Making Ends Meet: A Survey on Adapting Flexible Learning amidst the COVID-19 Pandemic of the BSIT Program in Davao del Norte State College

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Abstract: The COVID-19 pandemic unwrapped several challenges, most especially in the Academic Sector. To protect students, schools all world-wide have shifted from face-to-face instruction to flexible learning. This study narrates the Davao del Norte State College's sudden transition to flexible learning, particularly the BSIT Program, and how they make ends meet.
Keywords: LGS, mathematics, teacher, difficulty
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1. Introduction

The COVID-19 global pandemic posed significant challenges and created changes in our daily undertakings [1][2]. Suddenly, we need to distance ourselves from other people, avoid mass gathering, and wear protective gear and clothing. Everyone is taken aback.

One of the sectors directly affected by the pandemic is the education sector [3]. Since schools and classrooms are among the crowded places and most of the students are minors who are considered as either vulnerable or super spreader, schools were forced to close all over the world [4]. As a result, schools have shifted from face-to-face instruction to flexible learning [4][5].

Flexible learning is a term used to describe the design and delivery of programs, courses, and lessons in which the students may choose to complete either on-campus or off-campus[6][1]. This approach provides a customized learning environment wherein students may choose the time, place, and pace of learning.

For instance, the Zhejiang University (ZJU) in East China is one of the first to respond to the needs to conduct distance learning amidst the pandemic[7]. The university has launched the course hub "Learning at ZJU", which offers more than 5,000 courses to undergraduate and graduate programs.

In the Philippines, the Department of Education's K to 12 curricula is committed to achieving the Education for All 2015. The program aims to prepare senior high school graduates for the advanced educational potential to contribute to the competitive workforce of the nation [8][9][10]. However, due to the pandemic, the Philippine government mandated all schools, including primary to tertiary, to shift to distant learning and comply with the quarantine measures[11].

As a prevailing educational tool, ICT can facilitate the conversion of school education. Hence, harnessing ICT continues be a significant challenge to educators [12].

Given these setbacks, this study was conducted to analyze the adaptability of shifting the learning modalities from the practiced face-to-face interaction in delivering education to the adoption of flexible learning of the BSIT students of Davao del Norte State College for the first semester of the school year 2020-2021.

2. Methodology

Planning

The academic unit of the College surveyed to gauge the readiness of the students to the adoption of flexible learning. Hence, the survey questionnaire was deployed during the enrolment of the semester. Questions related to year level, geographical distribution, basic provisions for flexible learning, modalities of learning, delivery of instructions utilized, devices/gadgets used for flexible learning, and the students' internet connectivity were included in the survey questionnaire using the Google Form application.

Data Collection and Analysis

The online survey questionnaire through Google form was deployed on online platforms such as emails and Facebook groups, and group chats for the data collection. The respondents included the BSIT students enrolled in the first semester of the academic year 2020 - 2021. The students are instructed to personally answer the survey questionnaire. The collected data are organized, and frequency distribution analysis was used to show the frequency of occurrences of the field or outcome being considered.

3. Results

An online survey was conducted to the 345 students currently enrolled for the Bachelor of Science in Information Technology program for the First Semester, AY 2020 – 2021. Table 1 shows the distribution of the participants of the survey.

The majority of the students surveyed are residents of the province of Davao del Norte. However, other students surveyed are Davao City residents and the nearby provinces such as Davao de Oro, Agusan del Norte, and Agusan del Sur. Table 2 shows the distribution of respondents based on their geographic location.

DNSC is located at Panabo City, Davao del Norte, and caters to students from the Davao del Norte and different parts of the Davao region and even outside the Davao region. The students residing in Panabo City account for most of the students in the Davao del Norte location, with 179 from the 301 respondents. The rest are from neighboring cities and municipalities. Outside Davao del Norte, respondents reside in Davao City, Davao de Oro, and Agusan del Sur.

