



(RESEARCH ARTICLE)



## Challenges and responses of senior high school Indigenous People students on flexible learning toward academic resiliency: A concurrent mix method

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### Abstract

The purpose of this study was to examine the challenges and responses of senior high school Indigenous Peoples students in the Don Marcelino District secondary school regarding flexible learning during the COVID-19 pandemic. The study also aimed to determine the socio-demographic profile of the participants, their level of academic resiliency and performance, their level of acceptability of flexible learning, any significant relationship between acceptability responses and academic resiliency, and any significant relationship between acceptability responses and academic performance. A concurrent mixed-methods approach was used, with qualitative data collected through in-depth interviews with 15 participants and analyzed using thematic analysis, and quantitative data gathered through a survey questionnaire administered to 60 respondents and analyzed using statistical analysis. The sample size was determined using purposive and stratified sampling methods. The qualitative findings revealed three major themes: consideration of students' difficulties, resolution of challenges, and gained concepts. The quantitative findings showed that respondents had high academic resilience and an acceptability response to flexible learning, and satisfactory academic performance. The results can guide schools in providing support, creating programs and activities, and increasing motivation and learning interest among Indigenous Peoples students during emergency health crises.

**Keywords:** Senior high school; Indigenous people; Challenges; Responses; Academic resiliency; Academic performance; Concurrent mix method.

### 1 Introduction

The Don Marcelino District, Division of Davao Occidental, has eight (8) secondary schools. Currently, four (4) of them have already established senior high schools that offer different tracks—academic and technical, vocational, and livelihood—that suit the needs and demands of the students and the community. Based on the records of the respective secondary schools, almost 90% of senior high school students have belonged to the indigenous people group comprised of Blaan and Manobo. It is, therefore, shown that little by little the secondary schools in the district established a strong foundation for quality education with enough effective and competent teachers in the different fields of disciplines. This is supported by [1] finding that when teachers are more effective, students learn better, and there is an increase in the growth of student learning. In order to have an effective and competent teacher, it is essential that organizations set high standards for their practices and collect their ideas and perception on how to improve their education system. Collecting these perceptions and evaluating them against the set standards of the organization can help leaders make more informed decisions and can ultimately lead to greater success [2]

However, the outbreak of the COVID-19 pandemic has created the biggest disruption in the educational system, affecting billions of learners around the world. Countries have taken stringent restrictions such as working from home, quarantine for regions with a high number of cases and most importantly, lockdown [3] [40]. [4] proves immensely that during the pandemic, teachers, students, parents, and other relevant educators faced many challenges that they were

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not ready to overcome. In addition, without teachers getting vaccinated against COVID-19, there is no such thing as a safe return to work [40]. This became the main reason that the Department of Education decided to implement flexible learning to continue the education amidst the pandemic. Under its legal mandate, [5], sets forth Flexible Learning Options (FLOs), which include alternative delivery modes and their corresponding learning resources that are responsive to the need, context, and circumstances of learners. In addition, [6] cited flexible learning as a set of educational philosophies and systems concerned with providing learners choice, convenience, and personalization to suit the student.

Concerning the given statements above, the researcher, as a senior high school teacher for four years, has the interest to determine and explore the challenges and responses of the senior high school Indigenous People (SHS-IP) students on flexible learning towards academic resiliency in secondary schools in Don Marcelino District, Division of Davao Occidental. Further, few related studies have been conducted that explore the challenges and responses of senior high school Indigenous People students (SHS-IP) to flexible learning amidst the pandemic. An ILO report published in 2019 shows that Indigenous Peoples continue to experience inequalities despite progress made in terms of legal recognition of their rights.

Flexible learning provides online learning opportunities to learners. Flexible learning is based on the recognition of differences among students, which are addressed by providing varying degrees of choice to learners regarding what, where, when, why, and how to learn [6]. Flexible learning supports personalized learning, wherein learners' needs, interests, backgrounds, and learning styles are central. It reflects a shift from teacher-centered pedagogies and practices towards more innovative, student-centered approaches [7]. Studies have indicated that flexibility is perceived as beneficial to online instruction [8] and constitutes a key factor in students' enrollment in online courses [9].

Hence, flexible learning is not a new concept and has been a core issue in distance education for some time [10]. A central element of flexible learning is the provision of choice to learners. Instead of the instructor or the institution making key decisions about learning dimensions, the learner has a range of options from which to choose [11]. Thus, flexible learning involves loosening logistical and educational constraints and is often related to student-centeredness as well as to individualization in teaching and personalization of the learning process [12].

Furthermore, it is a challenge to define flexible learning, due to its manifold characteristics. As a result, diverse concepts have been developed around it [6], which vary, in part, in terms of the flexibility dimensions to which they refer. Moreover, [13] distinguished between planning-type flexibility, which the instructor can designate before the course begins and which needs to be managed when the course is offered, and interpersonal flexibility, which relates more to the dynamics of the course as it is experienced by the learners. [10] distinguished between flexible delivery, which focuses on options regarding access for learners, and flexible learning, which focuses on options related to how learning occurs. [6] identified seven categories of flexibility: (a) time, (b) space, (c) methods, (d) learning styles, (e) content, (f) organization and infrastructure, and (g) requirements.

Covid-19 has brought about a drastic global shift in the education sector in terms of teaching and learning. Within a short time, the direction of future education has potentially changed. Learning in higher education refers to the process of acquiring new knowledge, skills, and intellectual abilities. These were utilized in solving problems. The deployment of technologies in teaching and learning is not a new paradigm in higher education [14]. Undeniably, in the 21st century, students are familiar with digital environments. In fact, the study of [15] and [16] showed that the students' topmost source of knowledge was thru social media which proves that they are really familiar with digital environments. Therefore, lecturers are encouraged to use Information Technology (IT) in teaching to stimulate and employ students' learning [17]. The teaching-learning process aid with flexible practices has become a common teaching approach to involve students in learning [18].

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However, the provision of flexible learning opportunities does not necessarily lead to effective learning, as simply providing a range of options to learners does not bring with its deep learning [19]. With freedom comes responsibility, which requires real commitment and discipline [10]. Hence, flexible learning requires that students take on more control of the learning, make their own decisions, and invest a greater level of dedication [20]. Studies indicated that

students may need ongoing support in this process. Hence, it is essential to study how students make use of flexibility and how it relates to their achievements, to understand the best way to integrate it and support students' learning [21].

Hence, flexible learning is not a new concept and has been a core issue in distance education for some time [10]. A central element of flexible learning is the provision of choice to learners. Instead of the instructor or the institution making key decisions about learning dimensions, the learner has a range of options from which to choose [11]. Thus, flexible learning involves loosening logistical and educational constraints and is often related to student-centeredness as well as to individualization in teaching and personalization of the learning process [12].

Consequently, education during the pandemic has given flexible learning an entirely new meaning. It is the only method that could ensure the sustainability of education while fighting the spread of the pandemic, which contrasts with being used as a supplementary approach or alternative resources [19]. When no other options are available, online and distance education, as the only employable method, becomes the most prominent pillar of support to the newly formed education curriculum amidst the chaos. Across the world, governmental support in the forms of educational technology (including online learning, radio, television, texting) to support access to remote learning during the Covid-19 pandemic was seen in many countries. The reactions, somehow, varied significantly depending on one's income level [22].

Furthermore, it is a challenge to define flexible learning, due to its manifold characteristics. As a result, diverse concepts have been developed around it [7], which vary, in part, in terms of the flexibility dimensions to which they refer. [23], for example, referred to five sets of dimensions in which flexibility may be provided: (a) time, (b) content, (c) entry requirements, (d) instructional approach and resources, and (e) delivery and logistics.

