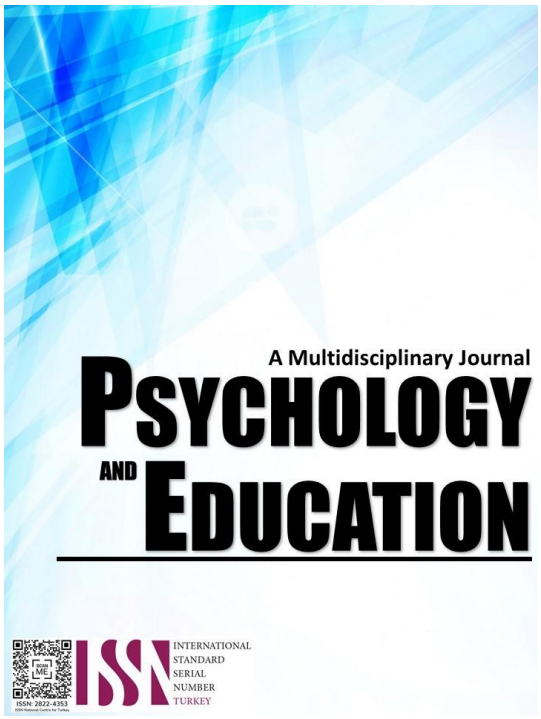
STUDENTS' FEEDBACK AND CHALLENGES ENCOUNTERED ON MODULAR DISTANCE LEARNING: ITS RELATIONSHIP TO THEIR ACADEMIC PERFORMANCE INSCIENCE



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Research Article

Students' Feedback and Challenges Encountered on Modular Distance Learning: Its Relationship to their Academic Performance in Science

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Abstract

This study aimed to determine the students' feedback and challenges encountered on modular distance learning and its relationship to their academic performance in Science from the different schools of Alamada North Cotabato during the Covid-19 pandemic. The study used the descriptive-correlational research design. The respondents of the study were grade 8 students of Alamada. The data gathered from the survey questionnaire were analyzed using appropriate statistical tools. Based on the findings of the study, it is found that the respondents have positive feedback on the use of modular distance learning in terms of the module content, strategies, learning activities, and assessments; they Sometimes experienced challenges like a lack of internet connection to supplement their readings, too many household chores and difficulty in staying motivated on the use of Modular Distance Learning. There is no significant difference in the feedback in utilizing modular distance learning when categorized according to age, sex, and monthly income. There is no significant relationship between feedback and the academic performances of the respondents in terms of strategies, learning activities, and assessments. However, module content is significantly related to their academic performance.

Keywords: *students, feedback, challenges, modular distance learning, academic performance, coping mechanisms*

Introduction

The health crisis's profound and global impact has affected students' lives psychologically and academically (Miller, 2020). It has caused an emergency shift to modular learning, which has created unprecedented disruptions for both students and faculty across the globe. The shift of the teaching-learning delivery to modular distance learning made it more challenging for school personnel, to deliver primary quality education. That is why DepEd leaders are constantly finding avenues to solve the problems and capacitating their teachers and school heads to become more effective in the field of modular distance learning (Bagood, 2020).

Modular distance learning is one of the most widespread and recognized teaching-learning techniques in the United States, Australia, and Asia. It effectively promotes reflective learning rather than focusing on marks or grades (Sejpal, 2013). Also, Ali et al. (2010) have proven in their studies that modular learning in primary education is a more effective mode of instruction than traditional teaching because it allows individuals to learn more at their own pace. Similarly, Karthikeyan and Kumar (2014) found that undergraduate students need more exposure to dermatology. However, it was found that students in a dermatology class generally favored modular learning as a more exciting and valuable learning experience than conventional learning.

In the Philippines, learning remotely is challenging because aside from the existing problems on access and affordability, the emerging concerns on financial stability and affective support contributed to interrupting learning engagement. Moreover, exposing culturally face-to-face learners in the context of modular distance learning can cause additional learning pressure. Nevertheless, the need to listen to the stakeholders' lived experiences in a modular distance learning setup provided a lending ear to be heard and a voice for building a pedagogy of understanding about their learning journey in this time of pandemic crisis (Abel, 2020).

In Alamada, using Modular Distance Learning in this critical period has created different issues and concerns regarding students' experiences. With these, the researcher has seen the need to gather the students' feedback and challenges encountered on modular distance learning that affected their academic performance in Science from the different high schools in Alamada, Cotabato. The gaps and issues prompted the researcher to investigate this problem.

Research Questions

This study aimed to determine the students' feedback and challenges encountered on modular distance learning and its relationship to their academic performance in Science. Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of age, sex, and family income?
2. What are the feedback of the students on the use of Modular Distance Learning in terms of module content, teaching strategies, learning activities and assessment?
3. What are the challenges experienced by the respondents in the use of Modular Distance Learning?
4. What are the coping mechanisms used by the respondents to address the challenges experienced?
5. What is the academic performance of the respondents in Science?
6. Do the respondents' feedback on the utilization of Modular Distance Learning differ when categorized according to selected demographic profile?
7. Is there a significant difference between the academic performance of male and female respondents?
8. Is there a significant difference on the challenges experienced on the use of Modular Distance Learning between male and female respondents?
9. Is there a significant relationship between feedback and academic performances of the respondents?

Literature Review

Modular Distance Learning

The secretary of the Department of Education in the Philippines has stated that aside from the online method of delivering education, modular learning is also established as an alternative, especially for those without internet access (Hernando-Malipot, 2020). Distance learning was highlighted in the DepEd Basic Education Learning Continuity Plan (BE-CLP). It aims to demonstrate resilience in countering adversities and upholding its duties and responsibilities towards the stakeholders (Department of Education, 2020).

Bagood (2020) explained that the shift of the teaching-learning delivery in schools to modular distance learning made it more challenging for school personnel to deliver primary quality education. That is why DepEd leaders are constantly finding avenues to solve the problems and capacitating its teachers and school heads to become more effective in the field of modular distance learning. He also added that identified teaching personnel and the Education Program Supervisors prepared modules starting in May 2020 in all subjects for all grade or year levels across four quarters following the "Most Essential Learning Competencies."

According to Llego (2020), modular distance learning is learners' learning at their own pace, in their way, and using self-learning modules (SLMs). It can be printed, digitized format, or electronic copy appropriate to learners, and other learning resources like learners' materials, textbooks, activity sheets, study guides, and other learning materials.

With modular distance learning, the teacher monitors learners' progress while the learners may ask for help via email, telephone, text messaging/instant messaging. Teachers shall do home visits to learners if the learners need remediation or assistance in their module. Any family member or other community stakeholders can aid (Manlangit, Paglumotan, & Sapera, 2020).

The success and effectiveness of distance learning depend on the study materials (Jayaram & Dorababu, 2015). Therefore, to cater to the needs and abilities of each student, DepEd focused on self-study modules as the primary learning tool that can serve all students, which can be combined with other modalities of delivery learning that students have access to. Self-study materials depend on harnessing the various means and channels of communication to adapt them to the needs of learners. In distance learning, like modular learning, teachers and students are apart. Thus SLMs must serve as teachers (Malipot, 2020).

Further, Gahutu (2010) studied modular learning as it applied to a Physiology course at the National University of Rwanda. Students reported that they learned best when the teaching was less theoretical and they could work through the material using practical classes and demonstrations. However, to make the problem-based approach successful, they need greater access to outside materials available through the library and the internet.

Modular distance learning is about surviving in a crisis with all resources available, including offline and online modalities. The term modular distance learning was recommended to be used to describe the mass changes made during COVID-19 and other similar crises (Bozkurt et al., 2020). Hodges et al. (2020) described modular distance learning as a temporary shift of instructional delivery to an alternate mode due to crisis circumstances. It involves using fully remote teaching solutions for instruction and education that would otherwise be delivered face-to-face or as blended courses.

Further, Pe'rez-Villalobos et al. (2021) characterized it as presenting a fast and transitory solution to the impossibility of keeping up face-to-face work due to a pressing problem and hoping to return to the prior

mode after that. Its purpose is to keep up formation going even if it could deplete quality, mainly because the abrupt change makes it quite probable that the institutional resources capacity, geared to face-to-face work, would be exceeded, including the support personnel for teachers and students, support systems and the control of the teachers themselves on the operation of the course.

Toquero (2021) explained that modular distance learning makes use of fully remote teaching for delivering instruction with the primary objective of providing temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis and not to re-create a robust educational system. It offers fast, practical, and reliable access during a crisis for learning to continue.

Similarly, modular distance learning is a feasible alternative amongst learning students unconventionally dispersed, either locally or abroad, with limited contact with educational facilities and instructional materials for their learning needs. It is the transmission of curricular content which deemphasizes person-to-person contact. This contact involves both educators and learners, therefore, it is transmitted overboard beyond the limit of space or number through an online medium (employing electronic networks and devices) and through correspondence, promoting interactive scholarship at the most efficient and realizable rate (Masuku, 2021).

In addition, they observed that whether modular distance learning is conceptualized as open learning, online learning, or distance education, based on respective individual or institutional perception, this phenomenon enhances unlimited and unrestricted access for all students to meet their higher education needs, not within the four walls of institutions, but at the comfort of their homes and their nearest library. It also entails delivering curricular content, instructional material, or educational resources to the target learning audience physically away from the center or institution of learning. Modular distance learning during COVID-19 became exceptionally inevitable in areas with the most challenging terrain where physical access to educational centers and resources is hampered.

With modular distance learning, students study at their own pace, and their lecturers will have limited physical contact, which invariably reduces incidents of abuse, blackmail, exploitation, and gender-based violence. Modular distance learning emphasizes academic meritocracy and students' performance as opposed to the traditional physical class system where each learner's survival is tempered in collective friction and degenerated by bullying, equal to a survival-of-the-fittest scenario (Hodges, 2020).

