Internet Connectivity and the Academic Performance of BS Crimininology Students from University of the Cordilleras

Heherson A. Balais
Criminology Department
Cavite State University, Bacoor City campus
Bacoor City, Philippines

Abstract:- This study dealt with the internet connection status among the criminology students of the University of the Cordilleras, and its relevance to their academic performance.

In this study a quantitative approach was utilized. 210 criminology students from the aforementioned university participated in the study. In particular, it wanted to find out whether or not the students had access to the internet; a. Where do students typically access the internet; b. What kind of internet connectivity they are using; c. How strong is their internet connection; d. Reasons why there is no internet connectivity at their home. Second will be the available devices they use in online learning. Last but not least, the effects of poor internet access on University of the Cordilleras students pursuing a Bachelor of Science in Criminology.

The study showed the status of internet connectivity among the criminology students of the University which are as follows; a) Majority have internet connection. b) Almost all of them utilized internet at home, c) Most of the students are utilizing Mobile data during online classes, d) the average of internet connection among the participant is moderate, e) Mobile phone topped as gadget they use during distance learning.

It also showed that that majority of the criminology students who were enrolled in the University of the Cordilleras Baguio City agreed that lack of internet connection can causes the following factors to their academic performance: a. They cannot perform well in class during discussions compared to those with internet access; b. they got low scores in their quizzes; c. they cannot watch video tutorials or pre-recorded discussions; d. they cannot pass their requirements on time; e. they got low performance in their recitation; f. it lessens their inquisitive thinking to learn something new; g. they got low performance scores during practical activities; h. they cannot do their assignment; i. they cannot search for relevant ideas when making activities; j. they do not have access in lessons sent through their learning management system and messenger; k. they cannot relate to the discussions; l. they are not updated with the topics in their online group.

I. INTRODUCTION

Nelson Mandela's famous quote, "Education is the most potent weapon you can employ to change the world," demonstrates the significance of education in improving our society. Despite of the uncertain situation we are facing; the importance of education remains to be consistent. The pandemic has brought a major shock to our educational system but the important thing is that we do not stop on delivering the education towards every student. Though our priority for now is the minimum health standards but for us educators we never say no to education because of this pandemic. On March 2020 "the Director General of WHO declared Covid-19 as a pandemic after assessment of the rapid spread and severity of the deadly virus across the globe with additional announcement of social distancing as a means of curbing the spread of the pandemic (WHO, 2020)."

"In response with the spread of COVID-19 poses a threat to humanity, as this pandemic has forced many global activities to close, including educational activities. To reduce the spread of the virus, education institutions have been forced to switch to e-learning using available educational platforms, despite the challenges facing this sudden transformation. In order to further explore the potentials challenges facing learning activities, the focus of this study is on e-learning from students' and instructor's perspectives on using and implementing e-learning systems in a public university during the COVID-19 pandemic (Maatuk, 2021)."

In connection with this, "social distancing is conscious increment in the physical gap between people in order to curb dissemination of disease (Red Cross, 2020). "

"Online learning is the use of internet and some other important technologies to develop materials for educational purposes, instructional delivery and management of program (Fry, 2001)."

"The 21st century has brought about a massive change in the world of education. Gone are those days when teaching was limited only within the confines of a classroom. The internet has brought about a paradigm shift in the fundamental way in

which learning is done. It has taken learning beyond the hallowed walls of the universities and into the palms of everyone (Sarkar, 2020)."

However, Tom (2017), stated that the concept of e-learning in not new for it can be trace back 170 years ago where instructor/ professor sent task and receive assignment through email. This was the humble beginning of the concept of online learning.

"Long before the internet was launched, distance courses were being offered to provide students with education on particular subjects or skills. In the 1840's Isaac Pitman taught his pupils shorthand via correspondence. This form of symbolic writing was designed to improve writing speed and was popular amongst secretaries, journalists, and other individuals who did a great deal of note taking or writing. Pitman, who was a qualified teacher, was sent completed assignments by his students via the mail system and he would then send them more work to be finished (Gogos, n.d.)."

"One of the first instances of online learning in the world can be traced back to 1960, at the University of Illinois, USA. Though the internet wasn't invented back then, students began learning from computer terminals that were interlinked to form a network (Sarkar, 2020)."

In addition, the Explore Talent LMS stated that, first online learning systems were really only set up to deliver information to students but as we entered the 70s online learning started to become more interactive.