Moreover, [13] distinguished between planning-type flexibility, which the instructor can designate before the course begins and which needs to be managed when the course is offered, and interpersonal flexibility, which relates more to the dynamics of the course as it is experienced by the learners. [10] distinguished between flexible delivery, which focuses on options regarding access for learners, and flexible learning, which focuses on options related to how learning occurs. [6] identified seven categories of flexibility: (a) time, (b) space, (c) methods, (d) learning styles, (e) content, (f) organization and infrastructure, and (g) requirements.

In the Philippine setting, the teaching and learning process assumes a different shape in times of crisis. When disasters and emergencies occur, schools need to be resilient and find new ways to continue the teaching-learning activities. One emerging result of the world health crisis is the migration to online learning modalities to mitigate the risk of face-to-face interaction. Secondary schools shifted from face-to-face delivery to online modality as a result of the pandemic. However, this sudden shift has resulted in problems for learners without access to technology. The online learning modality presents the gap between those who have connectivity and those without. Continuing academic engagement has been a challenge for teachers and students due to access and internet connectivity [24].

Considering the limitation on connectivity, the concept of flexible learning emerged as an option for online learning, especially in secondary schools in the Philippines. Flexible learning gives students the freedom to choose the pace, place, and mode of learning through appropriate pedagogical practice [25]. The learners have the option of how they will continue with their studies as long as they can comply with the requirements and show evidence of learning outcomes. Flexible learning and teaching span a multitude of approaches that can meet the varied needs of diverse learners. These include "independence in terms of time and location of learning, and the availability of some degree of choice in the curriculum (including content, learning strategies, and assessment) and the use of contemporary information and communication technologies to support a range of learning strategies" [26].

The United Nations (n.d.) describes IP as heirs and practitioners of unique cultures which have preserved their social, cultural, economic, and political characteristics different from those of the dominant society that surrounds them. Despite their cultural wealth and belonging to the locality; IP has had to seek their recognition for basic rights such as education. This is how international organizations such as the UN and UNESCO work to promote international legal frameworks that protect and promote their human rights.

Today, Indigenous communities use various approaches and technologies, including engaging with social media platforms, to manage life under COVID-19. Given the emphasis on online proficiency that has been placed on activities under COVID-19, it is important to reflect on Indigenous peoples' engagement with technology as they assert their rights to digital self-determination and sovereignty. To respond to the challenge of innovating educational delivery mechanisms in schools across the globe ventured into different practices such as distance education, online teaching, remote learning, blended learning, and mobile learning. These practices can be collectively called flexible learning that can be adapted by learners in their learning. It is the temporary change in the delivery of instruction caused by the

sudden occurrence of a crisis. Flexible learning does not mean going away from the traditional arrangement of the instructional process or creating a completely new educational system. It provides a temporary feasible alternative for education practitioners to perform instruction and provide students with necessary instructional support [27].

However, access to basic education has been one of the most critical development concerns among IP communities. In terms of the public school system, indigenous communities in general, especially those located in remote rural and mountainous areas, experience difficulties in accessing government services. Previous to the National IP Education Policy Framework, the DepEd has issued specific policies in response to the distinct educational needs of IP communities, such as DepEd Order No. 42, s. 2004 (Permit to Operate Primary Schools for Indigenous Peoples and Cultural Communities) and DepEd Order No. 101, s. 2010 (The Alternative Learning System (ALS) Curriculum for Indigenous Peoples Education). The DepEd has recognized the need to build on these existing policies and to approach the issue of IP education more systematically so that policy gaps are addressed and that its offices and units, especially those in the frontline of service delivery, are capacitated to effectively respond to realities on the ground.

To reduce the impact of the COVID-19 pandemic on school closures and, at the same time, facilitate inclusive learning opportunities for children and youth, [22] launched the Global Education Coalition, with the aim of providing resources online. Although it is a promising initiative, these online services are only accessible to people with a modular, computer, and internet service on hand; thus, such initiative perpetuates systems of technological and social inequality [28]. The critical theory highlights the concept of power, particularly in schools, which are institutions involved in reproducing inequality and the struggle to bring greater forms of social justice [28]. Inequality is largely invisible, due to ideological processes that make inequality seem to be the natural condition, in this case, of IP.

Williams and Myers [29] discuss the need to critically and consciously raise awareness of how Indigenous students might be impacted by the COVID-19 pandemic and the move to flexible learning. This disruption, reorganizing, and restructuring of educational systems, also provides opportunities to examine ways in which Indigenous students can be fully supported. Therefore, Indigenous youth are looking to their Elders for guidance [29]. Indigenous Elders have emphasized the crucial need to preserve long-term knowledge so that future generations can continue to learn Indigenous ways of knowing [30].

Therefore, the intent of this study was to describe and understand the challenges and the responses of the SHS-IP learners in connection with the implementation of flexible learning in this time of pandemic. According to the World Health Organization (WHO) Director-General, Indigenous Peoples are more vulnerable to COVID-19 and related consequences because of their high burden of poverty, unemployment, malnutrition, and both communicable and non-communicable diseases [31].

In addition, it also explores the realities behind the experiences of the senior high school Indigenous People (SHS-IP) students on flexible learning using a concurrent mixed method research design. The purpose of this design is to combine elements of qualitative and quantitative research approaches, that is, the use of qualitative and quantitative viewpoints, data collection, analysis, and inference techniques for the broad purposes of breadth and depth of understanding and corroboration [32]. The findings of the study provides a comprehensive and keen understanding of the current situation of the senior high school Indigenous People (SHS-IP) students in this new normal of education. This give interest to the teachers and school head of the institution to extend their efforts and provide the best and most quality service and programs that helps senior high school Indigenous People (SHS-IP) students towards academic resilience.

This study aims to explore how senior high school Indigenous People (SHS-IP) students respond to flexible learning during the COVID-19 pandemic, and the challenges they face in doing so. The study was conducted in the secondary schools of Don Marcelino District, Division of Davao Occidental. The qualitative research questions include identifying the challenges SHS-IP students face in flexible learning and their responses to these challenges, as well as the learning insights they have gained from the experience. On the other hand, the quantitative research questions aim to determine the demographic profile of SHS-IP students, their level of academic resiliency, their level of acceptability on flexible learning, and their level of academic performance.

The demographic profile includes gender, age, grade level, and track/strand. The study also aims to measure the students' level of academic resiliency in terms of learning engagement, learning interest, and learning attitude/behavior. The level of academic performance will be based on the criteria of outstanding, very satisfactory, satisfactory, fairly satisfactory, and did not meet expectations. The level of acceptability responses on flexible learning will be measured in terms of learning delivery, learning interaction, and learning resources.

Furthermore, the study seeks to determine if there is a significant relationship between acceptability responses on flexible learning and the academic resilience and academic performance of the SHS-IP students amidst the COVID-19 pandemic. This study will provide insights on how SHS-IP students respond to the challenges brought about by flexible learning during the pandemic, and how schools can provide support and create programs and activities that increase motivation and learning interest among students amidst any emergency health crisis.