Many countries like South Korea, Japan, Australia, and South Africa have focused on providing digital "content" or "materials" at K12 and higher education levels, particularly those with an existing lecture or content-centric practices. In addition to online technology-centric solutions, some countries also used technologies popular from earlier generations of distance education i.e. printed materials (e.g., activities, workbooks, and textbooks), radio, and TV to deliver educational content. These mass communication systems were critical in many countries to deal with digital divides and access issues and to address concerns that all learners are included. In the Philippines, the agency considered collaborating with the state-run television network and regional television networks for the use of TV and radio-based education. Likewise, correspondence or modular instruction was implemented to cater to learners in far-flung areas as part of the new normal in primary education (Bozkurt et al., 2020).

According to Schleicher and Reimers (2020), countries used various resources to support students' learning when they could not come to school, including instructional packages (textbooks, worksheets, and printouts), radio education, educational television, and online instructional resources. Countries usually used several tools to reach the most significant proportion of students possible. Online platforms were the most famous tool used during school closures.

The students were provided with learning materials like modules, workbooks, worksheets, and textbooks that aided in their independent learning process. This type of learning is independent learning, where students learn at their own pace. Its premise is learning in different times and spaces (Finol, 2020).

Amid the pandemic, most students chose a hard copy of the modules. It is essential to ensure they have the necessary resources to continue their education. For students who are more auditory learners and prefer in-person interaction, it may be helpful to provide opportunities for them to participate in small group discussions (Cabual, 2021). The study by Ambayon (2020) found that the students assessed the module as highly acceptable, reliable, and usable in this crisis. The result implies that the module is suitable for teaching literature to students.

Module Content

The recent switch to modular distance learning happened rapidly, impacting educators and school planning. Suppose schools and education sectors set out to deliberately plan for learning that can be transferable across the school and non-school settings. In that case, the first step might be to examine different learning approaches and pedagogical models (Mitchell & Guy, 2020).

Due to the sudden shift to modular distance learning, many teachers' time was likely devoted to building content and providing feedback on submitted learning tasks, representing the initiation of the learning task and feedback for task completion. The time and skillset to support the process of completing the activity or providing real-time support through an online mode, such as meeting virtually with individuals and groups, and using questioning techniques to assist students in grappling with concepts and understandings to reach proficiency, was likely new to many teachers and appeared as a struggle noted by survey participants. As a result, parents and other adults within the physical proximity of the learner provided this responsive, on-the-fly learning support (Garbe et al., 2020).

Dayagbil et al. (2021) disclosed that most of the student respondents reported that the teachers adjusted course outcomes and syllabi. The nature and content of the alternative tasks provided were suited to the remaining concepts to be addressed in their coursework. Despite that, several students still reported that these alternative tasks needed to be improved to enable them to acquire the remaining competencies required at the end of the semester.

According to Misirli and Ergulec (2021) and Garbe et al. (2020), parents critiqued the hidden curriculum on 13 occasions in the survey. They revealed a concern for the quality or quantity of content and a general concern about the rigor of the curriculum. Some assignments could be structured to hit cross-curricular standards. Some participants approved of the curriculum delivered on an online platform. Parents also believe only some of the screen time is helping basic skills like writing and communication. Parents want high-quality education for their children. They expect instructional level material and appropriate pacing because the student's academic progress will only be as significant if these factors are present.

In addition to the above statement, parents expressed their opinions about the lack of course variety. Distance education should also include courses such as music or physical education. Delivering only core courses improves their child in one way: academic, not social. Distance education needs to improve sports and music courses; these types of activities should be added for creative and kinesthetic children.

Furthermore, in Turkey, parents and children mostly used technological devices such as personal laptops, desktop computers, and tablets (81.6 percent) to access distance education lessons; 40 percent of those participating in distance education stated that they used mobile devices during the process; and 33.4 percent stated that they used TV broadcasts to access lessons and educational materials (Misirli & Ergulec, 2021).

Strategies Employed

As a result of the interruption of education due to the global health crisis, nations responded in many different ways. For instance, some countries like Japan, South Korea, Ghana, Kenya, Ireland, Australia, and Romania, to name a few, provided multiple entry points, technology/media choices, and different paths for learners to follow and relied heavily on synchronous and asynchronous online technologies (Bozkurt et al., 2020).

In the Philippines, Dayagbil et al. (2021) also presented the new setting, and students are expected to read, understand and comply with the tasks without the guidance of the teachers. They are forced to assume self-directed independent learning. On the other hand, the teachers affirmed that the use of face-to-face delivery would no longer work in the new learning environment. With concerns about access to online services, faculty members considered using a non-online approach and explored the necessary modifications that can be applied. Hence, in the narrative, several faculty members said they had prepared modules as an option for pure online learning delivery.

Misirli and Ergulec (2021) explored parents' views on students' experiences of modular distance learning during the COVID-19 pandemic, and their experience and perspectives toward remote teaching during the lockdown of the COVID-19 pandemic in Turkey. They found that in modular distance learning process, both students and parents experienced different challenges which are considered unsuitable for young children and students with special needs; the parents complain about social isolation, lack of interactivity, and increased screen time; and remote teaching has placed

a heavy burden on parents. However, parents also stated that their children had acquired self-regulated learning skills and digital socialization during modular distance learning.

Kugamoorthy (2017) postulated that the activity-based learning approach has motivated and increased student participation in learning activities and improved self-learning practices and higher cognitive skills. Student participation in the activity-based learning model encourages students to think critically and develop their practical skills when learning actively and comprehensively involving cognitive, affective, and psychomotor domains.

Activities Used

As a result of the COVID-19 pandemic in the Philippines, the challenges and issues in teaching and learning of public higher education continue, and found that during school lockdowns, the teachers made adjustments in teaching and learning designs guided by the policies implemented by the institution. Due to limited internet connectivity, most students needed help complying with the learning activities and requirements (Dayagbil, 2021).

Parents stated their concerns about the curriculum and indicated dissatisfaction with the amount of work being assigned. Parents submitted responses indicating that the teachers needed to assign more work and more work. Parents who are tasked with an overwhelming amount of other responsibilities might interpret the work sent home as too much or the teacher could simply be sending too many assignments home. If the state limits the number of standards teachers cover, this could provide a more appropriate amount of work. Having optional enrichment work appeases families struggling to complete remote learning activities while balancing other responsibilities. However, it also meets the needs of students who believe more work should be assigned (Garbe et al., 2020).

Moreover, some parents emphasized the inadequacy of homework and exams in modular distance learning. One parent expressed that the exams should not have been done online because it injures the children's sense of justice. While some parents expressed their opinions about the excess of homework, a group of parents found the homework's poor quality and the expectations of teachers from the students insufficient. One parent explained that it would be much better to encourage children to research culture, history, and handicrafts rather than always asking them to complete academic-related assignments (Misirli & Ergulec, 2021).

Assessment Strategies

Assessment of student learning outcomes is critical. A concern on how to assess learning outcomes and how to answer assessment tasks emerged as a significant concern as reflected in the narratives of the teacher and student respondents. The teachers found it difficult to assess the performance-based tasks, as well as the tracking, and checking of students' outputs. In the assessment of learning, the teacher respondents agreed that they have to think of innovative ways of assessing students in the context of their situation and home environment so the outcomes expected of the course will be manifested by the students (Dayagbil et al., 2021).

Assessments of learning outcomes in knowledge, skills, attitudes, and values are significant measures of teaching and learning in primary education. This part needs a clear statement that the assessments are still in compliance with the DepEd's standard indicating the required percentage in each component, including written work, performance tasks, and quarterly assessments (Ancheta & Ancheta, 2020).

Ho, Cheong, and Weldon (2021) suggested reviewing the quality and quantity of modified assessments accommodated for modular distance learning and structured class delivery with a suitable amount of interactive learning according to the learning culture and program nature.

Challenges faced by Teachers

Various challenges have been attributed to modular distance learning at the technological, pedagogical, and social levels. Technological challenges relate to the quality and availability of internet connections and students' access to the necessary hardware. Pedagogical challenges include teachers' and students' limited digital competencies, teachers' inability to manage online resources and design digital learning environments, a lack of interaction and motivation, and teachers' difficulty in ensuring social and cognitive presence. Finally, social challenges include the need for more interaction among students or between students and teachers, the physical conditions for learning at home, and parents' availability and support (Ferri, Grifoni, and Guzzo, 2020).

They also conducted a similar study in Portugal, and they found out that teachers frequently had difficulty separating their concerns from the ones of their students, which is exciting and significant in terms of

how powerful and intense this experience was for educational communities. The teacher perceived that students' conditions and difficulties experienced in modular distance learning include unequal access to computers and the internet at home, lack of digital competencies, and excessive workload and burnout.

Jelińska and Paradowski (2021) analyzed Teachers' perceptions of Student Coping with Modular Distance Learning during the COVID-19 pandemic revealing several factors that influenced teachers' perception of how their students were coping with modular distance learning, given the lack of an easy and foolproof way of ensuring student integrity outside of commercial automated proctoring software. Teachers who felt their students were coping worse were at once more likely to have introduced significant adjustments to their instruction. Perceptions of student coping differed substantially depending on the education level handled. Parents and guardians may not always be around to help with technology, ensure that the children stay on task and submit their work promptly, and help out in other ways necessary. Younger children are less likely to have a computer/tablet/smartphone to access remote classes in real time; it is also much more difficult for them to spend long hours stationarily in front of the screen. The findings also emphasized the importance of a supportive and reassuring attitude.

Telli, Yamamoto, and Altun (2020), who conducted a study on the coronavirus and the rise of online education in Turkey, found that technological levels also influenced parents and children. Parents and students accustomed to face-to-face education need the technological equipment, knowledge, and skills, and they find it challenging to follow lessons conducted in distance education.

Academic Performance of the Students

The findings of Li, Marsh, Rienties, and Bart (2016) emphasized that the long-term goals of learners are essential predictors of learner satisfaction. If a module needed to be sufficiently linked with broader qualification aims, the results indicated that learners were less likely to have positive learner satisfaction. They further revealed that the module characteristics (i.e., number of credits, level, type of exam, maturity of module design) significantly influenced learner satisfaction and academic performance.

