DEVELOPMENT COMMUNICATION STUDENTS' PREFERENCE IN TEACHING-LEARNING DURING THE NEW NORMAL: A CONJOINT ANALYSIS

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ABSTRACT

Aims: To determine the Development Communication Students' Preference in Teaching-Learning during the New Normal.
Study design: Quantitative-Descriptive approach.
Place and Duration of Study: Davao del Sur State College (DSSC), Matti, Digos City, Davao del Sur, throughout the Academic Year 2020-2021.
Methodology: Complete enumeration was utilized to collect data from 133 respondents enrolled in the Bachelor of Science in Development Communication (BSDC) program. A conjoint analysis was used to analyze the 25 combinations of factors and attributes generated through orthogonal design.
Results: Most students reside in *rural areas*, and the majority are *female*. In terms of students' technological profile, the students' years of internet usage, students belong to *5 years or more* in accessing the internet. For students' device ownership, the students are using their *smartphones*. While the students' primary device used for internet connection was the *mobile phones*. In terms of students' primary type of internet access and internet provider are *cellular*.Further, study revealed that the respondents' preferred type of instruction was through *synchronous discussion* (utility=0.294*), combination of Google classroom and Facebook application* (utility=0.551) as the preferred teaching strategy/platform, and *late in the afternoon* (utility=1.170) as the preferred time variable in learning program core subjects.
Conclusion: The Department of Development Communication can design a teaching-learning strategy which enjoined to apply these major study findings. This is an opportunity to deliver instruction and assess the learning of students effectively. While the combination of Google classroom and Facebook application was highlighted, synchronous discussions were still preferred, particularly for courses involving laboratories. Further, it is ideal to schedule the core subjects during the late in the afternoon particularly those subjects with laboratories for both teachers and students to cope the adjustment set-up in holistic aspects. Future Researchers are recommended to explore other factors and attributes, especially in learning during the New Normal.

Keywords: development communication, students' preference, teaching-learning, new normal, conjoint analysis

1. INTRODUCTION

Communication is the foundation of human functions in all life aspects. Applicably, this is important, particularly in the education sector for the teachers and student's role. This is the interconnected action of teacher and student in education instruction. As documented by World Health Organization WHO (2020), the COVID-19 first occurred in Wuhan, China, in

late December 2019 and still persisted in 2021. With this, Abender (2020) revealed that upon the dynamic surge of the virus, all countries create a method to adopt the new normal education system that altered the normal communication into a new normal. The immergence and innovation of new teaching modalities arises which dominated by the online distance learning via social networking sites and alternative means was self-paced learning using printed hard copies of module.

Hence, the online learning mode through social media was primordially utilized for Teaching and Learning through the adjusted synchronous and asynchronous forms. The synchronous form requires the Teacher and the Student to work together at an arranged time through online software platforms such as Zoom, Google Meet, Facebook live. While for the asynchronous form, do not need to interact online at the same time zone of the exact moment. A tool used to accomplish this is through the features of Learning Management System (LMS) while Facebook Private Group and Printed Coursepacks either as a soft copy or hard copy for self-assisted learning were the most accessible and convenient for both Teacher and Students to use (Serdyukov, 2020). The virtual system allows the teachers post tasks for learners to do the self-assisted learning process either with the support of attached audio and video presentation. They upload discussion attachment files or downloadable media to boost the students' learning process and progress. Alternative and adjustment regulated the communication of teaching-learning system (Perveen, 2016; Magsambol, 2020).

With the new synchronous and asynchronous Teaching-Learning system, both teachers and students are still in search and under evaluation of what will be the most effective platform and modality can be feasible to adapt, facilitate and sustain the education system objectives for the entire academic transaction of teaching-learning while adjustment was applied to syllabus of the new curriculum. The necessity of internet and Technology invoke the students' engagement to digital technology by utilizing Information Communication Technology (ICT) features of modern devices in this 21st century while the world was still under crisis (Serdyukov, 2020).