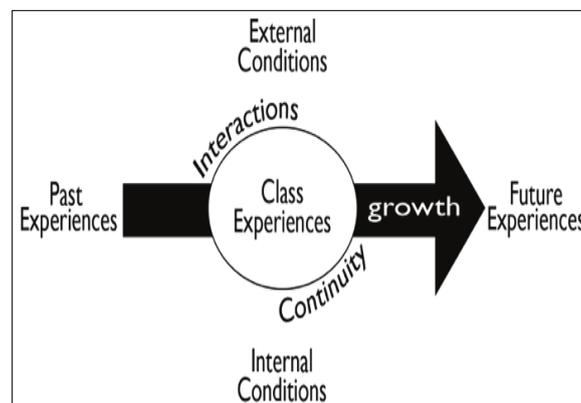
### 1.1 Theoretical Framework of the Study

The theoretical framework of the study is shown in Figure 1. The overall position in the philosophy of education is the concept of experience and learning. John Dewey in 1892, gave his concise definition of “experience”, our experience is simply what we do. As such, experience is the “irreducible totality of people acting, sensing, thinking, feeling, and meaning-making in a setting” [33]. Thus, this study anchored on the theory of experience and learning for the researcher to establish factual results about the lived experiences of SHS-IP students on flexible learning amidst pandemic in secondary schools of Don Marcelino District, Division of Davao Occidental.

Furthermore, this theory significantly supports in presenting the contrasting experiences of the SHS-IP students on flexible learning amidst pandemic. This also heightened the value of individual educative experiences in which human beings learn and grow since learning is intimately tied to experience. In addition, the theory presents the internal and external conditions, past and future experiences, and how individuals interact given the situations. John Dewey’s Theory of Experience and Learning helps the researcher to understand the multiple information of the study concerning the research objectives.

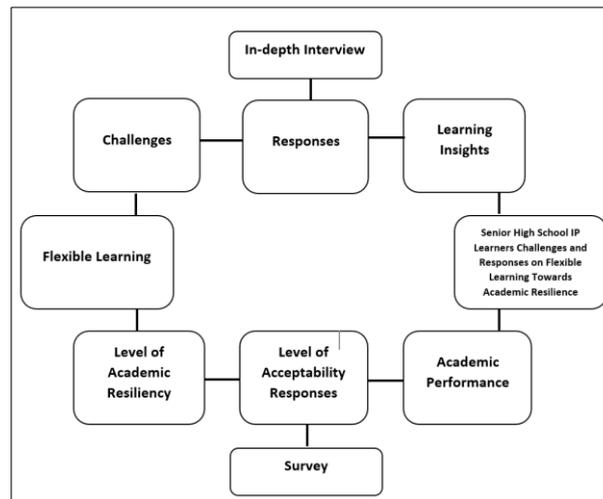
Moreover, in the theory, the past experiences entail the challenges and responses of the senior high school Indigenous People (SHS-IP) students on flexible learning amidst the COVID-19 pandemic, while the future experiences are the application of all the learnings that they have had in the existing situation. Furthermore, external conditions describe the outside environment where the senior high school Indigenous People (SHS-IP) students interact with and respond to the environmental factors. On the contrary, internal conditions are the policies, roles, and regulations implemented by the school and brought outside the premises for reference and compliance with all its concerns.

Lastly, interactions imply how senior high school Indigenous People (SHS-IP) learners respond to the actual situations and the continuity of the process to be experienced in the future. Generally, the class experiences reflect the overall challenges and responses of the senior high school Indigenous People (SHS-IP) learners on the flexible learning towards academic resiliency amidst the COVID-19 pandemic. John Dewey’s Theory of Experience and Learning.



**Figure 1** John Dewey’s Theory of Experience and Learning

The conceptual framework of the study presented the qualitative and quantitative phases of the study. The qualitative part describes the participants’ challenges, responses, and learning insights gained, while the quantitative part determines the level of academic resiliency, acceptability, and academic performance of the SHS-IP students on flexible learning amidst the pandemic. Moreover, the research instruments are also illustrated to show how the data collection processes are conducted using the concurrent mixed-method research design.



**Figure 2** Conceptual Framework of the Study

Figure 2 is the conceptual framework of the study presented the qualitative and quantitative phases of the study. The qualitative part describes the participants' challenges, responses, and learning insights gained, while the quantitative part determines the level of academic resiliency, acceptability, and academic performance of the SHS-IP students on flexible learning amidst the pandemic. Moreover, the research instruments are also illustrated to show how the data collection processes are conducted using the concurrent mixed-method research design.

## 1.2 Scope and Limitation of the Study

For the qualitative phase, the conduct of the study posted its limits on the challenges and responses of SHS-IP students on flexible learning towards academic resiliency amidst the COVID-19 pandemic. While for the quantitative phase, there were limits on the demographic profile, level of academic resiliency, level of acceptability responses on flexible learning, and level of academic performance of senior high school indigenous people (SHS-IP) students on flexible learning amidst the COVID-19 pandemic in the secondary schools of Don Marcelino District, Division of Davao Occidental.

Generally, it describes and determines how students learn and adopt flexible learning as a new learning platform in this new normal of education. Further, the study was carried out from March to April 2022. Considering the occurrence of the COVID-19 pandemic, close adherence to the health and safety protocols were strictly observed. In addition, the qualitative phase interview guide questionnaire was utilized during the in-depth interview with the participants. [34] thematic analysis was used in analyzing and interpreting the data.

While for the quantitative phase, a self-constructed survey guide questionnaire was used and validated by the panel of experts. It was undergone an item analysis to improve internal consistency or internal structure validity, pilot testing to determine if your research method is reliable and Cronbach alpha testing to measure the internal consistency of an item. The frequency, mean, and Pearson were used to evaluate, analyze, and interpret the data.

## 2 Material and methods

In this study, a concurrent mixed method was used. It is said that in a concurrent design, the data collection and data analysis of both components occur (almost) simultaneously and independently. According to [35], the purpose of this design is to obtain different but complementary data on the same topic to best understand the research problem. The intent in using this design was to bring together the differing strengths and non-overlapping weaknesses of quantitative methods with those of qualitative methods. Further, this design is used when a researcher wants to directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data.

Specifically, a phenomenological inquiry-based research design was used to describe and understand the challenges and responses of the senior high school indigenous people (SHS-IP) students on flexible learning amidst the COVID-19 pandemic. Specifically, this design explores the meaning of a single phenomenon by using known and accepted qualitative data analysis. Hence, qualitative data were collected from the participants of the study using an interview guide questionnaire to glean information through interviews. The aimed was to explore the lived experiences of SHS-IP

students on flexible learning amidst pandemics. [34] thematic analysis was utilized to further explain and interpret the findings. To generate the findings, the researcher familiarized the data, created initial codes and categories, searched for themes, reviewed themes, defined and named themes, and finally presented the final results of the study. According to [36], thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data. It minimally organizes and describes your data set in rich detail.

On the other hand, a descriptive correlation research design was used to determine the significant relationship among the variables of the study. Descriptive research is designed to provide a snapshot of the current state of affairs. On the other hand, correlational research is research designed to discover relationships among variables and to allow the prediction of future events from present knowledge. A 5-point Likert scale was used to determine the level of academic resiliency and level of academic performance of senior high school indigenous people (SHS-IP) students on flexible learning amidst the COVID-19 pandemic.

## **2.1 Sampling**

In the qualitative phase, the purposive sampling technique that involved purposefully selecting informants based on their capacity to elucidate was made as a particular theme, concept, or phenomenon existed. There were fifteen (15) senior high school Indigenous Peoples (SHS-IP) students as Key Informants are the reliable source of information representing the secondary schools in the District of Don Marcelino, Division of Davao Occidental. Purposive sampling is the process of selecting a sample by taking a subject that is not based on the level of the area but is taken based on the specific purpose.