Sambayon (2020) also discovered a significant difference in the learners' academic performance in favor of the experimental group, indicating that the utilization of contextualized teacher-made activity sheets is effective in developing the learners' academic performance.

Pradas et al. (2021) analyzed the move to modular distance learning at the School of Telecommunication Engineering in Madrid, Spain. The results showed an increase in students' academic performance in modular distance learning and supported the idea that organizational factors may contribute to a successful implementation of modular distance learning; the analysis does not find differences across courses with different class sizes or delivery modes.

Problems Encountered by the Students on the Use of Modular Distance Learning

The shift to modular distance learning significantly promotes healthy academic competition among students with no social or physical cost. Modular distance learning ensures learners' responsibility by placing them in control of their studies with their academic and professional destinies in their own hands (Masuku, 2021).

Due to the pandemic, institutions worldwide are embarking on using modular distance learning since online education poses a challenge for the said institutions because a comprehensive curriculum is also needed to implement quality education through alternative delivery (Palvia et al., 2018).

Furthermore, modular distance learning, however, still provides a similar challenge to implementing an online learning system. Modular distance learning is more relaxed than online learning. However, the same challenges can be encountered by a country that has never tried transitioning to a similar distance education delivery. Issues and challenges arise since institutions should establish the quality of learning. Some stumbling blocks to advancement have to deal with inadequate technological equipment (Abel, 2020).

In the Philippine setting, the country needs to prepare for the advent of the implementation of modular distance learning. During this crisis, the country is still struggling to offer alternative delivery education since numerous schools were in a conventional classroom setting before COVID-19. The time though is inevitable as the educational system in the country must face its most significant challenge to date, that of groping in an emergency remote education (Toquero, 2021).

Among the challenges of modular distance learning are the technological literacy and pedagogical

knowledge for first-time distance learning teachers (Bhaumik & Priyadarshini, 2020). The challenges also include the need to stimulate and sustain innovative practices among the teachers, particularly on contextualized concepts in the Philippine setting (Talidong, 2020).

Moreover, the teachers revealed in their study that their greatest challenge is the connections with their students and how to achieve a productive learning environment where students engage in the teaching-learning process (Abel, 2020).

Many academics navigated "shifting sands" in teaching responsibilities and personal lives. These challenges include conflicting communication from the university, non-standard access to IT resources, a lack of dedicated space to work from home, and excessive screen time, all of which contributed to disruptions in work-life balance. More positively, the pivot to remote teaching encouraged flexibility, creativity, and an opportunity to reflect on what academics do and how this might be best achieved (Erlam et al., 2021).

Many students, parents, and teachers said that education during Covid-19 was only advantageous to those with reliable internet connectivity and a digital device. As a result, most higher education institutions in the country shifted to asynchronous delivery and offline learning activities to accommodate and respond to social inequality in access to education. Moreover, the Commission on Higher Education proposed the need to not simply resort to synchronous instructional delivery but a combination of different approaches, such as asynchronous and synchronous modular instruction, to augment stakeholders' concern about the digital divide in access and promote inclusivity in the new normal in higher education context (Bozkurt et al., 2020).

With modular distance learning worldwide in the Higher Education Sector due to COVID-19, several challenges emerged along three perspectives: educators, students, and content. Educators should have the tools and skills to deliver modular distance learning efficiently. They should attain pedagogic creativity to engage the learners and stimulate their interest in learning. Meanwhile, they should also focus on the technical skills for modular distance learning since educators have to spend their time planning a series of learning activities using the thousands of freely available learning resources (YouTube, FutureLearn, OpenLearn, Open Educational Resources, etc.) and provide direct support to students instead of just delivering the best lectures.

However, the higher authorities in charge have prioritized communication and dialogue for learning, not just online content transmission. The onus of assessment lies on the module leader as they must assess the students as individuals and groups covering the necessary outcomes as required for the study compared to previously arranged assessments (Mohmmed et al., 2020).

Regarding students' experiences during Covid-19, Robertson et al. (2020) discovered that students were disappointed because what they experienced was not aligned with their plans. Furthermore, Terenko and Ogienko (2020) found that students' concerns in learning during Covid-19 were as follows: uncertainty related to the complete transition to online learning, lack of stability of the internet, technical issues such as accessing the application in use, and the transfer of the information. However, students had positive attitudes and motivation to learn online as the sole solution for continuing their academic journey.

According to Hodges et al. (2020), transitioning to modular distance learning disrupted the life of learners, teachers, and staff. Most students needed more time to be ready for immediate and abrupt course attendance. With this, flexibility will be needed regarding deadlines for course requirements, course rules, and instructional policies.

According to the parents, the biggest challenge they experienced during the modular distance learning process was the increased time spent in front of the screen (71.7 percent). In addition, parents stated that during remote teaching, the children could not communicate well with their peers and teachers. They were reluctant to learn, and there was a lack of technological infrastructure. The school activities disrupted their day; there was a communication breakdown with their children. The children surfed on the Internet while in class, had concerns regarding the platform on which the lessons were held, and had insufficient technological skills. Parents also stated that their workload increased, and their children got bored and had problems with discipline and concentration (Misirli & Ergulec, 2021).

In summary, the reviewed related literature and studies about modular distance learning present another alternative learning modality for the new normal. The researcher has found sufficient knowledge to support this current study, and it was formed in response to the pandemic. The situation was different from the well-planned traditional method to online learning or

modular method for teachers, students, and parents. It allows learners to use self-learning modules (SLMs) in print or digital format or electronic copy, whichever is applicable to the learner. Usually, teachers are the ones who deliver the learning materials and take responsibility for monitoring the progress of the learners. If possible, they will have to conduct home visits to check on each student's progress and performance.

Likewise, learners may ask for assistance from the teacher via email, telephone, text message, etc. Parents or any member of the family, on the other hand, play a vital role as facilitators to guide their children in answering their modules. Noting the results of the studies conducted by the previous researchers, they have determined the effectiveness of modular distance learning. However, some studies have shown the negative impact of modular distance learning which resulted in a decreased rate of students' academic performance. Amidst the pandemic, learning should not stop so students can still learn.

This study is unique since its focus was on the use of modular distance learning in Science subject, and its exploration of the relationship between students' feedback and challenges encountered during modular distance learning and their academic performance in Science. This study was conducted in the Municipality of Alamada North Cotabato.

Methodology

This chapter contains the research design, the locale and respondents of the study, sampling design, instrumentation, validity and reliability of the instrument, data gathering procedure, and statistical tools and treatment of data.

Research Design

The study used the descriptive-correlational research design. It was descriptive because it described the profile and feedback of the students on the utilization of Modular Distance Learning in terms of content, strategies, activities, and assessment, as well as the academic performance, challenges experienced, and coping mechanisms of students in using the Modular Distance Learning in the delivery of instructions. It was also correlational since it examined or tested the significant difference and relationship between variables and students' feedback on using modular distance learning regarding content, strategies, activities, and assessment when grouped according to selected profiles.

Locale and Respondents of the Study

This study was conducted in the Municipality of Alamada, Cotabato, where the known Asik-Asik Falls is situated. The samples were taken from Alamada, North and West Districts, particularly Alamada High School, Dado High School, and Pigcawaran High School. The study's respondents were 200 grade 8 students of Alamada who were enrolled in the School Year 2021-2022.

Sampling Technique

The samples for this study were taken from the combined number of 750 grade 8 students from the selected high schools of the two districts of Alamada. Alamada High School, Dado High School, and Pigcawaran High School have 350, 325, and 75 students, respectively. In determining the sample size from the total number of participating students, Slovin's formula was used, where n = is the sample size, N = is the Population size, and e = is the level of significance (for the confidence interval of 95%, equal to 5%). When the formula was applied, the study's sample size was 200 students (93, 20, and 87). There are only 200 respondents because of the limited number of students that were present during the conduct of the study.

Instrumentation

The study adopted the DepEd Regional Handbook in the Context Evaluation of Supplementary Materials, IMCS (2008). The first part of the questionnaire contained questions about the profile of the respondents in terms of age, sex, and family income.

The second part of the questionnaire required descriptive answers to the students' feedback on modular distance learning regarding content, strategies, activities, and assessment. The respondents rated the items in each question using the Likert scale ranging from 5- Strongly Agree, 4-Agree, 3-Moderately Agree, 2-Disagree, and 1-Strongly Disagree.

The third part consisted of questions on the challenges encountered by the respondents using Modular Distance Learning. The respondents rated the item in each question using the Likert scale ranging from 5-Always a problem, 4- Often a problem, 3- Sometimes a Problem, 2- Rarely a Problem, and 1- Never a Problem.

The last part of the questionnaire contained the coping mechanisms to address the problems experienced. The respondents rated the item in each question using the Likert scale ranging from 5- Always, 4- Often, 3- Sometimes, 2- Rarely, and 1- Never.

Validity and Reliability of Instrument

The researcher submitted the adapted questionnaire to the adviser, reader, and panel members for scrutiny. Regarding face and content validity, the adviser, reader, and panel members looked into the correctness of the instrument, grammatical construction, clarity of instruction, and the appropriateness of content about the study's objectives.

The instrument was pilot-tested on 20 high school students of Dado High School who were not participants in the study to determine the reliability of the questionnaire. The Cronbach alpha was used, and the obtained r- value of .84 showed that the instrument is reliable.

Data Gathering Procedure

In gathering data, the researcher first asked permission from the Graduate School Dean of Notre Dame of Midsayap College to conduct the study and also from the School's Division office of Cotabato. After the approval, arrangements were made with the principal or school heads of the three secondary schools of Alamada districts for the schedule of administration of the instrument.

The researcher did the instrument's distribution and retrieval personally, and the data gathered were coded and submitted to the statistician for analysis using an appropriate statistical program.

Results

This chapter presents the results of the study. The data are presented in tabular form and cover the profile of respondents, assessment of feedback and challenges encountered on modular distance learning and its relationship to their academic performance in Science, and the respondents' recommendations.

Profile of the Respondents

Table 1 presents the profile of the respondents in terms of age, sex and family income.

