in students' behavioral and emotional engagement. Their engagement will be strong enough as long as there is an extrinsic factor that motivates them regardless of their educational background. Parental participation can help children and adolescents succeed in a variety of ways. Parents can help their children with their homework at home which is one way they can positively impact their children's education. Moreover, in cognitive engagement, it shows slight significant relationship whether the guardian has a high or low level of degree or their occupation. The extent of their motivation and strategies to learn are positively affected by their parent's guardians' job and educational background.

As to available gadgets at home, cable television is noted to have an association with the level of learning engagement. These data suggest that the availability of a cable television is related to a high level of learning engagement while using a modular approach. According to Mythill (2022), human behavior is learned observationally through modeling which involve observing others which forms an idea of how new behaviors are performed, that may be significant with their behavioral engagement. Watching television was seen to have a positive correlation to language and cognitive engagement because of their great medium (rrb = 0.143, p = 0.046). Furthermore, repeated exposure to information from television affects student's emotional engagement (rrb = 0.164, p = 0.022) by either setting up another experience during distant learning even though they are away from schools and cannot interact from their classmates.

In addition, smartphones resulted to having a slight positive relationship with the Behavioral Engagement of students (rrb = 0.143, p = 0.046) supporting the study of Siew et al. (2017) that smartphones make children more indulged in learning. Being able to use smartphones in studying make them more motivated. However, it was found out that a slight negative relationship regarding smartphones and cognitive engagement (rrb = -0.113, p = 0.116) implies that students may find it too comfortable looking for answers using the said gadget rather than extending more effort that would practice their skills. Similar to this, negative relationship towards emotional engagement was also indicated (rrb = - 0.118, p = 0.102). According to the study of Wilmer (2017), gadgets specifically smartphones might interrupt the emotional engagement of a student because the excess usage of this might already cause anxiety and other negative emotions.

Piso-wifi was found to not have any relationship with behavioral (rrb = 0.098, p = 0.174) and cognitive engagements of students (rrb = 0.003, p = 0.971). However, it showed a slight relationship with the emotional engagement of students (rrb = 0.167, p = 0.020).

That suggests that they are positively affected by this internet connectivity. Being able to access internet and benefitting from the availability of this connection makes students more engaged with enthusiasm towards learning.

D. Factors Affecting the Pupil's Level of Engagement through Modular Learning Modality

As referred to the study conducted by Lee et al. (2019) that student's engagement constitutes multiple components including extrinsic and intrinsic elements, and to the study of Fabian et al. (2022) which focused on academic experiences during the pandemic, the indicators were generated.

In Table 12, factors affecting the pupil's level of engagement through modular learning modality are deliberately provided, showcasing twelve (12) indicators. These are essential in understanding the gap that may be needed attention, and provide insight to enhance the level of engagement of pupils in modular learning modality.

The table further describes the factors based on rank. The highest was the indicator with a relationship to teachers, with a mean of 8.33. This was followed by existing health conditions with a mean of 7.69. The third in the rank was unavailable learning space with a mean of 7.02. Next is vocabulary with 6.74. The fourth place is stress level, with a mean of 6.54, followed by conflict with other activities such as household chores with a mean of 6.46. The seventh rank was the unstable internet connection, with a mean of 6.38, succeeded by distractions such as social media, noise from community or neighborhood, and the like. The ninth rank was instructional support from household members, with a mean of 5.95. The tenth rank was insufficient load/data allowance with a mean of 5.86. The eleventh rank was the lack of available digital gadgets. The difficulty in independent learning placed rank 12 or the last place in the rank garnering 5.61.