For the inclusion criteria, the researcher provides criteria for the respondents to qualify in the study such as (1) the participants must be a bonafide senior high school student of respective secondary school in Don Marcelino District, Division of Davao Occidental, (2) belong to Indigenous People (IP) community and adapting flexible learning amidst the COVID-19 pandemic. While for the exclusion criteria are 1) the participants are not bonafide senior high school students of respective secondary schools in Don Marcelino District, Division of Davao Occidental, (2) not belong to Indigenous People (IP) community, and not adopting flexible learning amidst the COVID-19 pandemic. For the withdrawal criteria, respondents were given the free will and voluntariness to get involved in the study. They were assured that no threat, intimidation, force, or duress is manifested against them and that they could withdraw their participation anytime in the research process. Their responses are treated with full secrecy; should not be revealed or disclosed to anyone.

In the quantitative phase, a quota-stratified random sampling technique was used to determine the sixty (60) respondents of the study. In the stratified sampling technique, the target population was divided into distinct groups or strata. Within each stratum, the components were similar concerning selected characteristics of importance to the study.

## **2.2 Data Collection**

To provide accurate, valid, and reliable results of the study, the researcher established several data collection methods to ensure the smooth flow of the research study. The researcher engaged in a probing conversation with the participants. An interview guide questionnaire was utilized to collect qualitative data intended for analysis and interpretation. The duration of the in-depth interview was 30 minutes. After that, transcription, the construction of themes, and the interpretation and analysis of results followed. From a scholarly point of view, [37] defines interviews in qualitative research as attempts to understand the world from the subject's point of view, to unfold the meaning of people's experiences, and to uncover their lived world before scientific explanations. Furthermore, the researcher collects data from a variety of sources and, if possible, from different perspectives. confirmation of the transcript generated from the in-depth interview with the participants to ensure stability, accuracy, and completeness of the findings.

In addition, a self-constructed survey guide questionnaire was administered to the identified respondents of the study to gather quantitative information with respect to the quantitative research questions. The retrieval of research instruments was undergone for data evaluation, interpretation, and analysis using various statistical tools suitable for the study.

## **2.3 Ethics**

Research ethics is an important aspect of any study, concerned with principles of right and wrong conduct in research. In this study, various ethical considerations were taken into account to ensure the welfare and rights of the research participants.

Firstly, in the selection of respondents, the researcher employed accurate sampling techniques that allowed every individual in the population to have an equal chance to participate. Voluntary participation was also ensured, with the participants having the right and discretion to opt-out if they wished to do so. The privacy and confidentiality of the respondents were also respected throughout the study.

Risks and benefits were considered and communicated to the respondents, and their informed consent was obtained to ensure their cooperation. The researcher ensured that proper citation was given to ideas from other authors and academics to avoid plagiarism. Any deception, exaggeration, or fabrication of data was avoided, and data was verified based on the true statements provided by the respondents.

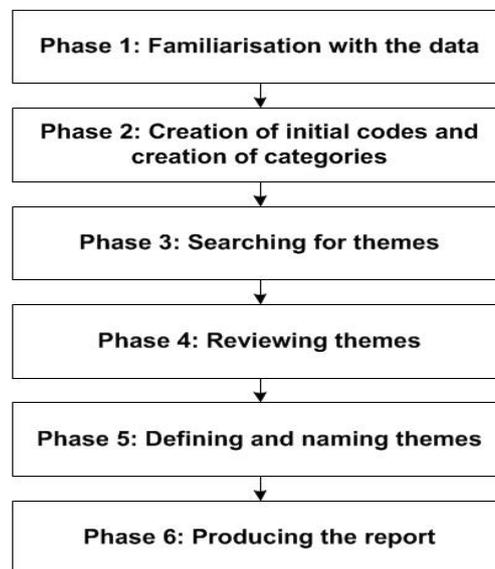
The researcher prioritized the respondents' dignity to avoid any conflicts of interest, and formal authorization was obtained from the organization where the study was conducted. Technology issues were also taken into account, and face-to-face interviews were conducted under strict adherence to health protocols.

The researcher ensured objectivity and honesty in encoding responses, adopted a critical way of thinking, and was diligent and hardworking. Authorship was anchored on the significant contributions and implications of the study's findings, with adherence to the guidelines and criteria set by the Schools Division Research Committee.

Overall, the researcher took into account various ethical considerations in the conduct of the study to ensure the welfare and rights of the research participants and adhere to the highest scientific and professional standards.

## 2.4 Data Analysis

To accurately analyze the data, [34] thematic analysis was used to understand the challenges and responses of the SHS-IP students to flexible learning amidst the pandemic as shows in Figure 3.



**Figure 3** Braun and Clarke's 2006 Thematic Analysis

In this phase, data was gleaned through interviews with the participants' experiences and coping mechanisms for flexible learning during the outbreak of the COVID-19 pandemic. In compliance with and accomplishment of the study, the researcher thematically processed the information to provide factual and concrete findings about the research objectives. [34] thematic analysis, respectively, presented the procedures in qualitative data analysis. Specifically, to give an overall understanding of findings, the researcher encoded, transcribed, and formulated core ideas into themes and categories for the interpretation of the results. To measure the academic resiliency of the senior high school Indigenous People (SHS-IP) students on flexible learning amidst the COVID-19 pandemic, a 5-point Likert scale was used.

The study will utilize a Likert scale to measure the level of academic resiliency and acceptability responses of the senior high school Indigenous Peoples (SHS-IP) students towards flexible learning amidst the COVID-19 pandemic. The range

of mean for the 5-point Likert scale is from 1 to 5, with 5 being the highest level of agreement and 1 as the lowest level. The interpretation for each range of mean was also provided to give meaning to the scores obtained.

For the level of academic resiliency, a score of 4.21 to 5.00 implies that the SHS-IP learners have a very high level of academic resiliency, while a score of 3.41 to 4.20 suggests that they have a high level of academic resiliency. A score of 2.61 to 3.40 indicates a moderate level of academic resiliency, a score of 1.81 to 2.60 suggests a low level of academic resiliency, and a score of 1.00 to 1.80 implies that the SHS-IP learners have a very low level of academic resiliency.

On the other hand, for the level of acceptability responses of the SHS-IP students towards flexible learning, a score of 4.21 to 5.00 implies that they have a very high level of acceptability responses, while a score of 3.41 to 4.20 suggests that they have a high level of acceptability responses. A score of 2.61 to 3.40 indicates an average level of acceptability responses, a score of 1.81 to 2.60 suggests a low level of acceptability responses, and a score of 1.00 to 1.80 implies that they have a very low level of acceptability responses.

Lastly, the academic performance of the SHS-IP students on flexible learning will be based on the grading system provided by DepEd Order No. 031, s. 2020. The grading system consists of five descriptors: Outstanding, Very Satisfactory, Satisfactory, Fairly Satisfactory, and Did Not Meet Expectations. A score of 90-100 falls under Outstanding, 85-89 is considered Very Satisfactory, 80-84 is Satisfactory, 75-79 is Fairly Satisfactory, and below 75 is classified as Did Not Meet Expectations, which means the student failed.

### 3 Results and discussion

#### 3.1 Qualitative Discussion of Results

The findings of the study are presented in Table 1. This was categorized into major themes, core ideas, and frequency of response. Moreover, the frequency of the responses was described as follows: general: 50% of the total responses; typical: 21%–49% of the total responses; and variant: 20% and below of the total responses of the participants.

