

Internet Connectivity and Learning Interest Among Bachelor of Science in Disaster Resiliency Management Students in Davao Del Norte State College

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Abstract:

Internet Connectivity can improve the quality of education in many ways. It opens doorways to a wealth of information, knowledge, and educational resources, increasing opportunities for learning. Teachers used online materials to prepare lessons, and students to extend their range of learning. The purpose of this study is to determine the importance and effects of internet connectivity to the learning interest of the students and help to increase the dissemination of information to the public and find out if there will be a significant relationship between the two variables among Bachelor of Science in Disaster Resiliency Management students in Davao Del Norte State College. Data gathering was done through the use of online survey questionnaires and 106 respondents participated in the study.

In the result, the mean of the level of assessment of students on the importance of internet connectivity is 2.5871 with a standard deviation of .13854. This shows that the level of importance in internet connectivity is high while the mean level of learning interest is 3.9891 with a standard deviation of .22681. This shows that the level of learning interest is very high. Findings indicated that a Strong connection is important to the students' learning interest and to complete all academic activities, assignments, and exams. Professors should also understand the status of the students. They should provide learning tools that everyone can easily access or better ways for them to work on their tasks. They can embrace the paperless and teach students through the means of learning management websites.

Keywords —internet connectivity, learning interest, academic activities, Davao del Norte State College

I. INTRODUCTION

Internet is widely readily and accessible to billions of people in many parts of the world. It is a form of unlimited wealth of information resources. In addition, some educator believed that the internet connection has increasingly become an invariable asset in education in terms of learning, teaching and research. According to [8], there were 72 percent of

the 1,416 surveyed students had been affected by a lack of access to a quiet space to study, with 24 percent were moderately impacted and 22 percent were severely impacted. A lack of reliable, high-speed internet will only make the so called achievement gap wider. There are roughly 5 million households with school-age children who do not have internet access at home and affect to the

students' learning interest [6]. It means there are millions of students are being left behind because of slow internet connections or limited access from homes in rural areas.

Due to the suspension of classroom teaching in many colleges and universities, a switch to the online teaching to provide an alternative way to minimize either the contact between each other because of the pandemic disease [7]. The problem faced by students without or slow internet access at home is the students' inability to complete the homeworks [13]. After the Philippine Long Distance Telephone Company (PLDT) reportedly suffered cuts in its fiber transmission, Davao City continues to experience intermittent internet connection or slow connectivity [9]. "According to an OoklaSpeedtest, rank of the Philippines is at the lower part of the global index in terms of average broadband and mobile speeds" [10].

This research uses the BS in Disaster Resiliency Management students' perception of Davao Del Norte State College that will be able to determine the importance of internet connectivity to the learning interest of the students and help to increase the dissemination of information to the public. Also, find the effects of internet connectivity on the students. The researchers of the study make a questionnaire to determine the students' feedback about the internet connectivity to learning interest. The Internet represents the greatest collection of human knowledge ever assembled and has been widely used by students and their teachers for teaching and learning [14]. This research was also determining the relationship of internet connectivity and students' learning interest of Bachelor of Science in Disaster Resiliency Management at Davao del Norte State College. Through this, maybe some teachers or professionals will understand that high-quality connection surely gives great impact to the students and ability to accomplish the teachers' given activities.

Theoretical Framework

This study anchored to the E-learning theory and practice put forth by Haythornthwaite and

Andrews on 2011. This theory asserts the different perspective on e-learning. The book deals with the social implication of e-learning, the effects, and technical interplay and social that supports e-learning. E-learning theory and practice emphasizing the impact of everyday electronic practices on learning, literacy and the classroom locally and globally. Exploring the way teaching and learning are changing with presence of the internet and participatory media. And, allows to address e-learning in terms of emerging online learning theories, new literacies, social networks, community and virtual communities, and online resources [16].

Some students faced specific problems like connectivity and video issues due to the remoteness of their location and could not compromise the quantum of time required for machine learning. Several available online teaching-learning tools like Zoom, Google Meet, Facebook and YouTube videos available for both teachers and students were put to need-based use. The same readiness was shown by the Chinese government under the policy of "Suspending Classes without Stopping Learning" to continue standard online teaching-learning activities during the period of COVID-19 situation of uncertainty [6].