Table 1. *Profile of Respondents*

Variable	*Frequency*	*Percentage*
Age		
13 years old	79	39.50
14	107	53.50
15	8	4.00
16	4	2.00
17 and above	2	1.00
Total	200	100.00
Sex		
Male	108	54.00
Female	92	46.00
Total	200	100.00
Family Income		
Php 1,000 – Php5,000	102	51,000
Php 5001 - Php 10, 000	74	37,00
Php 10,001 - Php 15, 000	4	2.00
Php 15,001 - Php 20, 000	8	4.00
Php 20, 001 - Php 25, 000	2	1.00
Php 25, 001 - Php 30, 000	4	2.00
Php 30, 001 - Php 35, 000	1	0.50
Php 35, 001 - Php 40, 000	5	2.50
Total	200	100.00

Shown in Table 1 are the characteristics of respondents in terms of age, sex, and family income. Out of 200 student respondents, 107 or 53.50 percent were 14 years old. Thirteen (13) years old got a frequency of 79 which is equivalent to 39.50 percent. The least is 17 years old and above with a frequency of 2 or equivalent to 1 percent of the total respondents. The minimum age is 13 years old, while the maximum is 17 years old and above.

As regards to the sex of the student respondents, majority are males having the frequency of 108 or 54 percent, while the females registered only 92 or 46 percent. For the family income of the student respondents, the income bracket of Php1,000-Php 5,000 got a frequency of 102 with a percentage of 51.00. It is followed by the income bracket of Php 5,001 – Php10,000 with a frequency of 74 or 37 percent. The least is income bracket Php 30,001 – Php 35,000 with 1 or .50 percent.

Feedback of Students on the Use of Modular Distance Learning

The students' feedback on the use of modular distance learning is contained in Table 2a. Ten items were rated by the student respondents about their feedback on the use of modular distance learning in terms of module content based on their agreement or disagreement of the items. The items with highest means are items 7, 5 and 1.

The highest mean of 4.09 is Item 7 which states that

The contents in Science modules are free of biases and prejudices described as Agree with a standard deviation of 0.91. The second highest mean of 4.03 is Item 5, the contents in Science *modules are suitable to the learners' grade level of development* described as Agree with a standard deviation of 0.93.

Table 2a. *Feedback of the Students on the Use of Modular Distance Learning in Terms of Content*

Items	*Mean*	*sd*
A. Module Content The contents in science modules…		
1. are presented in a clear logical and orderly Manner.	3.96	0.81
2. are simple and comprehensive.	3.78	0.88
3. are stipulated in the MELC.	3.93	0.87
4. are based on the spiral curriculum approach.	3.82	0.91
5. are suitable to the learners' grade level of development.	4.03	0.93
6. have the potential to arouse interest of the learner.	3.89	0.93
7. are free of biases and prejudices.	4.09	0.91
8. contribute to the attainment of specific objectives of the subject area and grade level.	3.81	0.80
9. provide for the development of higher order thinking skills.	3.91	0.92
10. enhance the development of desirable values and traits	3.93	0.89
Overall Mean	3.92	
Overall Standard Deviation		0.89

Item 1, *the contents in Science modules are presented in a clear, logical, and orderly manner* got a mean of 3.96 described as Agree with a standard deviation of 0.81. However, the item with the lowest mean of 3.78 is Item 2 which states that *The contents in Science modules are simple and comprehensive* described as Agree. The overall mean is 3.92 with a description of Agree and with a standard deviation of 0.89. The standard deviation of 0.89 means that the responses of the respondents are almost similar. Feedback of the Students on the Use of Modular Distance Learning in Terms of Strategies, Activities, and Assessment are reflected on Table 2b.

Table 2b. *Feedback of the Students on the Use of Modular Distance Learning in Terms of Strategies*

Items	*Mean*	*sd*
The strategies employed by teachers in science subject…		
1. are enough to allow me to master the expected Competencies	3.87	0.92
2. are appropriate to my learning needs.	3.92	0.89
3. are effective to facilitate learning.	3.88	0.94
4. are interesting and exciting.	3.75	1.02
5. develop my ability to think critically.	4.04	0.96
6. enhance my competence in the field.	3.82	0.89
7. develop my communication skills.	3.79	0.89
8. allow me to collaborate with my classmates.	3.88	0.92
9. develop my creativity.	3.81	0.95
10. are interactive and innovative.	3.88	0.89
Overall Mean	3.86	
Overall Standard Deviation		0.93

Table 2b deals with the feedback of the students on the use of modular distance learning in terms of strategies. There are ten items which were rated by the respondents as to their agreement or disagreement of each item. The results revealed that the respondents are Agreeable in all items. The first item which gained the highest mean of 4.04 is Item 5, *The strategies employed by teachers in Science subject develop my ability to think critically*, described as Agree with a standard deviation of 0.96. The second highest mean is Item 2 which states *The strategies employed by teachers in Science subject are appropriate to my learning needs* described as Agree with the mean of 3.92 and a standard deviation of 0.89. The third highest mean of 3.88 was obtained by items 3, 8 and 10. *The strategies employed by teachers in Science subject are effective to facilitate learning* described as Agree with a standard deviation of 0.94. Similarly, *The strategies employed by teachers in Science subject allow me to collaborate with my classmates* described as Agree with a standard deviation of 0.92 and *The strategies employed by teachers in Science subject are interactive and innovative* with a description of Agree

and a standard deviation of 0.89. However, the item with the lowest mean of 3.75 is Item 4 which states *The strategies employed by teachers in Science subject are interesting and exciting* described as Agree with a standard deviation of 1.02.The overall mean is 3.86 described as Agree, and with an overall standard deviation of 0.93. The sd of .93 means that the responses of the respondents are almost similar.

Feedback of the Students on the Use of Modular Distance Learning in Terms of Activities

Feedback of the students on the use of modular distance learning in terms of activities are shown in Table 2c. Table 2c shows the feedback of the students on the use of modular distance learning in terms of learning activities. Generally, the students are Agreeable in all items. Out of the ten items, two (2) items obtained the highest means of 3.90 with a description of Agree and standard deviation of 0.82 and 0.83 respectively.

Presented in Table 2d are items on the feedback of the students on the use of module distance learning in terms of Assessment. The highest mean of 4.00 is obtained by Item 1 which states *The assessment used in my Science class is congruent to the objectives*, described as Agree and a standard deviation of 0.84. It is followed by Item 5, *The assessment used in my Science class provides clear and unbias questions* with a standard deviation of 0.87 described as Agree. These items are *The learning activities employed in my Science class are adequate and appropriate to my learning needs* and *experiential (hands on activity)*. Item 2 which states *The learning activities employed in my Science class are easy to follow* obtained the second highest mean of 3.88 described as Agree with a standard deviation of 0.92.

Table 2c. *Feedback of the Students on the Use of Modular Distance Learning in Terms of Activities*

Items	*Mean*	*sd*
The activities employed in my science class…		
1. are localized/ contextualized.	3.84	0.84
2. are easy to follow.	3.88	0.92
Table 2c continued…		
3. are very challenging.	3.85	1.00
4. are adequate and appropriate to my learning needs.	3.90	0.82
5. are reinforcing and enriching which make me master the learning competencies that are essential.	3.76	0.89
6. are compatible with my motor skills.	3.73	0.91
7. are innovative and interactive.	3.76	0.91
8. challenge me to think critically.	3.84	0.93
9. are helpful in mastering the needed competency.	3.79	0.96
10. are experiential (hands on activity).	3.90	0.83
Overall Mean	3.83	
Overall Standard Deviation		0.90

The third highest mean of 3.84 is Item 8, *The learning activities employed in my Science class challenge me to think critically* with a description of Agree and a standard deviation of 0.93. However, the item which got the lowest mean is Item 6, *The learning activities employed in my Science class are compatible with my motor skills* with a mean equal to 3.55 described as Agree and a standard deviation of 0.91. The overall mean is 3.83 described as Agree and a standard deviation of 0.90. This shows that the responses of the respondents are almost the same.

Feedback of the Students on the Use of Modular Distance Learning in Terms of Assessment

Feedback of the students on the use of modular distance learning in terms of assessment are contained in Table 2d.

Table 2d. *Feedback of the Students on the Use of Modular Distance Learning in Terms of Assessment*

Items	*Mean*	*SD*
The assessment used in my science class…		
1. is congruent to the objectives.	4.00	0.84
2. is done comprehensively	3.71	0.86
3. is allotted with enough time.	3.90	0.98
4. covers the lessons and activities given and discussed.	3.89	0.95
5. provides clear and unbias questions.	3.97	0.87
6. tests me if I have mastered the needed competencies.	3.78	0.87
7. allows me to demonstrate my learning.	3.85	0.82
Overall Mean	3.87	
Overall Standard Deviation		0.88

Similarly, Item 3, *The assessment used in my Science class is allotted with enough time* also got a mean score of 3.90 described as Agree and with a standard deviation of 0.98. However, the lowest mean score of 3.71 is obtained by Item 2 which states *The assessment used in my Science class is done comprehensively* described as Agree with a standard deviation of 0.86. Generally, the overall mean is 3.87 described as Agree with a standard deviation of 0.88.

Summary of the Feedback on the Use of Modular Distance Learning

Summary of the Feedback on the Use of Modular Distance Learning is shown in Table 3.

Table 3. *Summary of the Feedback on the Use of Modular Distance Learning*

Area	*Mean*	*sd*
Content	3.92	0.89
Strategies	3.86	0.93
Learning Activities	3.83	0.90
Assessment	3.87	0.88
Grand Mean and sd	3.87	0.90

Table 3 shows the summary of the feedback of the students on the use of modular distance learning in terms of content, strategies, activities, and assessment. The highest mean of 3.92 is obtained by the area on content described as Agree with a standard deviation of 0.89. It is followed by the area on assessment with the mean of 3.87 described as Agree with a standard deviation of 0.88. Similarly, strategies also got a mean score of 3.86 described as Agree and with a standard deviation of 0.93. The lowest mean score is 3.83 obtained by learning activities but it is still described as Agree with a standard deviation of 0.90. Generally, the overall mean is 3.87 described as Agree with a standard deviation of 0.90 which means that the responses of the respondents are almost the same.