**Table 1** Themes and Core Ideas on the Challenges and Responses of SHS-IP Learners on Flexible Learning Towards Academic Resiliency

Major Themes	Core Ideas	Frequency Of Response
Consideration of Students' Difficulties	difficulty in understanding the lessons	-General
	poor internet connectivity	-General
	out of teacher's presence	-General
	financial needs	-General
	pressures	-Variant
Resolution to the Challenges	practicing time management	-General
	searching answers from google	-Variant
	asking help from friends and family members	-General
	doing online selling	-Variant
Gained Concepts	accepting the situation	-General
	practicing time-management	-General
	asking the guidance of classmates	-General
	becoming patient	-Variant
	helping oneself	-Variant
	understanding the instruction	-Variant

This list of core ideas emphasized that participants had difficulty understanding the lessons provided by the teachers because some of them were due to limited face-to-face contact. On the other hand, one of the difficulties encountered by the participants was an unstable internet connection. It jeopardizes their financial priorities in order to meet their educational needs, resulting in pressure.

The following participants shared their experienced about the difficulties in understanding the lesson as they said that:

*"I struggled with flexible learning, particularly during online classes, due to limited internet access and the need for self-learning, which definitely caused me stress in understanding the lesson." (IDIP3)*

*"I also have trouble understanding the lesson because I have to understand it on my own." (IDIP5)*

*"During online classes, I cannot able to understand what the teachers discussed due to slow internet connection and limited discussion." (IDIP8)*

*"Due to the absence of teachers, I find it hard to understand the lesson written in the modules." (IDIP11)*

*"I tried to use google translator for me to understand those difficult words in the modules." (IDIP14)*

*"I cannot pass my activities and task on time because I cannot understand the instruction in the module." (IDIP1)*

*"All the activities were uploaded on social media and it is hard for me to understand all the lessons and instruction alone" (IDIP15)*

These participants also shared their experiences with unstable internet connections, as they stated:

*"This platform requires gadgets and a strong internet connection, but it added burden on my part due to slow internet connection and unavailability of gadgets, resulting in submission delays." (IDIP1)*

*"The main issue I had encountered since SPAMAST implemented flexible learning was lack of internet access." (IDIP2)*

*"Poor internet connection was one of the biggest challenged I had encountered that caused my submission of activities delayed." (IDIP4)*

*"I cannot regularly attend my online class due to unstable internet connection." (IDIP6)*

*"Most of the time our teachers give us research tasks but then, I cannot accomplish it on time because of the unstable internet connection." (IDIP3)*

*"I'm living in a place where there is no constant and strong internet connection and it is hard for me to study because I had to travel just to access the internet" (IDIP10)*

*"I cannot attend my online class due to poor connections" (IDIP 12)*

Similarly, these participants shared their challenges about the lack of face-to-face contact with their teachers, as they stated:

*"When I asked my teachers, some of them cannot immediately respond to our concerns." (IDIP3)*

*"Communication with some of my teachers is one of my concerns. When I messaged them, they were not able to respond on time. As a result, I was unable to complete all of my obligations on time." (IDIP12)*

*"There were times that I need to consult my teachers for clarification but I need to wait more than 3 days before I have their response." (IDIP7)*

*"As I remembered, there were times when I ask permission to call and chat with my teachers I got no response from them." (IDIP5)*

*"I tried to contact our teachers but sometimes they were not responded." (IDIP2)*

*"Some of the teachers were very strict and it's hard for me to approach them because they never reply most of the time" (IDIP10)*

*"One of the challenges I have encountered is lack of face-to-face contact with my teachers and I know they are busy too so they cannot respond us on time" (IDIP6)*

In addition, another participants mentioned that they experienced financial issues, as they said:

*"Another issue is money. For example, I need laptop and cellphone for my online learning, but my family do not have enough money to buy these things right away." (IDIP9)*

*"My parents cannot afford to buy laptop because of limited income that we have in our family." (IDIP13)*

*"I encountered a problem of buying my daily load allowance because I don't have enough money." (IDIP2)*

*"Financial matters were the main issue in our family since the flexible learning had started." (IDIP12)*

*"Sometimes I cannot attend online class because I have no money to buy load" (IDIP6)*

*"It was difficult for me to buy new a gadget because we do not have sufficient amount to buy." (IDIP8)*

*"Since it is lockdown our parents lost their job and with that, we struggled so much in buying load just to join our online class" (IDIP11)*

Further, these participants expressed how they felt pressure on the flexible learning, as they stated:

*"When my teachers asked me during our online classes I felt pressured on what I am going say or respond to the questions given" (IDIP3)*

*"During online classes, I got pressured because I cannot open the link due to slow internet connection and with that, my teachers marked me late or sometimes absent" (IDIP9)*

Moreover, the stated responses demonstrated that the participants faced a variety of challenges in order to accept the acceptability of flexible learning. These difficulties have a significant impact on the rate at which they learn. Similarly, flexible learning was hampered by the fact that students were unable to participate in the discussion due to poor internet connectivity. It was the same in terms of knowledge delivery. Online technologies quantify their eagerness to learn new and advanced technology. Recommendations for online instructors to help students understand the flexible learning mode. Modules, videos, and other links should be included. Due to time constraints and poor connectivity, be lenient and understanding when submitting requirements. Reduce the number of activities given to the students considering the new learning platforms to which students are still adjusting from it.

Similarly, despite all the benefits of flexible learning, students face a lot of challenges in the course of their program. Studies conducted on flexible learning in Ghana reveal students have the problem of combining work, family demands, and other commitments with packed academic work. In addition, many students become frustrated when they do not understand what their teachers are teaching in class. Some people also misinterpret what the teacher said in a different way or with a different meaning. Students become stressed as a result of this frustration because they are unsure how they will pass the course because they barely understand what the teachers say in class.

It is simply unavoidable because it is a necessary part of a student's life. Many students, in fact, face difficulties on a daily basis. It could be caused by a variety of factors. The causes and levels of difficulty differ from person to person. It affects everyone, no matter how privileged, reasonable, clever, or intelligent they are. Frustrations, failures, losses, changes, and conflicts will test every student at some point.

### **3.2 Resolution to the Challenges**

The second major theme that emerged was the resolution to the challenges. This theme had the following core ideas anchored on the participants' responses, to mention: practicing time management, searching for answers from google,

asking for help from parents and family, and doing online selling. These core ideas proved that the participants practiced various strategies to cope with the challenges experienced.

Notably, one of the participants' solutions to overcoming the challenges they had faced was to practice time management. They looked for solutions by searching the internet and enlisting the assistance of classmates and parents to meet all of the requirements. Meanwhile, the participants who engage in online selling are able to sustain themselves financially.