Thereby, the Davao del Sur State College (DSSC) as the affected tertiary institution in Digos City locality under the new normal education system that on-the process to innovate the teaching-learning adjustment for the new modalities. The management office of the institution was under study to determine what teaching-learning environment that the students' preferred for this new normal. The Institution Administrator and collated Faculty-in-charge were stringent to determine which among the three variables such as Type of Instruction, Teaching Strategy/Platform, and Time variables that the students preferred as the most important in attending the core subjects of Development Communication during the new normal. Secondly, to determine what factors that the students' preferred for each of the three variables. The results intend to study the time-based situation by the statistics-based results of the academic study while the Philippines was still under the pandemic period. The pandemic is the framework of motivation of the researcher for the quantitative study of Development Communication students' preference in teaching-learning during the new normal using a Conjoint Analysis.

1.1 OBJECTIVES OF THE STUDY

This study aimed to determine the Development Communication Students' Preference in Teaching-Learning during the New Normal. Specifically, it was conducted:
1. To determine the Development Communication students' socio-demographic profile;
2. To determine the students' technological profile; and
3. To identify the students' most preferred teaching-learning environment in attending the core subjects of Development Communication during the new normal.

2. MATERIAL AND METHODS

2.1 Research Design

This study applied the quantitative approach using a descriptive survey. The aim of descriptive research design is to describe the desirable features of the sample under investigation. This will allow the results of a representative sample to be generalized to a larger target group in the 35 surveys. There is only one sample, and there is no comparison group (Aamir, 2015).

2.2 Sampling Design and Technique

The sampling technique applied was the Complete Enumeration. This is a complete count of category of every universe unit or population in the collection of data. This is applicable to small categories of population numbers to count per unit result (Boness, Stevens and Sher, 2020).

2.3 Data Gathering Procedure

In data gathering, the researcher observed the following procedures. First, letters and permission to conduct from the college were obtained prior to the conduct of the study. Second, respondents were informed about the survey questionnaire directions and guidelines on how to participate in the study thoroughly. The data gathering was made through an online platform in adherence to new normal strict ordinance. Thus, an online questionnaire checklist utilized through Google form via google classroom and in an e-mail and messenger as an alternative way. Lastly, gathered were tabulated and analyzed through relative frequency, Pearson r, and conjoint analysis.

3. RESULTS AND DISCUSSION

Figure 1 revealed that the *less than Php11,000.00* has a total of 83.46% as the highest percentage. Therefore, the dominant monthly household income of students' family belongs to the low to average income class. The students have low to average economic status that choses to study in the government public tertiary college Institution to gain college degree. The BSDC was one of the affordable and attainable courses to gain in the institution.

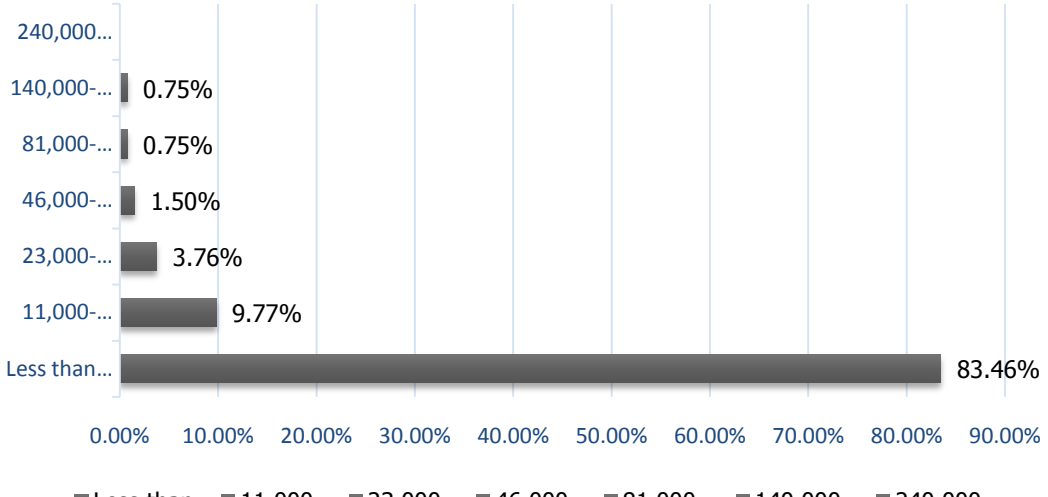

Fig. 1. The Development Communication Students' Socio-demographic Profile in terms of Household Income.