Challenges Experienced by the Respondents on the Use of Modular Distance Learning

Challenges experienced by the respondents on the use of modular distance learning are reflected in Table 4.

Table 4. *Challenges Experienced by the Respondents on the Use of Modular Distance Learning*

Challenges	*Mean*	*sd*
1. Lack of internet connection to supplement my readings	3.43	1.12
2. Difficulty in staying motivated	3.19	1.05
3. Too many household chores	3.24	1.25
4. Lack of financial support to buy my projects and other requirements	3.05	1.23
5. No available study area at home	2.38	1.43
6. Home environment is very noisy	3.02	1.29
7. Being left behind	3.14	1.16
8. Limited time to interact with friends	2.76	1.23
9. Limited time to do my modular requirements	2.65	1.36
Overall Mean	2.98	
Overall Standard Deviation		1.24

Table 4 reflects the challenges experienced by the student respondents on the use of modular distance learning. Results revealed that the respondents' most challenging experience in the use of modular distance learning is the *Lack of internet connection to supplement readings* which has the highest mean of 3.43 with a description of Sometimes a Problem and a standard deviation of 1.12. It was followed by Item 3, which states that *Too many household chores*, has a mean score of 3.24 and a standard deviation of 1.25 described as Sometimes a Problem. The third highest mean score of 3.19 is obtained by Item 2, *Difficulty in staying motivated* with a standard deviation of 1.05 described as Sometimes a Problem. The least challenging experience is obtained by Item 5, *No available study area at home*, with a mean score of 2.60 described as Rarely a Problem and a standard deviation of 1.36. The overall mean is 2.98 with a description of Sometimes a Problem and a standard deviation of 1.24.

Coping Mechanisms

The coping mechanisms used by the student respondents to address the challenges experienced in using modular distance learning are presented in Table 5. Reflected in Table 5 are the coping mechanisms utilized by the respondents to address the challenges they experienced. The highest mean score of 3.64 is obtained by Item 10, *I look for a space in the house where I feel comfortable to study and do my learning tasks* described as Often with a standard deviation of 1.33. Item 7, *I find time to do my household chores before doing my learning activities and assignment* obtained the second highest mean score of 3.60 described as Often with a standard deviation of 1.22.

The third item that got the highest mean is Item 6, *I find time to unwind or relax before answering my Science modules again* which earned a mean score of 3.41 with a standard deviation of 1.17 described as Sometimes. However, the respondents Rarely *go to the internet café* to cope with the challenges brought by the modular distance learning, as shown by its mean score of 2.24 and a standard deviation of 1.44. The overall mean is 3.05 described as Sometimes with a standard deviation of 1.30.

Table 5. *Coping Mechanisms Used by the Respondents to Address the Challenges Experienced*

Coping Mechanisms	*Mean*	*sd*
I…		
1. go to the house of my friends where there is available internet connection.	2.56	1.38
2. borrow books and other reading materials from my teachers and friends that would be useful as a supplementary material in answering my science module.	2.54	1.26
3. go to the internet café.	2.24	1.44
4. listen to my favorite music in my room to stay motivated.	3.26	1.34
5. read inspirational quotes from Facebook and other social media apps.	3.13	1.25
6. find time to unwind or relax before answering my science modules again.	3.41	1.17
7. find time to do my household chores before doing my learning activities and assignment.	3.60	1.22
8. work during my free time to earn for my financial needs.	2.77	1.34
9. make list of all my household chores to manage my time well.	3.00	1.32
10. look for a space in the house where I feel comfortable to study and do my learning tasks.	3.64	1.33
11. communicate with my adviser and ask for advice.	3.15	1.23
12. seek support from family and friends.	3.34	1.15
Overall Mean	3.05	
Overall Standard Deviation		1.30

Academic Performance

Results on the respondents' academic performance in Science are presented in Table 6.

Table 6. *Academic Performance of the Respondents in Science*

Grade Interval	*First Grading*		*Second Grading*	
	f,	%	f,	%
94-97	7	3.50	15	7.50
90-93	20	10.00	38	19.00
86-89	68	34.00	92	46.00
82-85	92	46.00	50	25.00
78-81	13	6.50	5	2.50
Total	200	100.00	200	100.00

Shown in Table 6 are the data about the students respondents academic performance in Science for first and second grading periods. The data shows that majority of the respondents have a grade interval of 82-85 in the first grading period with a frequency of 92 or 46 percent interpreted as Fairly Satisfactory, while the least frequency of 7 or 3.50 percent falls under grade interval of 94-97 with an interpretation as Outstanding. In the second grading period, a grade interval of 86-89 got a frequency of 92 or 46 percent, interpreted as Satisfactory. The lowest frequency of 5 is the grade interval of 78-81 which is equivalent to 2.50 percent with an interpretation of Did not meet expectation.

For the first grading period, the minimum grade is 78 and the maximum is 97 with a mean grade of 85.87 and standard deviation of 3.36. For the second grading period, the minimum grade is 79 and the maximum is 97 with a mean grade of 87.65 with a standard deviation of 3.53.

Difference Between the Feedback of Students in Terms of Contents, Strategies, Learning Activities and Assessment when Grouped According to Age

The results of measuring the difference between the feedback of students in terms of contents, strategies, learning activities and assessment when grouped according to age are presented in Table 7. Table 7 reflects the computed difference between the respondents feedback in the utilization of modular distance learning when grouped according to Age. Using the Kruskal Wallis test, the following indicators are noted. For the module content, the computed chi—square is 1.08 and with the degrees of freedom equals to 4, the obtained p-value is 0.89. Since the p-value is greater than 0.05 level of significance, the result revealed that the feedback of students in the utilization of modular distance learning when grouped according to their age does not differ. Thus, the null hypothesis which states that there is no significant difference between the feedback in terms of content, strategies, learning activities, and assessment of respondents when grouped according to age is not rejected.

Table 7. *Difference on the Feedback in the Utilization of Module Distance Learning when Categorize According to Age Using Kruskal Test*

Variable On Module Content						
Age	*n*	*Mean Rank*	*p-value*	*df*	*Chi- Square*	*Eta Squared*
Categories						
13 years old	79	101.40	0.89	4	1.08	0.53
14	107	100.98				
15	8	110.13				
16	4	129.13				
17 and above	2	95.25				
Total	200					

Variable On Strategies						
Age	*n*	*Mean Rank*	*p-value*	*df*	*Chi- Square*	*Eta Squared*
Categories						
13 years old	79	101.51	0.78	4	1.78	0.88
14	107	100.71				
15	8	113.63				
16	4	133.75				
17 and above	2	82.00				
Total	200					

Variable On Learning Activities						
Age	*n*	*Mean Rank*	*p-value*	*df*	*Chi- Square*	*Eta Squared*
Categories						
13 years old	79	98.72.	1.21	4	0.88	0.44
14	107	102.65				
15	8	109.31				
16	4	120.75				
17 and above	2	128.75				
Total	200					

Variable On Assessment						
Age	*n*	*Mean Rank*	*p-value*	*df*	*Chi- Square*	*Eta Squared*
Categories						
13 years old	79	98.56	0.34	4	4.51	2.23
14	107	101.54				
15	8	110.44				
16	4	160.63				
17 and above	2	112.00				
Total	200					

Shown in Table 6 are the data about the students respondents academic performance in Science for first and second grading periods. The data shows that majority of the respondents have a grade interval of 82-85 in the first grading period with a frequency of 92 or 46 percent interpreted as Fairly Satisfactory, while the least frequency of 7 or 3.50 percent falls under grade interval of 94-97 with an interpretation as Outstanding. In the second grading period, a grade interval of 86-89 got a frequency of 92 or 46 percent, interpreted as Satisfactory. The lowest frequency of 5 is the grade interval of 78-81 which is equivalent to 2.50 percent with an interpretation of Did not meet expectation.

For the first grading period, the minimum grade is 78 and the maximum is 97 with a mean grade of 85.87 and standard deviation of 3.36. For the second grading period, the minimum grade is 79 and the maximum is 97 with a mean grade of 87.65 with a standard deviation of 3.53.

Difference on the Feedback in the Utilization of Modular Distance Learning in Terms of Contents, Strategies, Learning Activities, and Assessment When Categorized According to Sex

The results of measuring the significant difference between the feedback of students according to sex is presented in Table 7b below.

Table 7b reveals the difference on the feedback in the utilization of modular distance learning when categorized according to sex. The mean rank are the following: on module content (male 96.37, female – 107.64); on strategies (male – 91.78, female – 113.12); learning activities (male – 95.44, female – 108.75); and on assessment (male – 94.75, female – 109.57).

Data show that the p-values of module content (0.17), learning activities (0.11) and assessment (0.07) are higher than 0.05, the arbitrarily chosen level of significance. Consequently, the null hypothesis which states that there is no significant difference on the feedback in the utilization of modular distance learning in terms of contents, strategies, learning activities, and assessment when categorized according to sex is not rejected. On the other hand, the p-value on strategies is 0.01 which is lower than 0.05, therefore, the hypothesis which states that there is no significant difference between the feedback in the utilization of Modular Distance Learning in terms of strategies when grouped according to sex is rejected.

Difference on the Feedback in the Utilization of Modular Distance Learning in terms of Contents, Strategies, Learning Activities, and Assessment when Categorized According to Sex

Table 7b. *Difference on the Feedback in the Utilization of Modular Distance Learning in terms of Contents, Strategies, Learning Activities, and Assessment when Categorized According to Sex*

Variable On Module Content					
Sex	*n*	*Mean Rank*	*Chi- Square*	*df*	*p-value*
Male	108	96.37	1.87	1	0.17
Female	92	107.64			
Total	200				

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Variable On Strategies					
Sex	*n*	*Mean Rank*	*Chi- Square*	*df*	*p-value*
Male	108	91.78	6.70	1	0.01
Female	92	113.12			
Total	200				

Variable On Learning Activities					
Sex	*n*	*Mean Rank*	*Chi- Square*	*df*	*p-value*
Male	108	95.44	2.60	1	0.11
Female	92	108.75			
Total	200				

Variable On Assessment					
Sex	*n*	*Mean Rank*	*p-value*	*df*	*p-value*
Male	108	94.75	3.24	1	0.07
Female	107	109.57			
Total	200				

Difference on the Feedback in the Utilization of Modular Distance Learning in Terms of Contents, Strategies, Learning Activities, and Assessment when Categorized According to Monthly Income of their Parents

The results of measuring the difference between the feedback of students according to monthly income is presented in Table 7c below.