These participants shared the ways in which they practice time management in line with these statements:

*"What I did was to practice effective time management and start a part-time online business to earn money to buy load and gadgets for me study." (IDIP1)*

*"I used a variety of coping mechanisms, including practicing effective time management, asking questions to my classmates, reading notes, and studying late at night." (IDIP15)*

*"To address my personal academic concerns, I practiced taking notes and completing all of my assignments ahead of time after our online class. I also sell online to supplement my income." (IDIP6)*

*"For me to finish all my school works I discipline myself to practice time management for me to ensure that I have done everything." (IDIP11)*

*"Time management really helps me become organized and punctual in all my dealings in school as well as it makes me more responsible in doing my assignments, projects, and many others." (IDIP7)*

*"I practiced time management so that I can attend online classes regularly and pass my assignments on time" (IDIP9)*

*"My strategy is to practice time management to avoid stress and I practice listing down all the important things I need to do."*

These participants also willingly shared that they used google as a source of their answers, as they said:

*"To keep up with the lessons and meet the numerous requirements in school, I used to browse Google and YouTube. Another source was my classmates; whenever I missed something or when I cannot attend online classes, I always asked about the lesson or any updates from our teachers." (IDIP4)*

*"To get through the lesson, I asked my parents for money to buy a load for me to browse answers on google." (IDIP12)*

*"To deal with these concerns, I watched movies and video tutorials on YouTube, read books and asked my parents for advice on the decision I would make." (IDIP14)*

*"I depend most of the time on google in searching answers for the activities and projects asked by our teachers." (IDIP9)*

*"I do advance research to teach myself and sometimes I browse the internet to find an answer in all my assignments." (IDIP11)*

*"I always save every centavo for me to have money to buy load for research." (IDIP5)*

These participants also proudly shared that their family and friends help them in solving their problems, through these statements:

*"When I have something that I don't understand I immediately contact my friends and asked them about my concerns and other updates." (IDIP10)*

*"I always seek advice from my parents every time I made any decisions because I know they can give me the best thing or advice to solve my problems." (IDIP2)*

*"My friends, classmates, and parents are the persons I always have every time I have problems in school." (IDIP9)*

Other participants shared that to overcome challenges in flexible learning they have to do online selling:

*"I do online selling to buy load for online classes and other school-related purposes." (IDIP5)*

*"I sell online to support myself financially since my parents have no permanent work at this time." (IDIP8)*

*"Online selling helps me sustain in my study because of this I bought my own cellphone and provide my daily load allowance." (IDIP13)*

In reference to the above statements, the participants were able to apply multiple means and methods of overcoming the various challenges toward the acceptance of flexible learning. Students used a variety of coping strategies, primarily praying/meditating and self-distracting activities such as watching TV and listening to music, to deal with stress. Emotional and instrumental support from family, friends, and lecturers were also important to stress coping strategies.

Furthermore, some students use instrumental social support, mental disengagement, emotional social support, planning, and active coping. Students must become more familiar with themselves, especially when dealing with stress.

The students who used time and task management, sleep, and deterioration to cope were more likely to achieve higher academic achievement, whereas those who coped by seeking academic support, skipping school, engaging in social and creative diversions, using substances, reducing effort on schoolwork, and dealing with problems alone were less likely to achieve higher academic achievement.

### 3.3 Gained Concepts

The third emerging theme gleaned from the in-depth interview was gained concepts with the following generated core ideas, to wit: accepting the situation, practicing time management, asking for the guidance of classmates, becoming patient, helping oneself, and understanding the instructions. Evidently, based on the unveiled statement above, the participants learned concepts for self-development by learning from the experiences they encountered. These developments shaped the participants' accomplished or fulfilled course of work.

Furthermore, acceptance of the current situation was the concept gained by the participants in the acceptability of flexible learning. To balance multiple priorities, time management practice was established with the help of classmates. This encourages patience, collaboration, and a broader understanding.

These participants shared that they accept the situation in line with these statements:

*"It was difficult at first, but as time passed, I gradually adapted to the changes, and I have no choice but to accept the fact that this is the new normal education." (IDIP13)*

*"I accept it genuinely because I can do nothing else. That is the new trend, and I must follow and embrace it. Simply, I don't have a choice." (ID115)*

*"Since flexible learning was mandated by the institution to use by the teachers and students for learning, then I have no choice but to embrace it." (IDIP9)*

*"Actually, I felt new in this learning platform and I found it a little bit difficult, especially in setting my time and priorities but as a student, all I need to do is to follow and adjust for me to finish my study." (IDIP2)*

*"As a student, I need to embrace the changes happening at present and try to adjust myself to the situation." (IDIP14)*

*"I have to accept and understand that this is for our safety and to prevent also the spread of COVID-19" (IDIP5)*

*"As a working student and a dreamer, I have to accept every challenge my dreams and to finish my study" (IDIP7)*

Similarly, this participant shared their gained concept on time management, as they stated:

*"If I had difficulty with my lesson, I would browse the internet and give myself enough time to complete all of the requirements in order to meet deadlines." (IDIP4)*

*"Time management is very important, especially nowadays. It helps me fulfilled my school works and activities on time." (IDIP8)*

*"Through practicing time management in flexible learning helps us students sustain and survive amidst the drastic changes." (IDIP1)*

*"Since I'm a working student, I really practice time management to finish all my assignments on time" (IDIP7)*

*"I give more extra effort and do time management to focus on online classes and modular activities" (IDIP9)*

*"In online classes, we really spend our time on screen to protect our health I manage my time in using gadgets" (IDIP3)*

*"In practicing time management, I learned how to balance my time and adjust myself in a certain situation." (IDIP10)*

Other participants added and shared that they asked for guidance from their classmates, as they said:

*"To overcome all of the challenges, one thing I did was to coordinate with my classmates about the lessons and school updates." (IDIP3)*

*"Working with my classmates is a big thing for me to accomplish all my task in school and submit it on time." (IDIP7)*

*"Grouping is a good strategy that helps me not be behind from any updates, activities, and other important matters in school." (IDIP6)*

*"My classmates become my source of information. They remind me of the task that I need to do and made me updated on time." (IDIP11)*

In addition, these participants shared that they exercise patience, helping themselves, and understand the difficulties encountered, as they stated that:

*"Despite the challenges I had encountered I need to extend my patience for me to obtain positivity in accomplishing all my tasks. (IDIP5)*

*"In this situation, no one could fully help you except yourself. With this, I need to help and train myself to become more independent." (IDIP10)*

*"As a student, I must find ways to comprehend the instructions from the modules and teachers in order to learn." (IDIP12)*

Regardless of the difficulties, the participants continued their studies. Even after these adversities, several lessons and adjustments were gained that were put to use in order to survive in this current situation. Students learn time management skills to help reduce work-related stress. Students are less stressed when they believe they have control over their time. Students can help manage their time by using planners, calendars, reminders, and to-do lists. Students should plan their weekly time commitments and prioritize what needs to be done. These techniques and skills can assist students in more effectively managing their time and having more control over their time. Students employ coping strategies such as looking for good space and time; borrowing learning resources; as part of embracing the new education system.

### **3.4 Quantitative Discussion of Results**

This section presented the results of the study, particularly on the respondents' socio-demographic profile, academic resiliency, academic performance on flexible learning, acceptability responses on the implementation of flexible learning amidst the COVID-19 pandemic, the significant relationship between acceptability responses on flexible learning and academic resilience of Senior High School Indigenous People (SHS-IP) students, and the relationship between acceptability responses on flexible learning and academic performance of Senior High School Indigenous People (SHS-IP) students.

#### **3.4.1 Socio-Demographic Profile of the Respondents**

The gender profile of the respondents showed that 47% were male, 40% were female, and 13% identified as LGBT. This indicates that the majority of the respondents in the selected secondary school in Don Marcelino District were men

compared to other genders. Additionally, based on tracking records of the participating schools, almost 62% of the Indigenous people learners enrolled were male.

The age profile of the respondents indicated that 73% of them were aged 16-18, 20% were aged 19-21, and 7% were aged 22 and above. This suggests that the majority of the respondents were under the age bracket of 16-18 years old, which is in line with the average age of senior high school learners enrolled per year according to the Philippine Statistics Authority.

The majority of the respondents were enrolled in grade 11, comprising 60% of the total population, while only 30% were enrolled in grade 12. This suggests that the Grade 11 students contributed a large number of respondents within the population.

The respondents' preferred senior high school track and strand were also determined. It was found that 47% were enrolled in the general academic strand, 20% in humanities and social sciences, 13% in information and communication technology, and 20% in home economics. This indicates that the highest number of the respondents were enrolled in the General Academic Strand and were still undecided on what course to take in college.