TABLE XII. FACTORS AFFECTING THE PUPIL'S LEVEL OF ENGAGEMENT THROUGH MODULAR LEARNING MODALITY

Factors	Sum of Ranks	Rank
1. Existing health conditions	1,526	2
2. Vocabulary	1,326	4
3. Relationships with teachers	1,627	1
4. Stress level	1,281	5
5. Lack of available digital gadgets	1,091	11
6. Insufficient load/data allowance	1,131	10
7. Unstable internet connection	1,218	7
8. Difficulty in independent learning	1,090	12
9. Conflict with other activities (example: household chores)	1,266	6
10. Unavailable learning space	1,365	3
11. Distractions (examples: social media, noise from community/neighbor)	1,211	8
12. Instructional Support from household members	1,155	9

This implicates the fact that the three great factors that can affect the level of pupils' engagement are relationships with teachers, existing health conditions, and unavailable learning space.

This implicates the fact that the three great factors that can affect the level of pupils' engagement are relationships with teachers, existing health conditions, and unavailable learning space.

According to a study by the Basch (2010), health-related issues significantly influence a child's motivation and aptitude to learn, Students who are healthier study more effectively. Physically healthy students participate more actively in activities and achieve higher grades. Recent studies in areas ranging from neuroscience and child development to epidemiology and public health provide persuasive evidence for the causative role of educationally relevant health disparities in the student achievement that afflicts learners persuasive evidence for the causative role of educationally relevant health disparities in the student achievement that afflicts learners.

Prior to the study conducted by Sawers et al. (2016), they found that the type of learning space can influence creative thinking, add excitement to both the student and instructor, and enhance teaching and learning experiences. These results indicate that space can influence instructor behavior as well as instructor and student perceptions of engagement, thus underscoring the dynamic relation between space, instructor behavior, and student engagement and learning. On the other hand, the two indicators in the lowest ranks deal with the difficulty in independent learning and the lack of available digital

gadgets. It suggests that the engagement of the pupils is least affected by these two areas. The first lowest indicator implies that independent learning only affected students in a little amount. It suggests that modular learning must be modified more to make it more self-centered and become a personalized learning for students. According to Meyer (2010), independent learning might be the kind of shifting of responsibility for the learning process from the teacher to the pupil. This shift must be in a positive way where they can practice their responsibilities to own their learnings.

Last lowest indicator which is "lack of available gadgets" implies that availability of gadgets did not affect student's engagement a lot. According to AnimationXpress Team (2021), independent learning can be connected to technological gadgets because these days have been encouraged that students must learn on their own without teacher's assistance because of the pandemic. They use their tools to look for the answers of their curiosity. In that sense, it agrees why these two factors received the lowest rank because they are connected to one another.

E. Significant Agreement On The Factors Affecting The Level Of Engagement Among The Pupils Through Modular Learning Modality

Kendall's Coefficient of Concordance (W) ran at a 5 percent level of significance to determine if there is a significant agreement among the respondents on the factors affecting the engagement of pupils in modular learning modality. Table 13 presents the coefficient of significant agreement.

TABLE XIII. SIGNIFICANT AGREEMENT ON THE FACTORS AFFECTING THE LEVEL OF ENGAGEMENT AMONG THE PUPILS THROUGH MODULAR LEARNING MODALITY

Kendall's *(W)*	**p-value**	**Decision**	**Interpretation**
0.056	<0/001	Reject Ho	Slight Agreement

Computed Kendall's W is 0.056 with a p-value less than 0.001 suggests that there is a slight agreement among the respondents on factors affecting the level of engagement in modular learning modality. Table 13 findings imply that there is a slight agreement among the respondents on factors affecting the level of engagement through behavioral, cognitive, and emotional engagements on modular learning modality, therefore, rejecting the null hypothesis. Student's engagement is affected by different factors such as both extrinsic and intrinsic. Changes or modifications with the factors might bring either a positive or negative effect to student's engagement by how they are handled or developed. The slight agreement also implies that consideration and improvement of these factors will help increase the engagement of the students in modular learning modality. It agrees with the study conducted by Saeed et al. (2012) that shows the connection between genuine student engagement and intrinsic and extrinsic factors. Students showed positive engagement due to these factors such as their good relationship with their teachers that let them view that learning is more interesting. Considering these factors provide more supportive environment for the students for best possible student academic and social outcomes.