Table 7c. *Difference on the Feedback in the Utilization of Modular Distance Learning in Terms of Contents, Strategies, Learning Activities, and Assessment when Categorize According to Monthly Income of their Parents*

Variable On Strategies					
Monthly Income	*n*	*Mean Rank*	*Chi-Square*	*df*	*p value*
Php 1, 000 - Php 5, 000	101	101.10	5.70	7	0.57
Php 5, 001 - Php 10, 000	75	100.86			
Php 10, 001 - Php 15, 000	4	74.88			
Php 15, 001 - Php 20, 000	8	123.19			
Php 20, 001 - Php 25, 000	2	62.25			
Php 25, 001 - Php 30, 000	4	94.88			
Php 30, 001 - Php 35, 000	1	170.00			
Php 35, 001 - Php 40, 000	5	133.70			
Total	200				

Variable On Module Content					
Monthly Income	*n*	*Mean Rank*	*Chi-Square*	*df*	*p value*
Php 1, 000 - Php 5, 000	101	103.41	6.20	7	0.52
Php 5, 001 - Php 10, 000	75	99.18			
Php 10, 001 - Php 15, 000	4	95.25			
Php 15, 001 - Php 20, 000	8	123.00			
Php 20, 001 - Php 25, 000	2	22.50			
Php 25, 001 - Php 30, 000	4	94.00			
Php 30, 001 - Php 35, 000	1	89.00			
Php 35, 001 - Php 40, 000	5	129.30			
Total	200				

Variable On Assessment					
Monthly Income	*n*	*Mean Rank*	*Chi-Square*	*df*	*p value*
Php 1, 000 - Php 5, 000	101	105.35	7.45	7	0.38
Php 5, 001 - Php 10, 000	75	96.77			
Php 10, 001 - Php 15, 000	4	75.25			
Php 15, 001 - Php 20, 000	8	119.75			
Php 20, 001 - Php 25, 000	2	39.50			
Php 25, 001 - Php 30, 000	4	85.13			
Php 30, 001 - Php 35, 000	1	140.00			
Php 35, 001 - Php 40, 000	5	138.10			
Total	200				

Variable	On Learning Activites				
Monthly Income	n	Mean Rank	Chi-Square	df	p value
Php 1,000 - Php 5,000	101	103.05	10.50	7	0.16
Php 5,001 - Php 10,000	75	96.99			
Php 10,001 - Php 15,000	4	73.38			
Php 15,001 - Php 20,000	8	134.38			
Php 20,001 - Php 25,000	2	41.00			
Php 25,001 - Php 30,000	4	92.63			
Php 30,001 - Php 35,000	1	145.50			
Php 35,001 - Php 40,000	5	152.10			
Total	200				

Table 7c presents the mean ranks on the difference on the feedback in the utilization of modular distance learning when categorized according to monthly income were the following: on module content with the two highest mean ranks of 129.30 and 123.00 and with the lowest mean rank of 22.50. For strategies which has the highest mean rank of 170.00, 133.70 and with the lowest mean rank of 62.25. Learning activities of 152.10, 145.50 and with the lowest mean rank of

41.00. For assessment of 140.00 and 138.10, with the lowest mean rank of 39.50.

Data show that the p-values of module content (0.52), strategies (0.57); learning activities (0.16) and assessment (0.38) are higher than 0.05 level of significance, hence, the null hypothesis which states that there is no significant difference on the feedback in the utilization of modular distance learning when categorized according to monthly income is not rejected.

Difference Between the Academic Performance of Male and Female Respondents When Grouped According to Sex

The results of measuring the difference between the academic performance of male and female respondents when grouped according to sex are presented in Table 8.

Data depicted in Table 8 revealed that the mean ranks on the difference between the academic performance of male and female respondents when grouped according to sex are the following: for the first grading, male is 85.13 and female is 86.80, while for the second grading male is 86.85 and female is 88.64.

Table 8

Difference Between the Academic Performance of Male and Female Respondents When Grouped According to Sex

Variable First Grading Academic Performance						
Gender	*n*	*Mean*	*SD*	*Mean Rank*	*p-value*	*z-value*
Male	108	85.13	3.09	91.62	0.005	2.83
Female	92	86.80	3.46	113.31		
Total	200					

Variable First Grading Academic Performance						
Gender	*n*	*Mean*	*SD*	*Mean Rank*	*p-value*	*z-value*
Male	108	86.85	3.31	88.53	0.000	3.68
Female	92	88.64	3.55	117.01		
Total	200					

Results show that there is a significant difference on the first grading academic performance of male and female respondents since the p-values of first grading is 0.005 and second grading is 0.000 which are lower than 0.05 level of significance. Thus, the null hypothesis which states that there is a significant difference between the first grading and second grading academic performance in Science when grouped according to sex is rejected.

Difference on the Challenges Experienced on the Use of Modular Distance Learning Between Male and Female Respondents Using Mann-Whitney Test

The result of the difference on the challenges experienced between male and female respondents on the use of modular distance learning is presented in Table 9. Table 9 displays the mean ranks on the difference on the challenges experienced on the use of modular distance learning between male and female respondents using Mann-Whitney Test were the following: male is 109.88 and female is 91.48.

Table 9. *Difference on the Challenges Experienced on the Use of Modular Distance Learning Between Male and Female Respondents Using Mann-Whitney Test*

Variable Challenges Experienced on the Use of MDL				
Gender	*n*	*Mean Rank*	*z value*	*p value*
Male	108	109.88	2.23	0.02
Female	92	91.48		
Total	200			

Data show that the p-value 0.02 is lower than 0.05, considered significant and therefore, the null hypothesis which states that there is no significant difference on the challenges experienced on the use of modular distance learning between male and female respondents is rejected.

Relationship Between Feedback and Academic Performance of the Respondents

The result of the significant relationship between

feedback and academic performances of the respondents using Spearman's Rho is presented in Table 10.

Table 10. *Relationship Between Feedback and Academic Performances of the Respondents Using Spearman's Rho*

	Academic Performance of Respondents		
Feedbacks	*n*	*r value*	*p value*
Module Content	200	0.139*	0.047
Strategies	200	-0.098	0.163
Learning Activities	200	-0.072	0.309
Assessments	200	-0.087	0.217

The data revealed that there is a significant relationship between feedback and academic performances of the respondents in terms of the module content. The p-value of 0.047 is lesser than the arbitrary chosen 0.05 level of significance. Therefore, the null hypothesis which states that there is a significant relationship between feedback in terms of content and academic performances of the respondents is rejected.

However, the p-values on strategies is 0.163, learning activities is 0.309 and assessment is 0.217 yielded no significant relationship between feedback and academic performances of the respondents since the p-values are greater than the 0.05 level of significance. Therefore, the null hypothesis which states that there is no significant relationship between feedback in terms of strategies, learning activities, assessment, and academic performance of the respondents is not rejected.

Discussion

This chapter discusses the present findings of the investigation based on the problem statements of the study, which consists of the profile of respondents, assessment of the feedback, and challenges encountered by the respondents on the use of modular distance learning and its relationship to their academic performance in Science.

Profile of the Respondents

The Grade 8 students have a minimum age of 13, and the majority are 14 years old, which means that students are at the appropriate age for their grade level. This implies that most respondents started schooling at the right age. Moreover, most of the respondents are male, which indicates that more male students are enrolled in Grade 8 than female students. This gives an implication that male students dominate the school. Furthermore, fifty-one percent of the respondents have a family income of ₱1,000-₱5,000, meaning their families receive a meager monthly income. This implies that most of them belong below the poverty line category. The respondents also confirmed these results during the FGD. They affirmed that the actual family income of their parents ranges from ₱1,000-₱5,000 because most of them are farmers, and often, it cannot sustain the needs of their family.

Feedback from the Students on the Use of Modular Distance Learning in Terms of Content, Strategies, Learning Activities, and Assessment

Content

Concerning the feedback of the students on the use of modular distance learning, results revealed that the students Agree that *The contents of the Science module are free of biases and prejudices*, which got the highest mean which indicates the content of the module is free from negative opinion and partiality. This implies that the module was carefully prepared and has been checked by experts. The result of the study supports the findings of Lazo and de Guzman (2021), who found that the development of Strategic Intervention Material (SIM) can improve the development of positive values and traits. Similarly, Were et al., (2022), states that learning materials as well as learning processes that are free from gender biases ad promote gender equality are both a good practice in education and may contribute to more inclusive and cohesive societies in the long run .

The item with the second highest mean is *The contents in Science module are suitable to the learners' grade level of development* described as Agree. This shows that the module's content is aligned with the expected competencies to be mastered by the students. This implies that the module's content is suitable for the grade level of the respondents. The study's results support the findings of Salandan (2011), who revealed that for modules to be interesting, they should have content relevant to the lesson and self-pacing to allow every learner to progress at his rate. The third highest mean is *that The contents in Science are presented clearly, logically, and orderly*, described as Agree,

which indicates that the contents of the modules are organized and easy to understand. This implies that the contents were crafted and presented consecutively to avoid confusion and aid students in quickly understanding the lesson. The result of the study supports the study of Elliot et al. (2020), who cited that the learners are provided with modules, worksheets, and textbooks that can aid in their independent learning process. This further supports the constructivism theory, where learners actively construct their knowledge through experiences.