"In Britain, the Open University was keen to take advantage of e-learning. Their system of education has always been primarily focused on learning at a distance. In the past, course materials were delivered by post and correspondence with tutors was via mail. With the internet, the Open University began to offer a wider range of interactive educational experiences as well as faster correspondence with students via email etc. (Explore Talent LMS, n.d.)."

In support, according to Sarkar on 2020, "the Open University in Britain was one of the first universities in the world to begin online distance learning, in the early 1990s. Currently, the Indira Gandhi National Open University in India is the largest university in the world with around 4 million students enrolled, most of whom currently receive education via online methods."

"Online learning is the newest and most popular form of distance education today. Within the past decade it has had a major impact on post-secondary education and the trend is only increasing (Stern, n.d.)."

"In transition, the term "e-learning" has only been in existence since 1999, when the word was first utilized at a CBT systems seminar. Other words also began to spring up in search of an accurate description such as "online learning" and "virtual learning" (Gogos, n.d.)."

Online learning is education that takes place over the internet. It is often referred to as "e-learning" among other terms. However, online learning is just one type of "distance learning" the umbrella term for any learning that takes place not in a traditional classroom (Stern, n.d.).

According one research that is conducted by Merlot Journal in 2015 shows that "there is strong evidence to suggest that online learning is at least as effective as the traditional format. Online learning is a story that is still being written, and how it progresses will likely depend on those present (Nguyen, 2015)."

In addition, "there are some advantages and disadvantages of online learning; the accessibility of online education globally, saving time, money, and efforts are advantages of online learning. In teaching, the lecture's recording is one advantage of online learning when students ask teachers to record the classes. The teachers are reviewing and preparing well for recording, which certainly improves teaching strategies and methods. Students can access the lectures anytime and can understand better. Not all learners have good internet connectivity. Some learners suffered from network problems, lacking high-quality learning devices (Mahyoob, 2020). "

"One of the challenges of this e-learning concept is the poor slow internet connection. According to one study, slow Internet connections or limited access from homes in rural areas can contribute to students falling behind. The educational setbacks can have significant impacts on academic success, college admissions and career opportunities (MSU, 2020)."

"The use of the Internet for learning is seen as a means to improve accessibility, efficiency and quality of learning by facilitating access to resources and service as well as remote exchanges and collaboration (Kamba 2009)."

"Students with no high-speed Internet access at home are also less likely to plan to attend a college or university. On the other hand, students with Internet access have substantially higher digital skills, which are a strong predictor of performance on standardized tests (MSU,2020)."

According to Ivwighreghweta (2014), "internet has opened the door to a new way of learning. However, there is a challenge brought by internet connectivity. Internet access it will become possible for users to browse within the environments and thus enhance access to information needed specially to enhance academic performance."

Hiltz and Turoff (2005) argued that "the contemporary transformation will be seen as revolutionary modifications in the specifications of higher education as a process and as an institution in the next 50 years because the transformation has moved face-to-face instructional programs using objectivist, for thousands of home-grown, provincial and domestic universities to online and hybrid programs applying digital technologies in enhancing constructivist, learner-centered, cooperative pedagogy for some hundred "mega-universities" that function worldwide."

"In the Philippines, the term 'e-learning' is used synonymously with online learning and concerns the online delivery of instructional content as well as associated support services to students. This was used even before this pandemic, adopted on the concept of Open University (Dela Pena, 2009). "

In order to facilitate academic debates, learning evaluations, the exchange of learning materials and content, and student submission of course requirements, university learning centers are making greater use of learning management systems (LMS).

However, in 2020, "in the Philippines, this translates into almost 325,000 infected and 6,000 deaths (Worldometer, 2020). To curb the spread of COVID-19, most governments have opted to employ quarantine protocols and temporarily shut down their educational institutions. Among this number are over 28 million Filipino learners across academic levels who have to stay at home and comply with the Philippine government's quarantine measures (UNESCO, 2020)."

"To respond to the needs of learners, especially of the 3.5 million tertiary-level students enrolled in approximately 2,400 HEIs, certain HEIs in the country have implemented proactive policies for the continuance of education despite the closure. These policies include modified forms of online learning that aim to facilitate student learning activities (Joaquin, 2020)."