This also coincided to the conclusion of De Vera III (2020) that Filipinos are dominantly belong to the low economic wage earner as one of the impact of poor education attainment of the working people.

3.1.1 Students' Gender Identity

Figure 2 revealed that the *females* are dominant who took up the program Bachelor of Science in Development Communication (BSDC) which obtained a total of 73.68%. The BSDC is one of the ideal programs for woman to earn a degree in the tertiary institution.

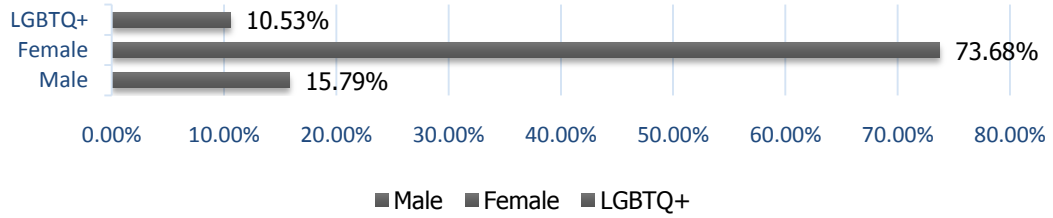

Fig. 2. The Development Communication Students' Socio-demographic Profile in terms of Students' Gender Identity.

3.1.2 Location of Respondents

Figure 3 revealed that there are 63.91% of Rural residents as the highest percentage. Therefore, most of the BSDC students are residents of the rural areas than in urban areas in the Region XI (Davao Region) of Mindanao. The DSSC tertiary college caters Davao del Sur residents either urban or rural settlers to earn degree in the institution.

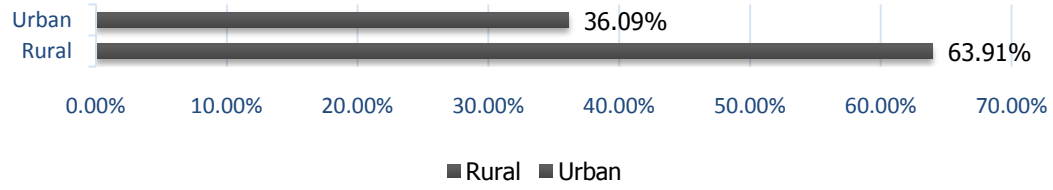

Fig. 3. The Development Communication Students' Socio-demographic Profile in terms of Students' Location.

3.1.3 Students' Number of Years of Internet Usage

Figure 4 revealed that the students are using the internet dominantly belonged to 5 years or more with 69.92% as the highest response. Student primordially linked their life transaction especially education attainment through the advancement of technology as way to maximize their learning progress in holistic approach. The Institution and the country provider of education must optimize internet availability and speed level to allocate for all learners of government public tertiary colleges

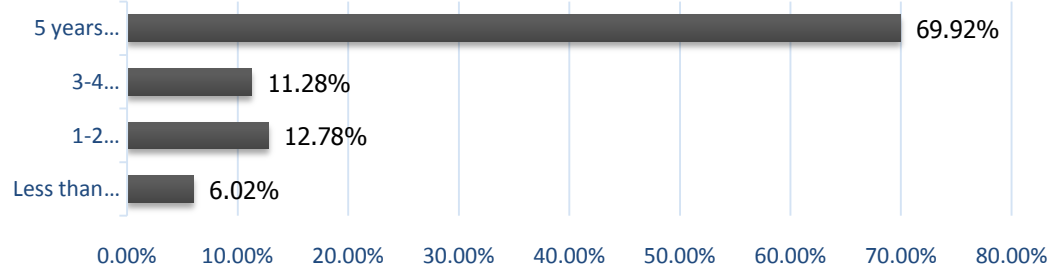

Fig. 4. The Students' Technological Profile in terms of Students' Number of Years of Internet Usage.