### 3.4.2 Senior High School Indigenous People (SHS-IP) Level of Academic Resiliency Amidst the COVID-19 Pandemic

**Table 2** Senior High School Indigenous People (SHS-IP) Level of Academic Resiliency Amidst the COVID-19 Pandemic

<b>Learning Engagement</b>	<b>Mean</b>	<b>Interpretation</b>
I am highly motivated to fulfill my learning tasks.	4.15	Agree
I accomplish all the activity on time.	3.52	Agree
I involve in both online and modular activities.	4.20	Agree
I actively participate in class during online discussion.	3.38	Agree
I seek help if I do not know.	4.22	Strongly Agree
Category Mean:	3.89	Agree
<b>LEARNING ENVIRONMENT</b>		
I can choose where to have my study.	4.23	Strongly Agree
I can work conveniently within my own space and time.	4.10	Agree
I can focus on my own work when I'm alone.	4.18	Agree
I feel convenient working at home.	4.09	Agree
I can easily adjust and adopt in a new learning environment.	3.50	Agree
Category Mean:	4.02	Agree
<b>LEARNING ATTITUDE/BEHAVIOR</b>		
Flexible learning helps me to learn dependently.	4.09	Agree
Flexible learning develops my study habit.	4.12	Agree
Flexible learning provides opportunity to operate technology.	4.07	Agree
Flexible learning creates positive discipline towards learning.	4.10	Agree
Flexible learning enhances creativity and critical thinking.	4.04	Agree
Category Mean:	4.08	Agree
Grand Mean:	4.00	Agree

Table 2 displays the Senior High School Indigenous People's (SHS-IP) level of academic resilience amidst the COVID-19 pandemic. Specifically, on learning engagement, item number 3 obtained the highest mean of 4.20 (agree), which states

that students attended online classes and worked out activities in the module, while item number 4 has the lowest mean of 3.38 (agree), which concludes that respondents shared ideas, views, and opinions during online discussion. In general, a category mean of 3.89 (agree) was generated, which implies that flexible learning gave the respondents a meaningful opportunity to learn and be engaged in a learning setup.

Flexible learning is defined by [1] as mixing face-to-face classroom time with online learning activities. Although it is unclear how much time is spent online in the mixed model, “the true test of blended learning is the successful integration of the two primary components (face-to-face and Internet technologies) so that we are not just adding on to the present dominating strategy or method. This increases the motivation and participation of the students within the modular and virtual learning environment. Different teaching methodologies and instructional technologies may be utilized in the flexible learning format to assist students with varying learning styles, requirements, interests, and increases learning engagement.

On the other hand, in the learning environment, item number 1, with a mean of 4.23 (strongly agree), got the highest responses. It stresses that respondents have the option of choosing where they want to do their online and modular study, which makes them feel convenient while learning. Item number 5 got the lowest responses, with a mean of 3.50 (agree), which expresses that respondents have the ability to adjust and adapt to a new learning setting. Overall, a category mean of 4.02 (agree) was consolidated, which implies that flexible learning gave the respondents a meaningful way to learn within a new learning environment.

In support, Flexible learning provides online learning opportunities to learners. Flexible learning is based on the recognition of differences among students, which are addressed by providing varying degrees of choice to learners regarding what, where, when, why, and how to learn [5]. Flexible learning supports personalized learning, wherein learners' needs, interests, backgrounds, and learning styles are central. It reflects a shift from teacher-centered pedagogies and practices towards more innovative, student-centered approaches [6].

Studies have indicated that flexibility is perceived as beneficial to online instruction, thus, it gives an opportunity for students to learn within their own space and time in a specific learning environment [7] and constitutes a key factor in students' enrollment in online courses [8].

Moreover, in the category of learning attitude or behavior, it was revealed that item number 2 with a mean of 4.12 (agree) proclaims that respondents engaged in flexible learning develop good study habits. On the contrary, item number 5 with a mean of 4.04 (agree) stresses that through flexible learning students enhanced their creativity and critical thinking. In totality, a category mean of 4.08 (agree) signifies that students develop a good attitude and behavior toward learning through flexible learning methods. In addition, a grand mean of 4.00 (agree) was obtained, which implies that indigenous people in senior high school possessed high academic resiliency amidst the COVID-19 pandemic while engaging in flexible learning. Student attitude and behavior toward flexible learning is a critical factor in the learning environment supported by online and modular learning tools. Student's attitudes relate to what they think and feel about, and how they behave toward an attitude object. Strong attitudes can guide behavior and positive attitudes towards learning can contribute to the effective employment of learning strategies.

#### 3.4.3 Senior High School Indigenous People (SHS-IP) Level of Academic Performance on Flexible Learning Amidst the COVID-19 Pandemic

**Table 3** Senior High School Indigenous People (SHS-IP) Level of Academic Performance on Flexible Learning Amidst the COVID-19 Pandemic

Indicators	Frequency	Percentage (%)
Outstanding	0	0.00
Very Satisfactory	36	60.00
Satisfactory	24	40.00
Fairly Satisfactory	0	0.00
Did Not Meet Expectations	0	0.00
Total	60	100

Table 3 presents the descriptive results of the academic performance of senior high school Indigenous people on flexible learning amidst the COVID-19 pandemic. Taken individually, 60% of the respondents had very satisfactory academic performance, while only 40% of the respondents had satisfactorily performed in their academics, utilizing flexible learning as a new learning approach. Thus, it implies that most of the respondents showed better performance in their academics through flexible learning modalities.

#### 3.4.4 Senior High School Indigenous People (SHS-IP) Level of Acceptability on the Implementation of Flexible Learning Amidst the COVID-19 Pandemic

**Table 4** Senior High School Indigenous People (SHS-IP) Students Level of Acceptability on the Implementation of Flexible Learning Amidst the COVID-19 Pandemic

<b>Learning Delivery</b>	<b>Mean</b>	<b>Interpretation</b>
I can understand the lesson and learning activities.	3.68	Agree
I can balance my school works effectively.	4.02	Agree
I can ask and clarify things within the lesson.	3.80	Agree
I can provide answers to the given learning activities.	4.00	Agree
I can create ideas out of the lessons discussed.	3.95	Agree
Category Mean:	3.89	Agree
<b>LEARNING INTERACTION</b>		
I can ask questions confidently.	4.02	Agree
I can share ideas with my classmates.	3.81	Agree
I can approach my teachers anytime through chat and text.	4.15	Agree
I can read the information in the module repeatedly.	4.10	Agree
I can respond to any concerns about the lesson.	3.87	Agree
Category Mean:	3.99	Agree
<b>LEARNING RESOURCES</b>		
I can use and manipulate technology for learning.	4.27	Strongly Agree
I can search for information from other sources.	4.18	Agree
I can ask for record lessons from my classmates and teachers.	4.12	Agree
I can scan and save notes from articles, journals, and research.	4.18	Agree
I can browse information through online access.	4.23	Agree
Category Mean:	4.20	Agree
Grand Mean:	4.02	Agree

Table 4 discloses the level of acceptability of flexible learning. Indicatively, item number 2 obtained the highest mean of 4.02 (agree), which states that respondents can handle varied activities both online and modularly despite the new learning situation. Meanwhile, the lowest mean of 3.68 (agree) in item number 1 indicates that respondents who engage in flexible learning can easily understand the lesson by engaging in both online and modular learning. A category mean of 3.89 (agree) implies that learning delivered through flexible learning helps the students cope and understand the lesson based on their convenience.