However, the item with the lowest mean is the item that states that *The Science module contents are simple and comprehensive* and described as Agree. This indicates that the learning contents of the modules are unsophisticated and inclusive. This implies that students can quickly grasp and understand the module's content. The study supports the study of Urbano (2019), who disclosed that the module has simple appropriate, and lovely illustrations that are logically and correctly sequenced. Furthermore, it provides the learner's avenue to think logically and critically, which are relevant requirements for students to learn and eventually improve their academic performance.

Generally, the overall mean is described as Agree. This means that Science modules in terms of content were carefully prepared, checked by the experts, aligned to the expected competencies, and organized. This implies that the students' feedback on using modular distance learning in terms of content is positive.

Strategies

Regarding strategies and activities in the modules, the students Agree that *The strategies employed by the teachers in Science subject are appropriate to their learning needs.* This means that the strategies and techniques utilized by Science teachers suit the diverse learning needs of the respondents and allow them to maximize their potential through cooperative and collaborative learning. This implies that Science teachers employed strategies that hone their skills in searching for and discovering new knowledge.

The result of the study corroborates with the findings of the study of Kugamoorthy (2017), who postulated that the activity-based learning approach has motivated and increased student participation in learning activities as well as improved self-learning practices and higher cognitive skills. Student participation in the activity-based learning model encourages students to think critically and develop their practical skills when learning actively and comprehensively involving cognitive, affective, and psychomotor domains.

Similarly, the students Agree that *The strategies employed by teachers in Science subject are appropriate to facilitate learning.* This means teachers' strategies suit students' learning styles and multiple intelligences. This implies that teachers have employed innovative and differentiated instruction where students actively engage in all activities. The result of the study supports the findings of Christenson et al. (2012), who found that students' engagement allows them to have experiential learning by performing academically. They also put forth the effort, persist, self-regulate their behavior toward goals, challenge themselves to exceed, and enjoy learning.

In like manner, the items with the third highest means state that *The strategies employed by teachers in Science subject are adequate to facilitate learning, allow me to collaborate with my classmates, and are interactive and innovative*, described as Agree. This means that the strategies and techniques the Science teachers utilize are relevant and significant in enhancing students' investigative skills. Further, it also shows that teachers prepare activities that enable students to work with others. This gives an implication that teachers employ activities that provide students to have meaningful and productive learning experiences. It also suggests that these strategies develop students' value of cooperation and how to work well with others.

Further, the students agree that teachers' strategies *are interactive and innovative*. This indicates that the teacher allows the students to develop independent learning skills, enabling them to become resourceful and creative. This implies that students engage in critical thinking, problem-solving, teamwork, and self-management.

The result of the study supported the findings of the study of Gasiewski (2012), Gosser (2015), and Lansiquot et al. (2011), who revealed that academic engagement is dependent on the classroom context, particularly with the interchange of ideas between the instructor and the students. On the same note, they identified peer-led instruction as a teaching strategy that improves student learning due to small peer groups engaging in course material and problem-solving. They also found that collaborative problem-solving strategies are conducive to meaningful group discussions, allowing students to discuss their

understanding of their Science concepts in a non-threatening environment.

On the other hand, the item with the lowest mean states that *The strategies employed by teachers in Science subject are interesting and exciting*. Despite obtaining the lowest mean, the respondents are Agreeable that they enjoyed learning the subject. This implies that Science teachers utilized interactive and differentiated strategies that motivate them to learn and love the subject.

The study's findings corroborated with that of Kugamoorthy (2017), who postulated that the activity-based learning approach has motivated and increased student participation in learning activities and improved self-learning practices and higher cognitive skills.

Generally, the overall mean is described as Agree. This implies that in terms of strategies and techniques utilized by Science teachers, the modules are suitable, relevant, and significant in enhancing students' investigative skills. This implies that the students' feedback on using modular distance learning in terms of strategies is positive.

Learning Activities

Regarding learning activities, data disclosed that *The learning activities employed in their Science class are adequate and appropriate to their learning needs and are experiential (hands-on activity).* This means that the activities employed in their Science class are sufficient and satisfy the respondents' learning needs. This implies that the learning activities are enough and suitable to the diverse learning needs, enabling them to experience how to do the learning tasks. This further implies that these activities develop students' self-confidence, increases creativity skills and enable them to execute tasks based on their capabilities.

Similarly, the students Agree that *The learning activities employed in Science class are easy to follow*. This means the learning activities in their Science class are easy to follow and understand. This implies that the activities in the module are crafted to help students easily understand the lesson's activities.

The third highest mean is *The learning activities employed in my Science class challenge me to think critically* described as Agree. This means that the learning activities of the module were prepared and well-designed and allowed the development of higher cognitive skills of the students. This implies that the module activities are appropriate for the student's cognitive skills and performance.

The item with the lowest mean states that *The learning activities employed in my Science class are compatible with my motor skills*, described as Agree. Though the item has the lowest mean, students agree that the teachers utilize this strategy. This means the activities are comfortable with students' capabilities in performing the tasks utilizing their body's muscles. This implies that students can perform better if the activities being employed align with their motor skills and abilities.

The study's result supports the constructivist theory developed by Jean Piaget (1896–1980), states that students mental patterns to guide behavior or cognition, and interpret new experiences or material in relation to existing schemes. Their cognitive development is not just acquiring knowledge but to develop or construct a mental model of the world. Similarly, Ministry of Education .

Generally, the overall mean is described as Agree. This means that Science teachers employ Science modules in learning activities that are suitable, relevant, and significant in enhancing students' investigative skills. This implies that the students' feedback on using modular distance learning in terms of strategies is useful.

Assessment

The respondents stated that *The assessment used in their Science class is congruent with the objectives and provides clear and unbiased questions*. This means that the students are Agreeable that the formative and summative tests and other evaluative tools are anchored with the learning outcomes. This implies that teachers prepared assessments that described what students are expected to achieve as a result of instruction. The study's results align with the findings of the study of Maki (2012), who revealed that in designing a learning experience, course, or program, there is essential that there is conformity between the learning outcomes, assessments, teaching, and learning activities. In other words, the three components must be aligned.

Similarly, *The assessment used in my Science class is allotted with enough time* described as Agree. This means that the students were given adequate time to answer the test. This implies that teachers see that the number of items is sufficient for the required hours stipulated in the student handbook or DepEd manual.

The study's results are similar to the findings of Wyss et al. (2013), who revealed a positive relationship between allocated instructional time and student achievement. Furthermore, they also found that regardless of quality instructional practice, students demonstrated higher levels of achievement when more excellent instructional time on task was provided.

The assessment used in my Science class is done comprehensively described as Agree. This means the examination was prepared exhaustively considering the learning contents and expected outcomes. This implies that teachers see that students can effectively use knowledge, processes, and resources to achieve higher performance.

The results of the study support the findings of Fan and Yu (2017) that the students' higher-order thinking skills and 21st-century skills should be the focus of the evaluation process. For this reason, assessment and evaluation processes are essential in STEM education.

Generally, the overall mean is described as Agree. This implies that Science modules in terms of assessment are anchored with the learning outcomes, students were given adequate time to answer the test, and modules were prepared exhaustively considering the expected outcomes covered. This implies that the students' feedback on using modular distance learning in assessment is positive.

Summary of the Feedback on the Use of Modular Distance Learning

The results of the summary of the feedback on using modular distance learning in terms of content, strategies, activities, and assessment are all described as Agreeable. The areas with the highest means are *Content*, *Assessment*, and *Strategies*. This means that the respondents are optimistic about using the modular approach. This implies that the students receive specific guidance and skill development and achieve the learning intentions or goals. The lowest mean was obtained by learning activities but was still described as Agree. Generally, the overall mean is described as Agree. This means that the respondents are Agreeable that the teachers have fully utilized the four areas in the delivery of instruction using the modular approach. This implies that the students have maximized performing all the tasks included in the modular distance learning. This further suggests that modular learning enhances students' capability to explore and discover new things through the scientific process.

The result of the study supports the findings of the study of Tugano, Trina, and Tonio (2022), who found that students were satisfied with the learning outcomes set to be achieved for each chapter of the course. They agreed that the outcomes were specific and attainable. The students were delighted in terms of the flexibility provided in the course contents. They found the language used easily understood, their sequencing very organized, and the number of learning activities adequate.

Challenges Experienced by the Respondents in the Use of Modular Distance Learning

The results on the challenges faced by the respondents on the use of modular distance learning revealed that the respondents struggled with the *Lack of a stable internet connection to supplement their readings*, *Too many household chores* and *Difficulty in staying motivated, are* described as Sometimes a Problem. This means most students need help finding a solid internet connection to gather information for their research activity. This implies that the students experienced problems every time they performed their research activities. The result of this study validates the findings of the study of Fabito et al. (2020), Cleofas and Roca (2021), and Ahmed et al. (2017), who revealed that one of the three barriers and challenges that students encountered in online learning was having unstable internet connection. Moreover, they discovered that poor students must own laptops and desktop computers and need more internet connections, especially in rural areas. In the FGD, one of the respondents shared that because of the poor internet connection, she could not search for the topic in the module and added that she could not communicate with her teacher.

Similarly, the challenges the respondents experienced in using modular distance learning is *Too many household chores* described as Sometimes a Problem. This means that students perform many tasks in their homes, which hinders them from complying with their academic requirements. During the FGD, one of the respondents said that allocating time to answer the module is challenging as she has too many household chores, such as cleaning the house, cooking food, taking care of siblings, washing their clothes, washing the dishes, and mopping the floor. This implies that parents' support is vital in children's learning development and in enhancing their academic performance. The result of this study confirms the findings of the study of Dellazzana-Zanon, Zanon, and Feritas (2014) that household chores may negatively affect learning development because, in addition to having little time for leisure, adolescents who perform

household chores have their school performance affected, more frequently misses classes, experience school failures, and have less time to do school work.