The results were supported by Hendrawan, Nugroho, and Permana (2020) that the Philippines was one of the countries with the highest rating as using social media among other countries around the world. Thus, due to the high need of Internet Connection in this 21st century, the people are dominantly using ICT gadgets to comply and attend all transactions online. This was a social pattern conformity since this provides conveniences as teachable to manage the accessibility features. This was the new modern society trend that highly dependent and treat this as primordial requirements in the modern world to possess. Hence, this was due to the fact that the ICT and modern technology was integrated in the all Institution over the world. With this, the Tertiary education are utilizing this method to boost the Institutions' management system as method to facilitate and innovate the teaching-learning which indeed turned as one of the Institutions' features to invite students to enrolled in.

Furthermore, this correlates to the other researches revealed that there are numerous internet users in the Philippines as of January 2020 (in millions) there are 73.91, for the year 2019 there are 76, for the year 2018 there are 69.6, for the year 2017 there are 64.1, for the year 2016 there are 48.54, and lastly way back year 2015, there are only 46.37 in all. It could be concluded that as the years go high, internet users are increasing as social media and online access gets higher in demand due to the Internet-based development of the country (Sanchez, 2020).

This indicated that Filipinos use internet since they rely on social media app as a primary source of news and a platform for purchasing online and operating an online transaction instead going outside the home premises. This demand keeps increasing due to the public ordinance of lockdown during post COVID-19 pandemic Lederman (2020).

3.1.4 Students' Device Ownership

Figure 5 revealed that the *Own Smart Phone* was the highest response with 88%. Therefore, *the BSDC students used their smartphones to do* their online classes and other essential transactions while under the new normal. Technology are highly important to students' academic operation by purchasing own units for the ease of conveniences and ownership factor.

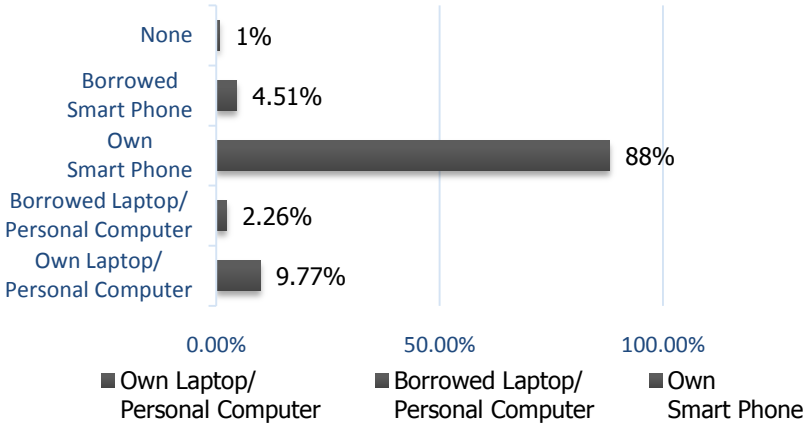

Fig. 5. The Students' Technological Profile in terms of Students' Device Ownership.

Thus, this was due to the high pertinence of mobile technology in the pandemic period as the primary access for mobilizing transaction safely than traverse outside the public city, this gives rise to the importance of Smart Phone as the most available and most commonly used internet device. As justified by Sanchez (2020) that the people preferred to purchased their own technology units and materials due to the personal conveniences of time to use it; secondly, it required no permission to consent from other to access; it allows the user to take full ownership and accountability to manage the unit depends on intention; lastly was due to the possession characteristics of the people to own personal materials than borrowing. The people tend to purchase no matter how low or high price the material/unit are as long as can be privately owned for personal purposes in times of needs. Borrowed materials is temporary and aiming for permanent will always be the end point for all necessities.

Therefore, the results coincided again to the conclusion of Finol (2020) that the pandemic period tested the education system of the tertiary sector. The Information Communication Technology (ICT) units are highly required that push a motivation factor for the students and teachers of the Institution to access ICT devices to sustain the online mode of education system due to the new normal way of teaching-learning.