Teachers used online materials to prepare lessons, and students to extend their range of learning. Interactive teaching methods, supported by the Internet, enable teachers to give more attention to individual students' needs and support shared learning. Access to the Internet helps educational administrators to reduce the costs and improve the quality of schools and colleges [5]. Students must have the proper support in order to achieve "what is beyond their ability to accomplish independently" and also the learner must engage with their learning (i.e., environment) not only in a manner that connects to their prior knowledge but also utilizes technological resources in an applicable and constructivist approach. This model encourages environments which promote sampling, discovering, manipulating, and investigating [15].

Some students without reliable internet access and/or technology struggle to participate in digital learning. For those who do have access to the right

technology, there is evidence that learning online can be more effective in a number of ways. It is clear that this pandemic has utterly disrupted an education system that many assert was already losing its relevance. According to [17], the growth of the Internet in the world provides many opportunities to many people in many different ways. When students are considered, the use of the Internet is mainly for social and entertainment purposes. However, it is very obvious that the Internet provides not only social connection and entertainment, but also academic and scientific information as well.

Conceptual Framework

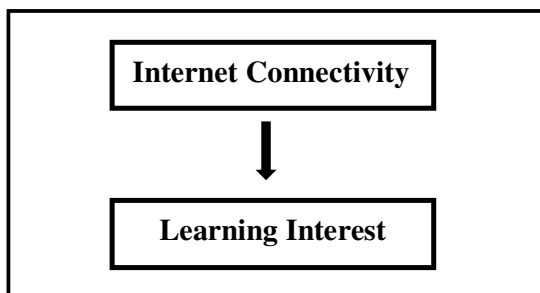


Figure 1. Conceptual Framework of the study

Figure 1 shows what effects does Internet connectivity to the learning interest of the students. Internet connectivity is the independent variable, and the learning interest of the students is a dependent variable.

Research Questions

The study intends to find out the effects and importance of internet connectivity to the Bachelor of Science in Disaster Resiliency Management Students of Davao del Norte State College. Specifically, this study seeks to answer the following question:

R1. What is the status and description of students on their: Internet Access Methods in Completing Academic, Activities Devices Available [11], Positive Effects of Internet Connection to Learning?

R2: How do students differ in their speed of Internet connection and what are the effects of these on their learning interest?

R3: How important is Internet connectivity in students' Learning Interest?

R4: How interested are the students of Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College in learning, doing the activities and exams?

R5: What Bachelor of Science students in Disaster Resiliency Management often do to improve their studies at Davao del Norte State College?

R6: Is there a significant relationship between internet connectivity and the learning interest among Bachelor of Science in Disaster Resiliency Management Students of Davao del Norte State College?

Null Hypothesis

Ho1: There is a significant relationship between internet connectivity and the learning interest among BS in Disaster Resiliency Management Students of Davao del Norte State College.

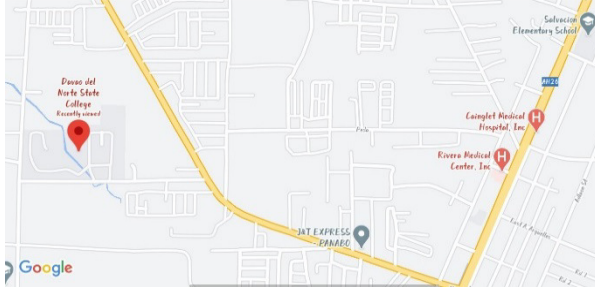
II. METHODOLOGY

Research Design

The researchers of the study used a descriptive survey research design regarding Internet Connectivity and Learning Interest Among Bachelor of Science in Disaster Resiliency Management Students at Davao Del Norte State College. Answering the research question hypothesis is the central purpose of all research. Descriptive survey research is defined as a research method used to describe what is necessary for a researcher to do in collecting the available data through the use of research instruments such as tests, questionnaires, or even observation. The main goal of descriptive research is to describe systematically the existing phenomena under the

study. This method is appropriate in this study to identify the internet connectivity and learning interest of the students.

Research Locale



The study was conducted at Davao Del Norte State College in New Visayas, Panabo City, Davao del Norte. The study was conducted within Bachelor of Science in Disaster Resiliency Management at Davao del Norte State College. These respondents were selected to gather data that will answer the research question of the study.