"The Philippine education system is struggling to adapt to the sudden and major shift to distance learning during the Covid-19 pandemic. Over the years, the overall internet connection speed in the Philippines remains among the slowest in the Asia Pacific region. That is despite having the highest average daily time spent using the internet in the region (Statistica, 2021). "

"In January 2021, the Philippines moved up to the 86th spot in the global mobile internet speed rankings, according to data from an Ookla report. This is a marked improvement from its 111th rank in the same period last 2020 (DICT, 2021)."

"Slow internet connectivity hampers Filipinos in their work, streaming, and downloading of videos, which include the online educational performance of the students (Statistica, 2021)."

"In support with the statement above a mother claimed that the only wrinkle to online learning is the intermittent internet connectivity in the country. When there is an internet outage, children's classes are canceled too (Dollanganger, 2021)."

"The numbers don't lie. A poor showing in the study reflects the sorry state of connectivity in the Philippines, and this is negatively affecting the lives of Filipino student's (Esquire Philippines, 2020)."

"According to a news article it states that truth be told, our country is an internet-challenged country. A problem that had caused delays implementing remote learning in general.

Although internet plans exist; they are not, however, created equal. Hence, in online classes, there was never a day when a student hasn't voiced out complaints such as 'Can someone tell the professor I/he/she got disconnected?' 'Oops! Where did he go? (referring to the professor who doesn't realize he got cut off), 'I have unstable Wifi', 'Do you guys see/hear me?'. We are in the city and yet we experience such mishaps. What more are those students who are stuck in remote places where signal isn't as strong as what we city dwellers have? They are forced to 'move mountains' just to get a bar or two' (Amadora, 2020)."

"Other factor to considered is the family situation, families who have more disposable income find themselves in a more fortunate situation (Dollanganger, 2021).'

Some of the BS Criminology students from the University of the Cordilleras in Baguio City have difficulties meeting their academic requirements in their respective subjects due to the use of an online learning platform, power outages, and poor internet connectivity. Furthermore, with the implemented online learning system not all students have technological knowledge and significantly the resources. Some only rely on data connection and others only use smartphones in attending their classes and in doing and submitting their academic requirements.

After considering all of these factors, the researcher is of the opinion that the conduct of this study is, in fact, timely and pertinent to the Criminology students at from University of Cordilleras. The primary objective of this study is to determine how internet connectivity affects the academic performance of BS criminology students at that institution. It will be anchored by first determining the students' internet access and connectivity, and then investigating the connection between students' academic performance and online learning. Appropriate measures will be proposed as a result of this investigation that may potentially and positively impact the learning experience of the BS Criminology students, instructors, and management of the University of the Cordilleras.

II. THEORETICAL/CONCEPTUAL FRAMEWORK

A. Theoretical Framework

The academic setting was temporarily crippled worldwide due to the effect of pandemic; however, it does not hinder the persistence of all learners and educators, thanks to the development of technology because we have the internet platform to serve as a classroom for the students and educators.

This adaptation of the internet platform as an alternative for face-to-face class has been explained by the Uses and Gratification Theory, wherein as a result of the pandemic the students and educators are in need of possible way to continue their education, hence, they have utilized the internet platform to gratify their needs.

The result of this study will confirm if the internet platform can really gratify the standard of education especially to a criminology student who were required to conduct

practical exercises to gain the required knowledge in most of their courses.

The Observational learning theory can explain the positive effect of internet platforms towards the students because educators are using online meeting which can be recorded and can be reproduced for the students to have further reference, another is that educators can utilize the YouTube as their visual aid, hence students can download and review such recorded discussions or video/s.

The advantage of such approach is that the students can repeatedly view it until such time that it contents will retain to the student's mind and they can apply what they have observed.

Another is that the internet platform maintains a connectivity between the students and teachers, in relation, the Connectivism theory explains that people will learn and grow when they have connection with each other.

As a result, the internet connection as one of the latest modes of communication helps every student in maintaining connection with their teachers and vice versa. Hence, the study will further explain this connection between students and their teachers as well as to discuss its effects and impact to their academic performance specifically the criminology students of University of the Cordilleras in Baguio City Philippines.

In addition, Salac and Kim (2016) claims that "compared to other neighboring Asian countries, the Philippines has an average internet speed of 2.8 Mbps whereas, Thailand had an average internet speed of 7.4 Mbps, Sri Lanka 7.4, and Malaysia 4.3, placing the country at 104 among 160 countries, with developed countries in Asia such as South Korea (23.6 Mbps) and Singapore (12.9 Mbps) ranking 1 and 12, respectively. The poor quality of internet connection may cause delay or absences during classes which will have a direct impact to the academic performance of every student."