3.1.5 Students' Primary Device used for Internet Connection

Figure 6 revealed that the *Mobile phone* gained 91% as the most preferred Primary Devise Used for Internet Connection of the BSDC Students. Therefore, it is the most accessible to obtain with high valued features that are potent to utilize to sustain the online distance learning through virtual classes. The Institution policy makers must adjustment within the capacity level of mobile devices for students can cope up.

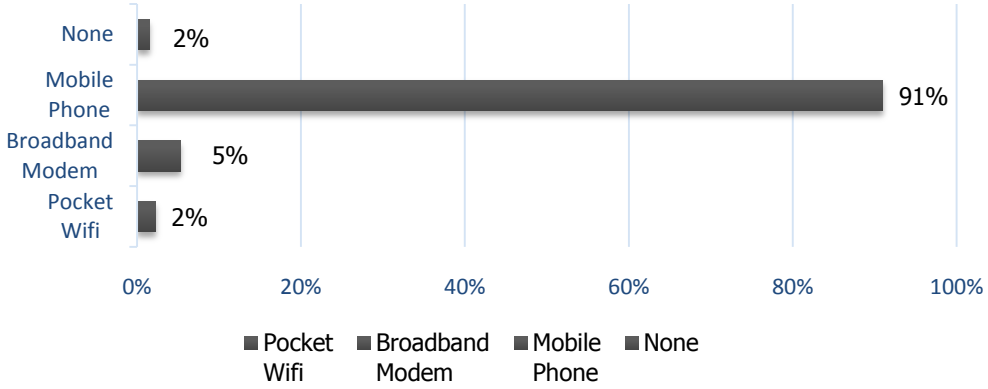

Fig. 6. The Students' Technological Profile in terms of Primary Device used for Internet Connection.

With these results, it correlated to the study of Lowenthal, West, and Archambault (2020) that the internet technology in this ICT operated modernization increases which noe featured are highly available in mobile devices. Therefore, as agreed to De Vera III (2020) that the consumers in the Philippines utilize several devices as a global citizen with high regards to online transaction involvements dominantly using Mobile Phone devices as the most portable to use especially for any immediate needs especially with duties on Institution under the pandemic period. This was because the Mobile devices was the most affordable, portable, and easy to use device as the leading device for users to access the internet in the Philippines.

Furthermore, it was justified by Sanchez (2020) that the importance of this mobile device provides not just communication but also access to information as electronic digital device. This has the ability to provide the features of any personal computer since Mobile Phone has a compact peripheral inside the android system of all related units as long as it is well-conditioned and able to connect an internet preferably that have a high connectivity level. A quarter of the population used their mobile phone in 2017 to access the internet, and it is forecasted to grow and penetrate almost half of the population by 2023 (Ventayen, Estira, De Guzman, 2017). Therefore, the mobile phone is the most preferred of BSDC Student.

3.1.6 Students' Primary Type of Internet Access and Internet Provider

Figure 7 revealed that theCellular has the highest rating of 78.20%. Therefore, the Institution set the standard learning interaction within the limit of the cellular users to access efficiently still the learning process of new normal.

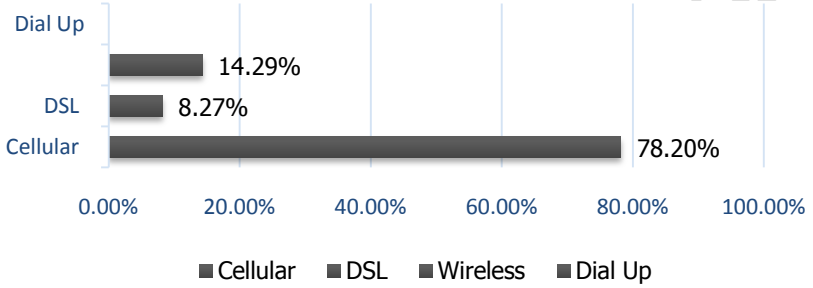

Fig. 7. The Students' Technological Profile in terms of Primary Type of Internet Access and Internet Provider.

As based on the study, it revealed that the cellular was the most accessible Students' Primary Type of Internet Access and Internet Provider of the students as correlated to Finol (2020) that this was due to its high accessibility, less costly and more easy to use. This related to the study shown that a Cellular handheld device allows users to make, receive calls, and do other related mobile phone functions as long as cellular peripherals were integrated in the system of Mobile phone.