Participants of the Study

The respondents of the study are students that came from Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College at New Visayas, Panabo City, Davao del Norte.

Sampling Techniques

The respondents were selected by using convenience sampling. The questionnaire was distributed to the students from the Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College

Convenience sampling belongs to the non-probability sampling. It is used in selecting the participants who are willing to participate in the study. The only criteria of this sampling are whether the participants will agree to participate. Convenience sampling also was appropriate since some students did not have access to the internet

since there is a crisis of COVID-19 pandemic disease occurs during the conduct of the study. Thus, the researchers have chosen respondents who are willing to be part of the study and can access the internet and as long as the student is from The Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College.

Statistical Treatments

All the responses gathered from the survey questionnaire of the respondents were tallied and tabulated using IBM SPSS Statistics. The researchers asked assistance from the statistician to analyze and interpret the results utilizing the appropriate statistical tool.

Data Collection Procedures

Researchers asked permission from the Institute Dean and Program Chair of the students. Data gathering was done through an online survey questionnaire. Due to the COVID-19 pandemic disease, the researcher used the internet to give the survey questionnaire to the respondents which are students from Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College. The respondents should log in first to their Gmail account to answer the questions on google form and submit.

Research Instrument

The researchers used Online Survey Questionnaire to gather information from Bachelor of Science in Disaster Resiliency Management Students in Davao del Norte State College as the research participants.

Ethical Considerations

The core concerns of this study are college students who had lack internet connectivity that can affect their learning interest in education. In surveying, the researchers did not force anyone to answer or assess the questionnaire.

To distribute the questionnaire, we do an online survey because we want them to be safe, healthy, and away from crowded places. All the responses stayed confidential, and all the statements cited were coded to guarantee the protection of the participant's profile.

III. RESULTS AND DISCUSSION

All participants of the survey are all students from Bachelor of Science in Disaster Resiliency Management at Davao del Norte State College, Panabo City. The presentation of data in this research study are arranged in the following sequence: The students' internet access at home, the method used to complete the academic activities for the students no connection at home, the strength of the internet connection and its effect to the students, the importance of internet connection to the students, And the students' leaning interest.

RQ1 What is the status and description of students on their: Internet Access Methods in Completing Academic, Activities Devices Available, Positive Effects of Internet Connection to Learning?

There are a total of 106 participants in the study. Table I shows that 65.1% of the students of Bachelor of Science in Disaster Resiliency Management have an internet connection at home and 34.9% are nothing and most of these 34.9% students were used Peso Net as the students' method to complete academics' activities. The students mostly used Mobile broadband as the source of internet connection.

TABLE I.
RESPONDENT'S PROFILE ON INTERNET CONNECTIVITY

Context (n=106)	Status	Frequency	%
Internet Access	Yes	69	65.1
	No	37	34.9

Methods in Completing Academic Activities	Borrowed Wi-Fi password from neighbor	5	4.7
	Paying at the computer shop	9	8.5
	Use and Pay at Peso Net	18	17.0
	Others	15	14.2
Devices Available	Cable broadband	9	8.5
	Fiber optic broadband	9	8.5
	Digital Subscriber Line (DSL)	2	1.9
	Wi-Fi broadband	32	30.2
	Mobile broadband	53	50.0
	Dedicated leased line	1	.9
Positive Effects of Internet Connection to Learning	Yes	90	84.9
	No	16	15.1

RQ2 How do students differ in their speed of Internet connection and what are the effects of these to their learning interest?

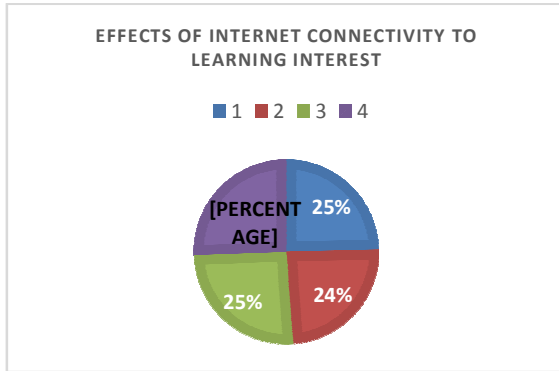
Table II shows that the status of the internet connection of the students is mostly normal connection. However, according to the students of Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College, Internet Connection still gave positive effects on his/her learning interest (Table I).