In support, Jurado, et.al.,(2010) claims that "limited internet access is a major concern in implementing blended learning, whereas, Rotas and Chapay (2020) revealed in their study that there are twelve themes that causes difficulties as experienced by the university student in the Philippines regarding the online learning system, and these are: unstable internet connectivity; inadequate learning resources; electric power interruptions; vague learning contents; overloaded lesson activities; limited teacher scaffolds; poor peer communication; conflict with home responsibilities; poor learning environment; financial related problems; physical health compromises; and mental health struggles. One of these factors revealed in the study is the poor internet connectivity, this only shows that from 2016 to 2020 the Philippine average speed of internet connectivity does not improve."

Furthermore, Bautista, J.(2021,Sept.20) Reported that "with the current setup of blended learning due to the pandemic, students have resorted to online cheating via a Facebook group where they share notes and test answers. The "Online Kopyahan" community group has been created, and had at one point more than 600,000 members, but after a local

television report aired, the now-archived Facebook group was left with 571,900 members." Based on this data, students' academic performance will be affected by online cheating in addition to internet connectivity.

In addition, Singh (2014) concludes that "most of the undergraduate students' use the internet for entertainment, social and education objectives. They use it minimum for their academics and knowledge."

Lastly, the aforementioned theories and concepts will be confirmed by the result of this study.
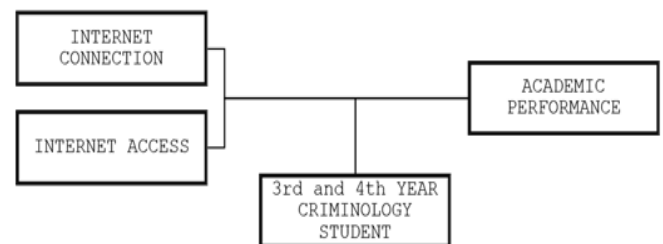
B. Paradigm of the Study

Fig 1: Paradigm of the Study

The purpose of this study is to determine the status of internet connection among the 3rd and 4th year criminology students from University of Cordilleras the City of Baguio during their online classes as well as its effects or impacts to their academic performance during such classes.

C. Statement of the Problem
The purpose of this study is to ascertain how internet connectivity affects students' who are pursuing a BS criminology from University of Cordilleras, in the City of Baguio. In particular, it will respond to the following inquiries:
- What is the nature of accessing the internet by the respondents?
- What is the level of agreeableness on the negative effect of no or lack of internet connection on the academic performance of the respondents?

D. Definition of Terms

➢ *Academic performance*
"Academic performance is the outcome of education—the extent to which a student, teacher or institution has achieved their educational goals (Annie, Howard & Mildred, 1996 as cited by Arshad et al. 2015)."

➢ *Availability of Internet Connection*
Availability of Internet Connection refers to the availability of internet services such as loading station, network provider and etc.

➢ *Distance Learning*
"A method of study where teachers and students do not meet in a classroom but use the Internet, e-mail, mail, modules, etc., to have classes (Merriam Webster, Dictionary)."

➢ *Internet*

"Abubakar D. and Diyoshak, R. (2015) defined internet as a collection of computers and computer Networks located all over the world, all of which share information established upon Internet protocols."

➢ *Internet Connectivity*

'The term Internet connectivity refers to the way people are hooked up to the Internet, and may include dial-up telephone lines, always-on broadband connections, and wireless devices (encyclopedia.com) "

➢ *Internet access*

"Internet access is the process of connecting to the internet using personal computers, laptops or mobile devices by users or enterprises. Internet access enables individuals or organizations to avail internet services/web-based services (Technopedia, 2016)."

➢ *Lack of Internet Connection*

"Lack of internet Connection is the absence of internet signal (Operational Definition)."

➢ *Moderate Internet Connection*

Experiencing moderate speed of internet connection. Characterized by more than 1 Mbps on downloading and uploading speed.

➢ *"Poor Internet Connection*

Download and upload speed is less than 1 Mbps are too slow. Users may experience buffering when streaming video, difficulty connecting multiple devices and other internet connectivity issues (Anders, 2021).'

➢ *Strong Internet Connection*

"Internet download speeds of 20 Mbps or higher are often considered fast internet because they can handle multiple online activities for multiple users at once without major interruptions in service issues (Anders, 2021)."