The Mobile phones used to be mainly known as "cell phones" or cellular phones, today's mobile phones are more commonly called as "smartphones" due to extra features of data services in connection to social media. The cellular phones were innovated its features which give rise to the Smart Phones as now the fastest internet service providers in the Philippines based on the update on June 2020, by download speed in Mbps (Lowenthal, West, and Archambault, 2020).

3.2 Development Communication Students' most preferred Teaching-learning Environment for DevCom Core Subjects

Table 1. Teaching-Learning Environment Results

Teaching-Learning Environment Result			
Variables	Factors	Utility Estimate	Preference
Type of Instruction	Offline Independent/Self-paced Learning	-0.246	3rd

	Uploaded Student Reporting using a presentation program (i.e. Powerpoint, slideshare)	-0.048	2nd
	Synchronous Discussion	0.294	1st
Teaching Strategy/ Platform	DSSC Learning Management System	0.424	2nd
	Google Classroom	-1.094	5th
	Facebook Messenger	0.089	3rd
	Combination of Google Classroom + Facebook Application (i.e. Closed Group and Messenger)	0.551	1st
	Teleconferencing Application (i.e. Zoom and Google Meet)	0.030	4th
Time	Early Morning(8:00-10:00)	0.292	4th
	Late Morning(10:00-12:00)	0.585	3rd
	Early Afternoon(1:00-3:00)	0.877	2nd
	Late Afternoon(3:00-5:00)	1.170	1st
(Constant)		12.415	

Based on the generated results, in terms of *the Type of Instruction* variable, BSDC students preferred *the Synchronous Discussion* factor with a result of 0.294. In *Teaching Strategy/platform*, the *Combination of Google classroom + Facebook Application* was the most preferred by the students with a result of 0.551. For the *Time* variable, the students most preferred was the *Late Afternoon (3:00-5:00)* to attend an on-time class session that obtained a result of 1.170.

The Objectives of the Study which was the students' most preferred Teaching-learning Environment for BSDC Core Subjects was answered through the Conjoint Analysis. The Conjoint Analysis revealed the students' most preferred factors of each three variables. The most preferred factors were ranked as the general first preference for the program.
The *Synchronous Discussion for Type of Instruction* was the students' most preferred factor since the BSDC course consist of numerous laboratories. Therefore, this is the practical course that requires hands-on training for students' knowledge be utilized as the course objectives intend to. The *result s*upports the BSDC students' goal to learn the ground, scope, and functions of the course via proactive interaction of communication for online distance learning with their professors under the new normal. The result justified the Theoretical framework of the Study which was the Socio-Psychological Tradition of Communication Theory of Griffin (2011) that students even until the new normal wanted the Synchronous Discussion with their Teachers so that they can still gain progressive learning function and be satisfied even as a virtual Students. Further, as agreed by Flannery (2020) that it was their driving force to build a consistent proactive communication with their teachers even until the new normal. In return it is what the Teachers desire that is why they are monitoring and evaluating strategies to came up a sustainable online platform to address the students' needs which is to gain quality education until this new normal teaching-learning system of the Institution.

In terms of *Time*, the *Late Afternoon* was the students' most preferred for online distance learning that the institution is to provide adjustment to coincide for the *Synchronous* Discussion so students can be prepared to attend virtually with high possibility that complete number of students can attend in every interactive classes. However, over all it was concluded that the *afternoon* shift being a morning type or an evening type does not have an

influence on academic performance or intelligence since there are internal and external factors that affects the learning progress and it were the commitment, motivation, learning environment, and the instructors' attitudes and method of teaching to the students (Heggart and Yoo, 2018).