According to [4] “Flexible Learning is a set of educational philosophies and systems, concerned with providing learners with increased choice, convenience, and personalization to suit the learner. In particular, flexible learning provides learners with choices about where, when, and how learning occurs, this helps students work effectively and think critically that leads to creation of better ideas and learning responses.

Additionally, item number 3 in learning interaction got the highest mean of 4.15 (agree), which explains that the respondents had constant and open communication with their teachers by means of texting and chatting to clarify things about the lesson. Meanwhile, item number 2, with the lowest mean of 3.81 (agree), infers that respondents had the opportunity to share ideas with their classmates during virtual class discussions. Accordingly, an overall category mean of 3.97 was accumulated, which implies that respondents in flexible learning had greater interactions with their teachers and classmates by means of sharing ideas, asking questions, and making connections to strengthen teachers' and students' good relationships.

The students choose online courses to reduce scheduling issues. The majority of students, both face-to-face and online, had no technical concerns. Both groups felt that their communication with the teacher was satisfactory. Online students said that the instructor's reaction time to inquiries was quick. Online students, on the other hand, viewed peer communication to occur significantly less often. Course satisfaction was similar in both modes.

As to the learning resources, item number 1 with a mean of 4.27 (agree) obtained the highest responses, which signify that the respondent had an opportunity and privilege to use or manipulate technology while learning in a flexible learning modality, most specifically during an online class and the completion and submission of the different learning tasks. Conversely, item number 3 got the lowest mean of 4.12 (agree), which entails that respondents can ask for records of lessons from their classmates and teachers for them to review and have a better understanding of the lessons that were previously discussed. In totality, a category mean of 4.20 (agree) points out that respondents had more time to explore and utilize various technology in accomplishing their school-written and hands-on activities with ease.

The teaching and learning activities shifted to flexible learning during the pandemic. Although distance and online learning has been seen as part of the educational tool adapted to facilitate existing face-to-face learning, it has not been widely used as the sole channel to deliver the whole curriculum of the school year.

Consequently, education during the pandemic has given flexible learning an entirely new meaning. It is the only method that could ensure the sustainability of education while fighting the spread of the pandemic, which contrasts with being used as a supplementary approach or alternative resources [16]. When no other options are available, online and distance education, as the only employable method, becomes the most prominent pillar of support to the newly formed education curriculum amidst the chaos. Across the world, governmental support in the forms of educational technology (including online learning, radio, television, texting) to support access to remote learning during the Covid-19 pandemic was seen in many countries. The reactions, somehow, varied significantly depending on one's income level [38].

However, the pandemic has somehow demanded students and educators to follow the new norms, which is to accept the implementation of flexible learning. The students and teachers will meet virtually and students complete their tasks without attending a physical or face-to-face class. Having different standards of technological availability and connectivity in various areas in any given country, the experience of flexible learning for teachers and students will vary across the region. The perception of teachers and students in areas with lower levels of development may favor onsite classes instead of those from urbanized areas with better connectivity. The overnight shift from the conventional physical contact classes to flexible learning may be a less jarring experience for teachers who are familiar with the digital realm. Ending the present pandemic does not mean no more pandemics will happen again in the future [39]. Thus, it is better for the educators to be always prepared whatever the mode of teaching is available. The students' perceptions towards their learning journey will also differ based on their learning experience with their teachers.

On contrary, although the utilization of modules encourages independent study and engages students in learning concepts found in the module, developing a sense of responsibility in task accomplishment with little assistance from others, the learners progress on their own.

#### *3.4.5 Significant Relationship Between Acceptability of Flexible Learning and Academic Resilience of the Senior High School Indigenous People (SHS-IP)*

Table 5 presents the significant relationship between the acceptability responses of flexible learning and the academic resilience of the Senior High School Indigenous People (SHS-IP). The results revealed that acceptability responses to flexible learning have a significant relationship to the academic resilience of the Senior High School Indigenous Peoples' students, with a p-value of 0.00 for acceptability responses to flexible learning and a p-value of 0.00 for academic resilience, which is less than the 0.05 significant level. Thus, the results imply that the acceptability of flexible learning helps the respondents sustain their study amidst the new normal situation due to the presence of the COVID-19 pandemic.

**Table 5** Significant Relationship Between the Acceptability Responses on Flexible Learning and Academic Resilience of the Senior High School Indigenous People (SHS-IP)

Particulars	r- value	p-value	Interpretation
Acceptability Responses on Flexible Learning	0.483*	0.00	Significant
Academic Performance	0.510*	0.00	Significant
Overall	0.653*	0.00	Significant

\*Significant

#### 3.4.6 Significant Relationship Between Acceptability of Flexible Learning and Academic Performance of the Senior High School Indigenous People (SHS-IP)

**Table 6** Significant Relationship Between Acceptability Responses on Flexible Learning and Academic Performance of the Senior High School Indigenous People (SHS-IP)

ITEMS	r-value	p-value	INTERPRETATION
Acceptability of Flexible Learning	0.149*	0.004	Significant
Academic Performance	0.131*	0.012	Significant
Overall	0.157*	0.003	Significant

\*Significant

Table 6 shows the significant relationship between the Senior High School Indigenous People's acceptability responses to flexible learning and academic performance (SHS-IP). The findings revealed that acceptability responses to flexible learning have a significant relationship with the academic performance of senior high school Indigenous Peoples students, with a p-value of 0.04 for acceptability responses to flexible learning and 0.00 for academic performance, both of which are less than the 0.05 significant level. Thus, the findings imply that the acceptability of flexible learning aids respondents in maintaining their studies despite the presence of the COVID-19 pandemic.

## 4 Conclusion

The study drew several conclusions based on its qualitative and quantitative findings. In terms of qualitative results, the participants encountered various difficulties in accepting flexible learning due to an unstable internet connection and insufficient presentation of topics by teachers. To overcome these challenges, participants used coping mechanisms such as time management, seeking assistance from friends and family, and using the internet to gather information. Practicing time management helped participants adjust to their current situation and emphasize the importance of collaboration and personal discipline. Regarding quantitative findings, respondents were highly engaged in flexible learning, resulting in the accomplishment of learning tasks and increased learning involvement. They felt more at ease and convenient learning at home or in their preferred place. Flexible learning also developed respondents' dependency, study habits, and critical thinking skills, and provided an opportunity for them to use technology for effective learning. The study also found that respondents understood the lessons delivered by their teachers, which opened avenues for them to clarify things and create ideas out of the lesson discussed. Additionally, the implementation of flexible learning required learning resources, and the respondents used technology to search for information and record through online access, sustaining themselves in the new normal education scenario.

The study's findings have led to several recommendations for school administrators, policymakers, and educators. Firstly, for Indigenous students who experienced difficulty in adjusting to the new flexible learning modality, schools should offer psychological consultation and activities to help them cope with and adapt to the current educational environment. Secondly, policymakers and educators should consider the diverse backgrounds and geographic locations of students to provide inclusive education that accommodates different learning paces and styles, making flexible learning an ideal instructional modality during emergencies like the COVID-19 pandemic. Thirdly, schools should provide training programs to address the various challenges that learners face with homeschooling, including instructional, device, and technical problems. This would help increase students' motivation and resilience towards pursuing their studies. Lastly, policymakers should consider giving additional financial assistance to students, particularly those whose parents have lost their jobs due to the pandemic. Schools should provide ICT support to students who are not familiar with online platforms, and the timing of giving technical and financial assistance should

be considered, as earlier support benefits the students when most needed. Schools should also offer various learning modalities appropriate to the learners' needs and location.

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## Compliance with ethical standards

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The authors declare no conflict of interest.

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