III. DESIGN AND METHODOLOGY

The research method that will be use by the researchers is descriptive. "According to Aggarwal (2008) as cited in Salaria (2012) descriptive research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation." In order to ascertain the impact of poor internet access on the academic performance of the University of the Cordilleras' BS Criminology program, the descriptive approach was used in this study. The researchers decided to utilize this approach for it is the goal of the study to obtain a reliable and first-hand data in the establishment of a credible conclusion and recommendations.

A. Population and Locale of the study

The third fourth-year B.S. Criminology students of the University of the Cordilleras in Baguio City who are enrolled in the current academic year 2021-2022 are the respondents of the study.

The sampling method that will be use in the study is total enumeration sampling. According to Kanpur (n.d) total enumeration sampling is the collection of information on the whole population.

B. Data Gathering Tools

"The main instrument to be used in the study is a survey questionnaire. Surveys and questionnaires are designed to collect and record information from multiple people, groups or organizations in a consistent way (Intrac, 2017). "

Two sections make up the survey questionnaire. The students' fundamental demographic profiles are included in the first section. The pupils' internet access and connectivity were evaluated in the second section.

The final section examined how respondents' academic performance was affected by having no internet access or poor internet connectivity. Survey questionnaire will be in the form of Google Forms and will be sent to the respondents via messenger or electronic mail.

C. Data Gathering Procedure

Before beginning data collection, the researchers will first ask the research adviser for approval. After the approval, the researcher will prepare and send a letter to the Dean of Criminology Department in the University of the Cordilleras to commence the study and for the floating of questionnaires to the determined respondents. If approved, the researchers will now proceed in sending the web-based questionnaires to the respondents via messenger or electronic mail.

Instruction will also be provided to the respondents before answering the questionnaire. The respondents are given three days to accomplish the said questionnaire. After which, the collection of data will be stopped or closed. Since total enumeration is used as the sampling method all the respondents are expected to answer.

However, if there are respondents who are not determined to answer due to some reasons, the researchers will not force them to answer and only those collected responses will be considered for interpretation and analysis of data. Virtual interview will also be done to validate the information stated in the survey questionnaire. The virtual interview will be done via zoom or google meet.

The raw data gathered will be treated and analyze for interpretation, conclusion, and recommendation. The researchers also treat all the personal information of the respondents/participants as confidential, hence, their names are hidden.

D. Treatment of Data

The researchers will use weighted mean to interpret the data collected. According to Clark-Carter (2010), "the weighted mean involves multiplying each data point in a set by a value which is determined by some characteristic of whatever contributed to the data point.The data is calculated by adding up all the responses and dividing the sum total by

the total number of respondents to get the mean. In getting the weighted mean, the following formula will be used:

$$\bar{X} = \frac{\Sigma X}{N}$$

Where,
$\bar{X}$ = population mean
ΣX = sum of each value in the population
N = number of values in the population"

Triangulation method will also be used in the study. "Triangulation is a technique to analyze results of the same study using different methods of data collection. It is used for three main purposes: to enhance validity, to create a more in-depth picture of a research problem, and to interrogate different ways of understanding a research problem. (Nightingale, 2009)."

The study will benefit from triangulation method to better understand the impact of an internet connection outage on the performance of criminology students.

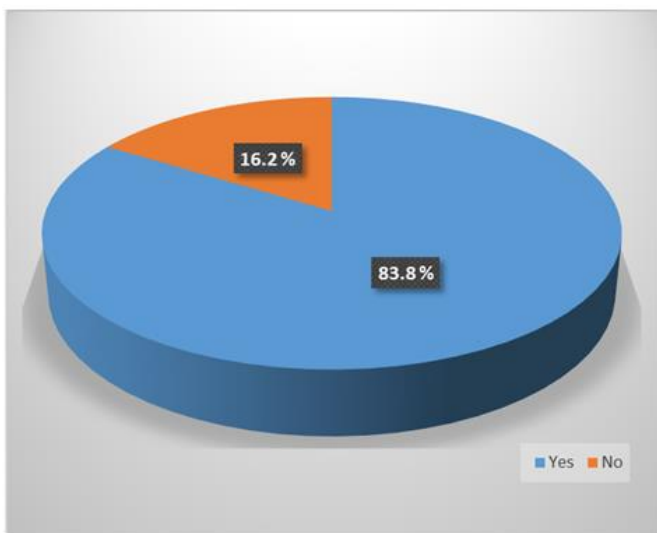## IV. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Fig. 2, Internet Connectivity of the criminology students of University of Cordilleras.