F. Intervention Plan to Address the Factors Affecting the Level of Engagement of Pupils through Modular Learning Modality

The proposed intervention plan was based on the results of the study to Strengthen and Improve the Lowest Factors Affecting the Pupil's Level of Engagement through Modular Learning Modality. The factors which got the lowest figures in students' engagement include independent learning, provision of standard content of materials based on grade level, and answering self-learning modules. Hereunder is the Action Plan which outlines particular Objectives, Activities or Actions to be taken, the Person or Agency Involved, and the Expected Output to address the study's lowest-ranked factors.

TABLE XIV. PROPOSED INTERVENTION PLAN TO ADDRESS THE FACTORS AFFECTING THE LEVEL OF ENGAGEMENT OF PUPILS THROUGH MODULAR LEARNING MODALIT

Objectives	**Activities**	**Person or Agency Involved**	**Time Frame**	**Expected Output**
Behavioral Engagement				
1. To set goals and establish routine every week for students.	Write down journals for student's schedule and checklist to monitor their accomplishments.	Teachers, Parents and Students	Weekly	Achieving the total number of hours and scope of topics that student should accomplish within the week.
2. To improve typical modules that will suit	Providing activities that will allow them for Self-	DepEd and Teachers	Every Month	On-time submission of modules that are

the interest of the students based on the feedback of their guardians after checking and evaluating their performance on their last activities.	assessment of their outputs.			easy to understand and make students invested.
Cognitive Engagement				
3. To create special tasks for students making students responsible for finding content that guides the discussion and makes them highly interested.	Create tasks for students that they need to accomplish for a given time frame considering the weaknesses and strengths.	Teachers, Parents, and Students	Weekly	Engaged students with better understanding with the standard content of their modules.
4. To develop methods for recalling, comprehending, and solving problems.	Create workbooks exclusive for each child's learning level	DepEd and Teachers	Every Month	Students are able to answer the activities in the Self – Learning Modules after studying the discussion and strategies.
Emotional Engagement				
5. To create LMS with captivating photos, video clips, narration, and other audio tracks to bring class material to life, and build crucial emotional connections, and keep students interested.	Adapt a child friendly Learning Management System and website that is easy and convenient to use for everyone to maintain virtual communication with students and constant access for some learning materials to aid them.	DepEd and Teachers	Every School Year	Teacher to student and student to student connection through online messages on the LMS.

The intervention is needed to be put in place based on the results of the study's lowest level of engagement. The plan is divided into three categories based on the approach that must be applied to improve the behavioral, cognitive, and emotional engagements of the students. The plan begins with behavioral engagement intervention which aims to achieve at least two hours a day of studying self-learning modules by creating a specific plan that a student must undertake, keeping them aware and involved with the help of the parents, then encourage the on-time submissions of modules through interesting modules and exercises that will keep them hooked. The next category is based on the lowest results in Cognitive Engagement which is about the ability of the students to practice independent learning. Two steps will be taken to strengthen this area. First is to create a special task to make students obliged and responsible to finish it. Second is to guide students using flowcharts or any methods that they can easily follow to eliminate their difficulties. The last category is the Emotional Engagement. Teachers will be resourceful of the platform available where they can extend their interaction with the students and apply modification based on the interest of the students according to the conducted assessment.

V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter summarizes the salient results and findings of the study. It also presents the conclusions formulated and the proposed recommendations per objective.

A. SUMMARY

This study determined the pupils' engagement in modular learning modality in public elementary schools in the Municipality of San Lorenzo Ruiz, Camarines Norte. The respondents were Grade 6 pupils currently enrolled

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during school year 2021-2022. Moreover, the study aimed to propose an intervention plan to enhance the pupils' engagement.