TABLE II.
STATUS OF INTERNET CONNECTION

Context (n=106)	Status	Mean	SD
	Strong Connection	2.617	.12617

Normal Connection	2.5295	.16128
Poor Connection	2.4931	.14105

GRAPH 1.0



Learning interest

1	Can finish the courses' activities posted at LMS but still behind the class discussion.
2	Sometimes late submission of the tasks and activities.
3	Connected with Normal internet connection but still has great influence on my learning interest and improved my academic grades.
4	Almost lost my learning interest but still study harder for my grades and for the future.

Graph 1.0 shows that due to the normal connection, students are almost lost their learning interest but still study harder for the grades and their future.

RQ3 How important is Internet connectivity in students' Learning Interest?

Table III shows the level of assessment of students on the importance of internet connectivity. The overall response of the respondents has a mean

score of 2.5871 and a standard deviation of .12854 which denotes that internet connectivity is important in the learning interest of the Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College. The result implies that internet connectivity is useful and helpful to the students to complete academic activities. Internet, the most useful technology nowadays and helps students for educational purposes which are widely used to gather information and to do research or add to the knowledge of various subjects. The Internet plays a very vital role in education [1].

TABLE III.
 LEVEL OF ASSESSMENT OF STUDENTS ON THE IMPORTANCE OF INTERNET CONNECTIVITY

Level of Assessment	Mean	SD
Importance of Connectivity	2.5871	.13854

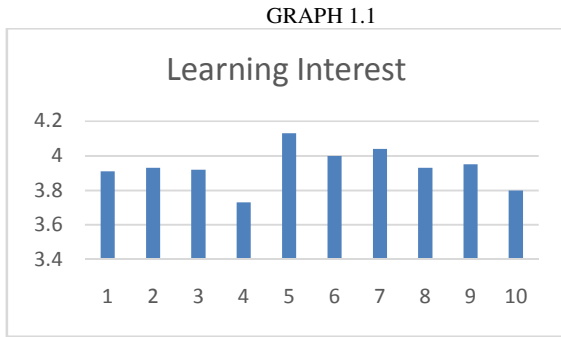
RQ4 How interested are the students of Bachelor of science in Disaster Resiliency Management of Davao del Norte State College in learning, doing the activities and exams?

Table IV shows the level of assessment of students on their learning interest. The overall response of the respondents has a mean score of 3.9891 and a standard deviation of .22681 which denotes that the Bachelor of Science in Disaster Resiliency Management students of Davao del Norte State College are interested in learning and complete all academic activities. The result implies that the students are more interested in learning in school or academics especially when students having strong or normal internet at home. The reason why students are more interested in learning and doing academic activities online because it uses the internet which is very beneficial for students in all aspects. It serves as a teacher to students from where you can ask everything and it will answer one's questions [3].

TABLE IV.
 LEVEL OF ASSESSMENT OF STUDENTS ON THEIR LEARNING INTEREST

Level of Assessment	Mean	SD

Learning Interest	3.9891	.22681
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Learning interest	
1	Prepare for the activities
2	Listen to the video discussion uploaded by the instructor.
3	Actively participate in the video call meeting, and answering some questions and clarifying things that I did not understand.
4	Study the provided modules with a high level of concentration.
5	Don't like that I have an activity that cannot be submitted before the deadline.
6	Study and prepare for activities and exams.
7	Exert more effort when answering all activities.
8	Study hard and advance to improve my performance
9	Consider studying and doing assignments as my priorities than anything.
10	Make it a habit to answer activities and advance study for the exams.

RQ5 What Bachelor of Science students in Disaster Resiliency Management often do to improve his or her studies at Davao del Norte State College?

Graph 1.1 shows that the students of Bachelor of Science in Disaster Resiliency Management of Davao del Norte State College said, they do not want to have an activity that cannot be submitted. This result implies that the students are

doing and complete all the activities to improve their studies.

RQ6 Is there a significant relationship in the internet connectivity and the learning interest among Bachelor of Science in Disaster Resiliency Management Students of Davao del Norte State College?