The findings showed that of the 210 participants in the survey, 88.8% have access to the internet, while 16.2% do not. This suggests that while the majority of criminology students at the University of the Cordilleras have access to the internet for their online classes, a small number of them do not.

In consonance, Carag, F. et. al. concludes in their study "that students are having problems obtaining an internet connection due to the high cost."
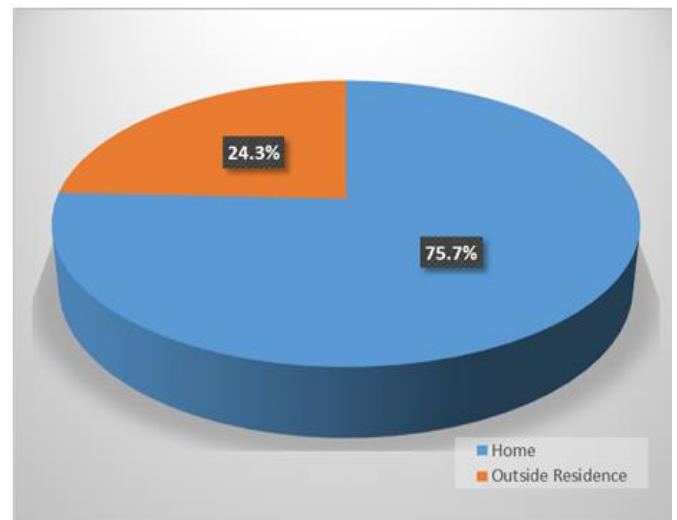
Fig. 3 Frequent Place of Internet Connection Usage.

Data shows that 75.7% of the 210 participants uses their internet connection at their houses. The result disclosed that, although majority of criminology students have an internet connectivity within their houses, still there are some who do not have an access, especially those students who are located in remote provinces in which signals and internet connections are difficult to access. In support, the Philippine News Agency disclosed that cable lines for internet connection will reach some remote municipalities in the region of Cordillera in the year 2022 to 2023.
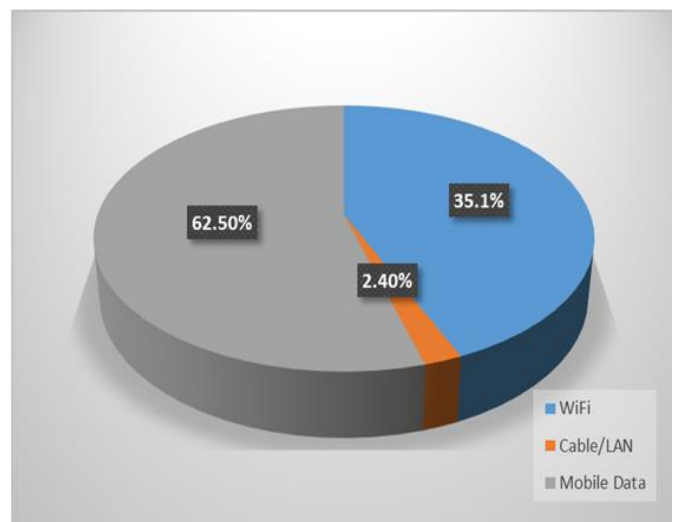
Fig.4, Kind of Internet Connection

The data shows that 62.50 % of the participants are using mobile data, while 35.1 % are utilizing WiFi and only 2.40% of the participants are using Cable/LAN as their internet provider.
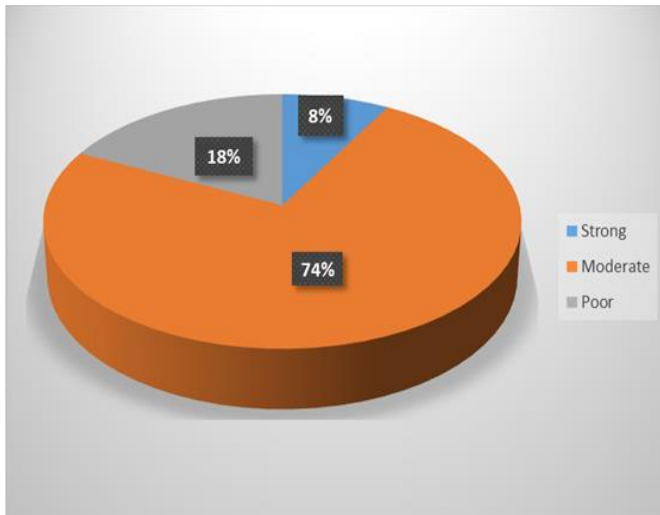
Fig. 5, Stability of Internet Connection