The problems which were specifically answered through this research were the following: 1) Profile of the students such as sex, household member/s who can deliver Instructional Support, occupation of household member/s who can deliver instruction support, monthly income, available gadgets at home, and internet connectivity; and 2) Level of engagement of pupils in modular learning modality in terms of behavioral engagement, cognitive engagement, and emotional engagement. A significant weak positive relationship was found between n the profile of the respondents and their level of engagement through modular learning modality. In addition, based on the results of the study, a number of factors got substantial agreement, implying that they had a direct impact on the students' engagement. In 100 response to the generated results, an intervention plan was developed to address the factors influencing the level of engagement of pupils through modular learning modality.

The study used a descriptive survey research design. The correlation research method was used to test the hypotheses. Data were gathered and analyzed using percentage, ranking, Point Biserial Correlation, Somers' Delta, and Kendall's Coefficient of Concordance. The researcher used total enumeration consisting of 195 Grade 6 pupils from different public elementary schools in the Municipality of San Lorenzo Ruiz, Camarines Norte namely Salvacion Elementary School, Imelda Elementary School, and Mampurog Elementary School which are implementing modular learning modality.

B. Findings

➢ *The findings of the study were summarized as follows:*

- There were a total of 195 respondents wherein 98 of them were males, and 97 females. Mothers ranked first as the household members who can deliver instructional support, with a frequency of 111. Majority were elementary graduates with a frequency of 47. Most of them were part-time workers having a frequency of 76. The family income bracket of Php5,001-Php-10,000 ranked first, having 38.5 percent. Furthermore, smartphone and mobile data garnered values of 182 and 147 respectively.

- The level of engagement of pupils in modular learning modality in terms of behavioral engagement got a General Weighted Mean of 3.48 indicating Strongly Agree. The two highest indicators got the same weighted mean of 3.57. They were the 4th indicator that discussed "being able to manage time in answering the Self–Learning Modules because it is always available for distribution by the teacher. The 7th indicator which was "teacher's constant reminder of submission and distribution of Self – Learning Modules can help the student to manage time to finish the tasks".

Consequently, two lowest indicators were the second and third indicators which were "allotting at least two hours a day to study the Self – Learning Modules" and "submit the outputs on time since my parents/family help me to understand the discussions and answer the activities" with weighted mean of 3.25 and 3.44 respectively. In terms of cognitive engagement, the General Weighted Mean was 3.51 indicating Strongly Agree, with the highest indicator which was "performance evaluation regularly and properly conducted by the teacher ensures and measures their learning" with weighted mean of 3.60. The fourth indicator "I can easily understand lessons in the Self – Learning Modules with the help of my parents/family" got the weighted mean of 3.57.

However, the two lowest indicators were the 5th indicator which was "being able to answer the questions and do the activities in the Self – Learning Modules after studying the discussions", with weighted mean of 3.42. The 7th indicator which dealt with the provision of standard content was based on student's grade level which got the weighted mean of 3.40. Furthermore, in terms of emotional engagement, General Weighted Mean was 3.45 indicating Strongly Agree.

The two highest in rank belonged to the first indicator "parents and the siblings motivate student to make projects and experiments" with weighted mean of 3.56 interpreted as Strongly Agree. The 5th indicator "developing sense of responsibility in accomplishing the task provided in the Self-Learning Modules with weighted mean of 3.55. On the other hand, the two lowest indicators were the 10th and 2nd indicators which were "Engaging with my classmates through online messages through Self – Learning Modules" with weighted mean of 3.18, and "being able to learn better at home because parents/family are assisting the student" got the weighted mean of 3.32.

- In the test for significant relationship between the profile of respondents and their level of engagement through modular learning modality, significant weak positive relationships were noted between the respondent's level of engagement and guardian or elder siblings as the household members who can deliver instructional support (rb = 0.193, p=0.007; rb = 0.193, p= 0.024). As to available gadget at home, cable television got the high level of learning engagement (rb = 0.151, p=0.035) while broadband as type of internet connectivity (rb = 0.255, p 0.05).
- There were several factors affecting the level of pupils' engagement. Among the perceived factors affecting pupils' level of engagement through modular learning

modality, the highest was "relationships with teachers", with a mean rank of 8.33 while the lowest was "difficulty in independent learning" with a mean rank of 5.61.