Furthermore, *Difficulty in staying motivated* is described as Sometimes a Problem. This means that the students may suffer from physical, mental, or other personal problems affecting their interest in studying their lesson. During the FGD, similar answers were generated from the respondents who sometimes felt bored and lazy to answer their modules. This implies that the students should be given all the support they need, and parents should never cease inspiring their children to study hard despite the difficulties they have experienced. The finding supports the findings of the study of Shuck et al. (2014) and Rachmat and Simamora (2020), who found that students who lack motivation were significantly affected by external factors like learning environment, learning time, and instrumental supports, which in turn affected the achievement. In addition, motivation is associated with an individual's cognitive and affective processes in situated and interactive interaction between learners and their learning environment according to contextual and social factors as enablers or barriers.

On the other hand, the item with the lowest mean is the item that states that *No available study area at home describes as* Rarely a Problem. This means having a space for study and do modular requirements at home is acceptable for the respondents. This implies that students can do their modular requirements at any place in their home that they consider conducive and comfortable for study. The study's findings contradict Baticulon et al. (2020), who revealed that establishing a positive and conducive learning space has long been a problem in distance education, especially in most poor households.

Generally, the overall mean of the challenges the respondents experienced in using modular distance learning is described as Sometimes a Problem. This means that students consider it okay to do their modular requirements. This implies that students can meet their modular requirements despite the challenges they experience.

Coping Mechanisms Used by the Respondents to Address the Challenges

Regarding coping mechanisms used by the respondents to address the challenges of modular distance learning, three items have the highest mean scores. The item with the highest mean is *I look for a space in the house where I feel comfortable studying to do my learning tasks* described as Often. During the FGD, the respondents verbally expressed that they look for a space in their houses or outside where they feel comfortable studying and answering their modules. This means the respondents find a convenient place to answer their modules and comply with other tasks. This implies that the students are determined to overcome their struggles in answering their modules. The study's findings corroborate the findings of Baticulon et al. (2020), who revealed that establishing a positive and conducive learning space has long been a problem in distance education, especially in most poor households.

Similarly, the second highest mean score is *I find time to do their household chores before my learning activities and assignment,* described as Often. This means the respondents give time to do their household chores before answering their modules. During the FGD, one of the respondents shared that he finds time to do his household chores before answering his learning activities and assignments. It is difficult to answer the module task if there are many tasks, especially helping their parents on the farm. This implies that the students can multitask by doing their learning activities and assignments while doing their household chores. Furthermore, multitasking can lead to a more organized and balanced lifestyle, which can positively affect overall well-being and balance household responsibilities and academic pursuits, which is essential to succeed in both areas.

The result of the study supports the findings of the study of Poncian (2017), Amali, Bello, and Adeoye (2018), who revealed that students voiced out the challenge that remote learning schedules conflict with their home responsibilities. This disruption usually happens in remote learning because students must participate in household chores. The problem influences university students' academic performance, as shown by previous studies where students' involvement in household responsibilities negatively affects their academic achievement.

The third highest mean score is that *I find time to unwind or relax before answering my Science modules, again* described as Sometimes. Respondents need to relax to manage stress before answering their modules. This implies that the students need to give their minds and body a chance to recharge to approach the task with greater focus and accuracy. The result of the study supports the findings of the study of Saklofske et al. (2012), who suggested that relaxation, exercises, maintaining good mental health, and time management are some ways of managing stress in

distance learning.

On the other hand, the item with the lowest mean score of coping mechanisms is *I go to the internet café* described as Rarely. This means that students sporadically go to the internet café. This implies that spending time in the internet café is not possible due to the distance of the café, and it is also an added burden to them.

The findings of the study corroborate the finding of the study of Basar et al. (2021) and Salleh (2020), who found that with the widespread availability of mobile phones, computers, laptops, tablets, and other devices, more students and parents should be able to access the internet in their local area. In addition, they found that online learning is effective but inefficient and understands that online learning is effective as a response to the urgency of the pandemic. However, learning outcomes cannot be met, as it requires high costs to purchase suitable internet packages.

Generally, the overall mean of coping mechanisms used by the respondents to address the challenges is described as Sometimes. This means that the respondents can comply with the module requirements with the coping mechanisms they possess. This implies that the students can cope with their module requirements despite the challenges they experienced in using modular distance learning.

Academic Performance in Science

Regarding the academic performance of the students in Science, most of them got a grade of 82-85 during the first grading, described as Fairly Satisfactory, then during the second grading, a grade interval of 86-89 was obtained by the students, which was described as Satisfactory. This means that the respondents are striving hard to perform well and comply with all activities in modular distance education, and improvement can be noted in their Science grades. This implies that the respondents' efforts paid off and can further motivate them to strive for good academic performance.

The finding supports the study of Gossenheimer (2017), Agarin (2021), and Mutya et al. (2022), which revealed that students perform very satisfactorily in modular distance learning. Further, they found that students' average grades for distance modality are higher than that of face-to-face classes. This entails that even in distance learning, students are learning and obtaining new knowledge with the guidance of their parents and good teacher communication.

Difference in the Feedback on the Utilization of Modular Distance Learning When Categorized According to Profile

Age

The findings disclosed that the feedback on using modular distance learning in terms of content, strategies, learning activities, and assessment is the same when categorized according to age. This means that regardless of age, the respondents' comments on using the module in Science in the four areas are similar since the p-value is more significant than the arbitrarily chosen significance level. This implies that the students have similar learning experiences regarding content, strategies, learning activities, and assessment.

The finding supports the study of Ambayon (2020), who disclosed that regardless of age, the modular approach promises learner-centered, flexibility, accessibility, simplicity, and cost-efficiency modalities to save a lot of transportation and accommodation.

Sex

Results revealed no significant difference in the feedback regarding the utilization of module distance learning regarding content, learning activities, and assessment when categorized according to sex. This shows that the remark of both male and female respondents on the use of modules in Science in the three areas are similar since the p-values are more significant than the level of significance. This implies that both male and female respondents have everyday learning experiences in the three areas considered. On the contrary, there is a significant difference in the feedback on the use of modules in Science in terms of strategies since the p-value is lesser than the arbitrarily chosen significance level. This indicates that in terms of strategies, male and female respondents' remarks, and learning experiences differ. This implies that they have distinctive learning experiences with the pedagogies or methods employed by the teacher in the delivery of instructions.The study's results support Nistor's (2013) statement that female learners tend to be more perseverant and engaged than males.

Difference in the Feedback on the Utilization of Modular Distance Learning When Categorized According to Monthly Income

Findings show no significant difference in the feedback on the utilization of module distance learning when categorized according to monthly income since

the p-values on the four areas are more significant than the significance level. This shows that whatever the monthly income of the parents, it does not have a direct effect on giving feedback on the utilization of modular distance learning. The statements of the respondents also confirm this during the FGD. They affirmed that the actual family income of their parents ranges from ₱1,000-₱5,000 because most of them are farmers, and sometimes it cannot sustain the needs of their family. This implies that whether one has a lower or higher income does not matter.

Difference Between the Academic Performance of Male and Female Respondents When Grouped According to Sex

Data revealed a significant difference between the first-grading and second-grading academic performance in Science when grouped according to sex. This indicates that the academic performance differs between male and female respondents on modular distance learning since the p-value is lesser than the level of significance. This implies that female students perform their learning tasks and focus more on their studies than male students, leading to higher academic performance.

The study's findings are congruent with Ghazvini and Khajehpour's (2011) findings, who disclosed that gender difference exists at the level of cognitive functioning in the academic environment. Girls are likely to be more adaptive in learning in a different environment.

Difference in the Challenges Experienced in the Use of Modular Distance Learning between Male and Female Respondents

Data revealed a significant difference in the challenges experienced in using modular distance learning between male and female respondents. This indicates that the struggles and difficulties experienced by male and female respondents towards modular distance learning vary since the p-value is lesser than the level of significance. During the FGD, the male respondents shared their different difficulties and struggles experienced in doing their modular tasks like too many household chores, feeding their animals in the farm, taking care of their siblings, poor internet connection in searching the lessons, they cannot communicate with their teachers and classmates because of lack of gadgets. They cannot answer the modules because they need help understanding the questions or activities.

The study's findings are congruent with the findings of Cortes et al. (2022), who revealed that the challenges experienced by students in modular distance learning are not entirely negative. Each facet of experience contributes to the effectiveness of distance learning and depends on how the learning modality is managed.

Relationship between Feedback and Academic Performances of the Respondents

Results revealed a significant relationship between feedback in terms of content and academic performances of the respondents in terms of module content since the p-value is lesser than the level of significance. This means that their positive comments on module content affect the academic performances of the respondents. It further shows that the more positive feedback they have, the better their academic performance is. This implies that if the students understand the lesson and know how to perform the tasks, they are more motivated to study hard and earn excellent academic performance.

These results are similar to the findings of the study of Barlow (2022), who revealed that students have different learning experiences, and the majority of the feedback is positive. Students also showed improved academic performance when module distance learning was introduced.

Conclusion

Based on the findings of the study, it can now be concluded that the respondents have positive feedback on the use of modular distance learning in terms of the module content, strategies, learning activities, and assessments and that they Sometimes experienced challenges like lack of internet connection to supplement their readings, too many household chores, and difficulty in staying motivated on the use of Modular Distance Learning.

There is no significant difference in the feedback on the utilization of modular distance learning when categorized according to age, monthly income, and sex, except for strategies. Moreover, there is a significant difference between the academic performance of male and female respondents when grouped according to gender and the challenges experienced in the use of modular distance learning. Furthermore, there is no significant relationship between feedback and the academic performances of the respondents in terms of strategies, learning activities, and assessments. However, there is a significant relationship between module content and

academic performance.

In light of the findings and conclusions, the following recommendations are drawn:

A. For possible courses of action: (1) School Principals should initiate programs that can provide a stable internet connection so that students can supplement their readings in making their investigatory projects and other tasks. (2) The school heads should call the attention of the parents to sustain their support and encourage their children to focus on their studies specifically in doing their modular tasks. (3) The teachers should closely monitor the performance of the students and conduct intervention program to those students who belong to the needs improvement category.

B. For further studies: (1) The Effects of Alternative Delivery Mode Program: Its Relationship To The Academic Performance in Science. (2) Students' Feedback and Challenges Encountered in the Implementation of Alternative Delivery Mode Program

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