The study reveals that the internet connection stability of the criminology students from the university of the cordilleras is in moderate level, hence, the student will still able to attend their online classes but there are still the chances of interruption of internet connection while on class. This was based on the study's findings, which showed that 74% of the criminology students from the aforementioned university had a moderate degree of internet stability, compared to only 8% who said their connection was strong and 18% who had a poor connection.

In relation, Salac and Kim (2016) claims that "compared to other neighboring Asian countries, the Philippines has an average internet speed of 2.8 Mbps whereas, Thailand had an average internet speed of 7.4 Mbps, Sri Lanka 7.4, and Malaysia 4.3, placing the country at 104 among 160 countries, with developed countries in Asia such as South Korea (23.6 Mbps) and Singapore (12.9 Mbps) ranking 1 and 12, respectively. The poor quality of internet connection may cause delay or absences during classes which will have a direct impact to the academic performance of every student."
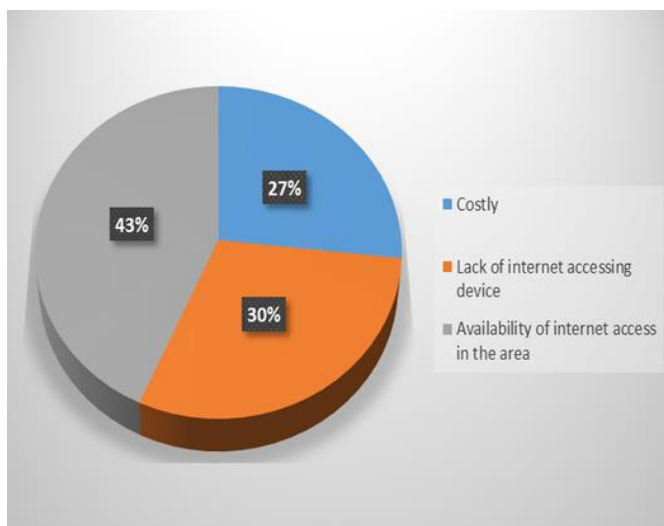

Fig.6, Reason of no Internet Connectivity

It was disclosed from the data that 43% of the participants points out the availability of internet access in their area as the reason for their lack of internet connectivity. The other 30% claims that their lack of internet accessing device is the reason, while the remaining 27% answered that they cannot afford the cost of internet connectivity. One contributory factor is the mountainous terrain of the region. The terrain of the region hinders the internet providers companies to reach most of the remote areas in the region.
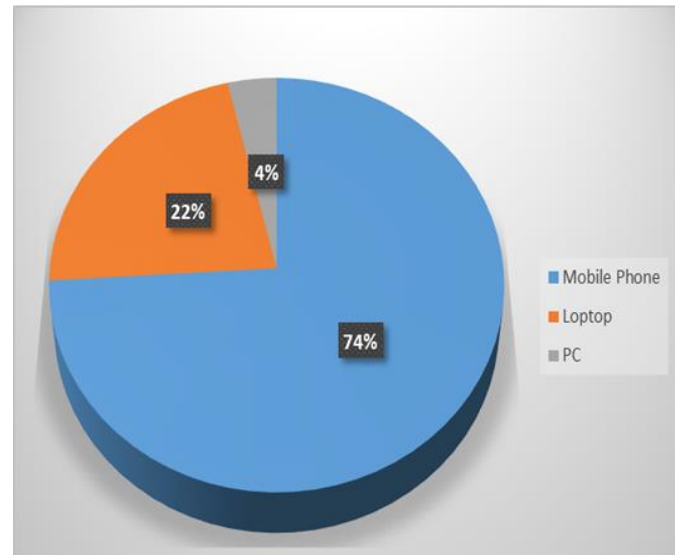

Fig. 7, Devices used by the Criminology students of the University of the Cordilleras.