Table V shows the positive correlation between the level of internet connectivity and learning interest. Since the *p*-value is $.003 < 0.05$, then we reject the null hypothesis. There is a significant difference in the level of internet connectivity and the level of learning interest. This positive correlation implies that when the level of internet connectivity, the level of learning interest also increases. On the strength of the relationship between variables, with the value of $r = .290$, it has a significant Relationship, thus, the null hypothesis is Rejected. There is a significant relationship between the level of internet connectivity and learning interest. The result implies that internet connectivity provides easy access to quality education. Students easily access quality education materials like tutorial study materials. Teachers also make use of the internet by providing the students with extra study materials such as interactive lessons and educational quiz [1].

TABLE V.
CORRELATIONS BETWEEN LEVEL OF IMPORTANCE OF INTERNET CONNECTIVITY AND LEARNING INTEREST

Variables	Mean	Std. Deviation	P value	r	Decision
Importance of Internet Connectivity	2.5871	.13854	Sig. (2-tailed)	.290	HO is Rejected
Learning Interest	3.9891	.22681			

Range of R-value	Description Interpretation
0.00 to ± 0.20	Negligible Relationship
0.21 to ± 0.40	Slight Relationship

0.41 to ± 0.60	Moderate Relationship
0.61 to ± 0.80	High Relationship
0.81 to ± 0.99	Very High Relationship
± 1.00	Perfect Relationship

IV. CONCLUSION AND RECOMMENDATION

In this paper, the researcher addressed the internet connectivity and learning interest among Bachelor of Science in Disaster Resiliency Management students in Davao Del Norte State College. During online survey, there are 106 respondents participated.

Conclusions

The conclusions of the findings for the internet connectivity and learning interest are based on the findings from the Bachelor of Science in Disaster Resiliency Management in Davao del Norte State College. The conclusions are stated below:

For research question 1; the number of respondents is a total of 106 students and 50% are using mobile broadband as their source of internet connection. Therefore, Bachelor of Science in Disaster Resiliency Management students in Davao del Norte State College is using Mobile broadband to do their activities, exams, projects, and participate in video call short discussion with the classmates and course instructors. Students that no internet connection at home are mostly used Peso Net. Research question 2; according to the Bachelor of Science in Disaster Resiliency Management students in Davao Del Norte State College, the students are using with normal connection and almost lost their learning interest but still study harder for the grades and their future. Besides, 84.9% of the students said that internet connection has positive effects on learning interest.

For question 3; the importance of internet connectivity. Based on the result, the response of

the students has a mean score of 2.5871 and a standard deviation of .12854. This implies that internet connectivity is important to the students' learning interest. It is useful and helpful to complete academic activities. Research question 4; a level of assessment on students' learning interest. Based on the result, the response of the students has a mean of 3.9891 and a standard deviation of .22681. This implies that Bachelor of Science in Disaster Resiliency Management students in Davao Del Norte State College is more interested in learning and doing academic activities especially when the internet's status is strong or normal connection.

Research question 5; Bachelor of Science in Disaster Resiliency Management students in Davao Del Norte State College is doing and complete all the activities, exams, projects, and participate in all short video discussions online to improve their studies. Research question 6; There is a significant relationship between internet connectivity and learning interest among Bachelor of Science in Disaster Resiliency Management Students of Davao Del Norte State College. Thus, the null hypothesis is Rejected.

Recommendations

This study provided findings indicating the subscribed values of the participants. They showed the academy that there must be a strong connection for their education for them to boost their motivation and interaction. The findings are consistent and provide practical implications for all students. The implications are as follows:

First and foremost, the Dean of the school should always monitor the status of the students and help in their studies. They can also help those who cannot access Learning Management System (LMS) or other learning tools because some students are not able to access it due to their poor connection or maybe there is no suitable device for the given course activity.

Secondly, instructors should also understand the status of the students. They should provide learning tools that everyone can easily access or better ways for them to work on their tasks. They can embrace the paperless and teach students

through the means of learning management websites.

Thirdly, the students should also ask their instructor if there something they did not understand about the topic. Study and complete the posted activities in advance before enjoying any social media. Lastly, for future researchers, a further study may be conducted to continue, improve and develop internet connectivity and students' learning interest.

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