Table 1. Year Level Responses

Year Level	Responses
First	98
Second	93
Third	102
Fourth	52

Table 2. Students Geographical Distribution

Location	Responses
Davao del Norte	301
Outside Davao del Norte	44

Table 3 summarizes the responses for the provisions for flexible learning. Few of the BSIT students do not have access to electricity, which only shows that some of the DNSC students belong to society's marginalized sectors and have no access to essential commodities. Table 3 also indicates that the provisions on television, radio, and internet access are not available to students, which poses significant challenges for communications and information dissemination. Television is the primary provision for flexible learning that students can access, followed by Internet Access and radio. Since television is an expensive option for the delivery of instructions and requires ample time to prepare, DNSC did not use the mass media for the First Semester, AY 2020 – 2021.

Table 3. Provisions for Flexible Learning

Basic Provisions	Responses	
	Yes	*No*
Electricity	338	7
Television	286	59
Radio	152	193
Internet Access	198	147

When surveyed on the delivery of instruction they practiced during the semester, most of the students experienced a combination of modular and online learning, while some responded to modular and online learning. Table 4 summarizes the modality of learning adopted by the BSIT students during the semester.

The educational course packs distributed to students are formatted and divided into modules/modular setups. In context, in modular modality, the instructors have developed instructional materials (modules) and sent a softcopy of the modules to the students using various media. Simultaneously, online learning refers to the lesson delivery through video discussion and online meetings and conferences.

Table 4. Modality of Learning Adapted

Modality of Learning	Responses
Modular	126
Combination of Modular and Online Learning	196
Online Learning	13

The instructors utilized several approaches and platforms to reach the students. The varied platforms mode of the semester's instructions includes DNSC Learning Management System (DNSC LMS), Facebook Page and Messenger, Edmodo, Google Classroom, Discord, Youtube, and email. Table 5 summarizes the medium used by the instructors to contact and deliver instructions to students. The DNSC-LMS serves as the central repository of the instructional materials, including the course packs.

Table 5. Delivery of Instruction Utilized

Delivery of Instruction	Responses
DNSC LMS	282
Facebook (Group/Page, Messenger)	284
Google Classroom	176
Edmodo	60
Discord	95
Youtube	9
Email	125

Table 6 shows the primary devices used for learning in the new normal setup. The majority of the students use smartphones to access their lessons while others use their personal computers like laptops. However, three respondents answered that they do not have access to devices for learning; they cope with their lessons by asynchronously answering modules and borrowing devices from relatives and/or neighbors.

Although the College opted to deliver instructions through the official DNSC LMS and other online services, several students reported that they experienced poor to intermittent internet connection. Table 7 shows the internet connectivity availability of the BSIT students. It can be noted that 83.47% experience poor or no internet connectivity. Table 8 shows that students with no direct access to the internet in their homes availed the PisoNet Vending Machine or internet cafes. This requires them to seek other places for internet signals instead of staying at home for quarantine. Table 8 summarizes the student's method to access their lessons given the different types of services available for internet access.

Table 6. Devices Used for Learning

Devices Used	Responses
Smartphone	179
Laptop	14
None	3

Table 7. Internet Connectivity Experienced by the DNSC BSIT students

Quality of Internet Connectivity	Responses
Good	57
Poor	275
No internet connectivity	13

Table 8. Type of internet connectivity

Connection Type	Responses
Internet Café	80
Wireless Home Broadband	30
Home Fiber	59
Prepaid/Postpaid Mobile Data	202
None	13

4. Conclusion

Given the results, it can be noted that the study "Making Ends Meet: A Survey on Adapting Flexible Learning amidst the COVID-19 Pandemic", brought about the sudden transition to flexible learning in higher education had uncovered challenges not just to faculty but most especially to the students. Problems with basic internet access and internet connectivity pose risks in not coping with the new normal setting in the teaching-learning process. But being caught in the immediate transition from the face to face delivery to flexible learning also brings out the resiliency in the management, faculty and students in coping with the new normal. True enough, there are still many challenges to surmount but this new normal also provide an opportunity to further explore alternative ways in carrying out learning amidst the crisis.

5. Recommendation

It is recommended that the Davao del Norte State College actively use the digital platforms in the delivery of education and continue in its goal of strengthening the ICT infrastructure of the College and strengthening the ICT capabilities of the working force. Further analysis of the sudden transition should be continually conducted to improve the student-teacher interaction and make access to flexible learning available to all the students, especially the marginalized..

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