Data reveals that,74% of the criminology students from the University of the Cordilleras are using their mobile phone to participate during their online classes. Some were using their laptop as it was shown that only 22% percent of the participants identifies laptop as their device used during online class, while very few of them have their own personal computer at home wherein only 4% of the participants claims to have their own personal computers.

In relation, it was found out in the study of Asio,J. et. al (2021) that a majority of students in central Luzon, Philippines has smartphones.

TABLE 1. EFFECTS WHEN THE STUDENTS HAVE NO INTERNET ACCESS AT HOME.

STATEMENTS	MEAN	VERBAL INTERPRETATION
I CANNOT DO MY ASSIGNMENT.	2.77	AGREE
I DO NOT HAVE ACCESS IN LESSONS SENT THROUGH OUR LEARNING MANAGEMENT SYSTEM AND MESSENGER.	2.69	AGREE
I CANNOT SEARCH FOR RELEVANT IDEAS WHEN MAKING ACTIVITIES.	2.75	AGREE
I CANNOT WATCH VIDEO TUTORIALS OR PRE-RECORDED DISCUSSIONS.	2.84	AGREE
I CANNOT PERFORM WELL IN CLASS DURING DISCUSSIONS COMPARED TO THOSE WITH INTERNET ACCESS	2.94	AGREE
I AM NOT UPDATED WITH THE TOPICS IN OUR ONLINE GROUP.	2.68	AGREE
IT LESSENS MY INQUISITIVE THINKING TO LEARN SOMETHING NEW.	2.78	AGREE
I CANNOT RELATE TO THE DISCUSSIONS.	2.68	AGREE
I GOT LOW PERFORMANCE IN OUR RECITATION.	2.81	AGREE
I GOT LOW SCORES IN OUR QUIZZES.	2.86	AGREE
I PASSED MY REQUIREMENTS BEYOND THE GIVEN DEADLINE.	2.82	AGREE
I GOT LOW PERFORMANCE SCORES DURING PRACTICAL ACTIVITIES.	2.77	AGREE
GENERAL ASSESSMENT	**2.78**	**AGREE**

LEGEND:

1-1.75 STRONGLY DIS AGREE   2.6-3.25 AGREE

1.76-2.5 DISAGREE   3.26 - 4 STRONGLY AGREE

The impacts of a lack of internet access on criminology students at the University of the Cordilleras in Baguio City are shown in Table 1. The table manifested that majority of the criminology students who were enrolled at University of Cordilleras, agreed that lack of internet connection can causes the following factors to their academic performance:

a. They cannot perform well in class during discussions compared to those with internet access;

b. they got low scores in their quizzes;

c. they cannot watch video tutorials or pre-recorded discussions;

d. they cannot pass their requirements on time;

e. they got low performance in their recitation;

f. it lessens their inquisitive thinking to learn something new;

g. they got low performance scores during practical activities;

h. they cannot do their assignment;

i. they cannot search for relevant ideas when making activities;

j. they do not have access in lessons sent through their learning management system and messenger;

k. they cannot relate to the discussions;

l. they are not updated with the topics in their online group.

Furthermore, it was disclosed from the data gathered that the most dominant factor agreed upon by the respondents were their inability to perform well in class during discussions compared to those with internet access due to lack of internet connection, this was attested by its mean of 2.94 as the highest mean in the data, whereas the least factor agreed upon by the respondents is they not updated with the topics in their online group due to lack of internet connection, this was corroborated by its mean of 2.68 as the lowest mean among other factors.

In support, a study initiated in Michigan State University by Hampton, et. Al.(2020) found out "that students who do not have access to the Internet from home or are dependent on a cell phone alone for access perform lower on a range of metrics, including digital skills, homework completion, and grade point average. They are also less likely to intend on completing a college or university degree. A deficit in digital skills compounds many of the inequalities in access and contributes to students performing lower on standardized test scores, such as the SAT, and being less interested in careers related to science, technology, engineering, and math."

V. CONCLUSION

The researchers came at the following conclusions based on the study's findings:

- Majority of the criminology students are not fortunate to obtain personal computers or laptop at home, hence, their primary resources during their online classes are their mobile phones while their primary source of internet connection are b their mobile data.

- The students generally agreed that lack of internet connection at home may have a negative effect on their academic performance.

- The speed of the internet connection is just moderate, hence further improvement to internet connections in the region is necessary.

- This study is limited only to the criminology students who are enrolled in the University of the Cordilleras and it does not define the entire effect of internet connectivity to other regions of the Philippines.

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