- The results revealed that there was a slight significant agreement with the factors that affect the level of engagement among the pupils through modular learning modality through the value of Kendall's W generated that resulted to 0.056 with a p-value less than 0.001, thereby rejecting the null hypothesis.
- An intervention plan was proposed to enhance the pupils' difficulty in independent learning engagement in modular learning modality which included the assessment of students' level in independent learning through pre-test, create handbooks exclusive for each child's learning level, conduct of workshop and orientation for new strategies and framework to aid the learners, create an online portal to track students' progress, create handbooks exclusive for each child's learning level, and conduct programs within the barangay for students' interaction.

C. Conclusions

➢ Based on the findings of the study, the following conclusions were drawn:

- The respondents in selected public elementary schools got almost the same number of males and females. The majority are provided with instructional support by their mothers, elementary graduates with part-time work, having monthly family income of Php 5,001-Php10,000. Most of the respondents used smartphones and mobile data to connect to the internet.
- As to the level of engagement of pupils in modular learning modality, availability of Self-Learning Modules and constant reminder of teachers regarding the submission and distribution can help the pupils manage their time correctly and finish the tasks on time. Moreover, conducting performance evaluation regularly and properly by the teacher ensures and measures pupils' learning. In addition, parents' involvement can motivate the pupils to become more engaged in modular learning.
- There is a weak positive relationship between household members who can deliver instructional support, available gadgets at home, and internet connectivity. Meanwhile, monthly family income has no significant relationship between educational attainment and occupation of household members who can deliver instructional support.
- The relationship with teachers was the highest factor that can affect the level of engagement of pupils in modular learning modalities.
- There was slight agreement on the factors affecting the level of engagement among the pupils through modular learning modalities.
- An intervention plan was proposed based on the lowest factors which were the independent learning of the students, assessment of students' level in independent learning through pre-test, create handbooks exclusive for each child's learning level, conduct of workshop and orientation for new strategies and framework to aid the learners, create an online portal to track students' progress, create handbooks exclusive for each child's learning level, and conduct programs within the barangay for students' interaction. The level of Engagement of Students was influenced by a lot of significant factors that were both extrinsic and intrinsic. The highest level of engagement was seen when there was the involvement of other person's guidance such as teachers and parents. In this manner, their participation was reflected in learning and finishing tasks. On the other hand, independent learning was spotted to exhibit the lowest engagement in learning through modular modality due to the lack of assistance. However, a weak positive relationship was generated between the profiles of the students that affect their involvement in learning outside the four corners of school classrooms. Therefore, it was likely that the observed factors and engagement would be even stronger if students could be guided, and interventions would be created addressing the weakest points. Modifications and development of resources and materials were needed to be taken into consideration to increase student's level of engagement in modular learning modality.

D. Recommendations

➢ Based on the findings and conclusions, the following are hereby proposed: The pupils' engagement through modular learning can be improved by addressing first the fundamental factors that affect their engagement such as their profiles that have something to do with their engagement.

- The DepEd and LGUs may coordinate programs to support kids and their parents who lack access to adequate educational resources. Teachers may offer a range of learning resources to aid students in independent learning, and they may keep a line of contact open with students and parents during class hours via SMS or other online platforms.
- The teachers may establish teacher-student relationship through regular home visitation, proper performance evaluation, and giving feedback.
- The parents or guardians may assist the students' regarding their queries such as unfamiliar vocabulary words even in Self-Learning Modules.
- The barangay officials may create health related follow-ups for each student in their respective barangays.
- The school leaders may build a modified approach based on the pupils' weakest and strongest engagement.

- The future researchers may continue to conduct data analysis based on the current data presented and may consolidate findings or search for innovative interpretations and patterns in the data and establish inferences that may be drawn from the affective side to further explain the data or generate new observations.

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