The *Synchronous Discussion* must coincide to the students' most preferred *Teaching Strategy/platform* which is the utilization of the *Combination of Google Classroom + Facebook Application (i.e., Closed Group and Messenger)* to conduct the online classes within the *Time* adjustment that both Teachers and Students both agreed for an Interactive communication during the entire teaching-learning process. Thus, this was strengthened to the fact that the Google Classroom provides the students and teachers to have consistent communication about the assignments in which teachers can track the student's progress (Jakkaew&Hemrungrote, 2017). As added by Flanney (2020) stated that the Google Classroom was used to facilitate the interaction of an Institution actors via the virtual world. In Google Classroom, teachers freely hand out a scientific and independent assessment for students in which they can provide materials on the subject being taught; they can post some teaching materials, assign tasks for students, and upload the students' grades so that they can immediately see the scores obtained in the course subject.

As added by Liu, & Chuang (2016) the Google Classroom also minimizes the costs incurred due to the use of more affordable stationery and other materials and can minimize time-released energy. In short, the time and energy spent by Google Classroom users will be lesser than usual. As supported by Wijaya (2016) that this can be one solution to complete the teaching-learning process while the school prohibits the Face-to-face. The Google Classroom provides students to be independent, engaged and motivated because mostly, young learners tend to use technology in their daily life. It also succeeds the teaching-learning process in the digital era as in the industrial revolution that the teachers are required to have the expertise, ability to adapt to new technologies and global challenges. In terms of Facebook Application, Serdyresult (2020) concluded that this was the most dominantly use as Learning Management System (LMS) alternative for few Institutions worldwide upon the surge of pandemic. The features serve as dynamic portal for Teachers and Students to utilize the teaching-learning process due to its high scope of connection through social media as collective platform to immerse more the students to incorporate technology in their online distance learning in new normal.

In terms of time factor, a time management and time commitment are interdependent behavioral factors that both Teachers and Students must observe to efficiently perform each role at the given class agreement schedule as part of system adjustment to aid any unprecedented instances to conduct for the virtual classes.

Table 2. The Most Important Factor According to BSDC Students

Importance Average Score Value	
Teaching Strategy/platform	53.712
Time	28.660
Type of Instruction	17.628
Averaged Importance Score	

Among the three Teaching-Learning Variables, the Importances' Average Score Value showed that the students gave most importance on the variable *Teaching Strategy/Platfor*m that ranked as first highest value of (53.712). Therefore, students value this as most crucial with high impact to online distance learning process that can affect their academic status and commitment level to attend virtual classes. According to Flanney (2020) that students

prioritize most the platform that their teachers are utilizing until the whole duration of classes. The platform and strategies employed can affect their interaction and commitment to each academic task due to the factors of technological resources availability, topographic areas where the students are located, their means of financial status to sustain the mode of learning for the via online. The students prioritize the moralities that the Institution use in which they can strategize ways to cope up within their capabilities since this is the system that their learning progress highly depends on as the teaching-learning set-up to be accustomed to use.

Furthermore, as supported by Lederman, (2020) that the students create an agreement suggesting an alternative of platforms wherein they can utilize the class discussion more than one mode of platforms for they believe that this is the most factor need to be agreed on at the first start of class. This was the common concern that the students raise unto their teachers due to the sustainable internet connectivity problem, hence they are those who ask alternative methods for modalities of teaching-learning to remain efficient virtual learners while at each safe residential zone.

The students' technological profile coincided to their most valued variable that affect their academic progress while under the new normal. The BSDC Department are enjoined to provide adjustment to the Teaching-learning system by means of considering Teaching Strategy/ platform preference of students that will assure to utilize their means of technology accessibility at home to sustain and keep their academic performance high while committed to remain proactive to the virtual classes. The *Time* adjustment and *Type of Instruction* must coincide to the most preferred factor of the student so that a harmonic function of each factor and variables could achieve the teaching-learning system objectives.

Table 3. The table of Correlations for observe and predicted preferences

Predicted Preference	r	Strength of Relationship	p-value	REMARKS
Observe Preference	.737	High Correlation	.000	Significant

The table shows the correlation between observed and estimated preferences. As indicated the observed preferences is highly correlated to the expected preferences with a correlation coefficient of r=0.737. More so the p-value of 0.000 which is less than 0.05 level of significance implies the rejection of the null hypothesis and conclude that there is a significant high relationship between the observed preferences and expected preferences

4. CONCLUSION

The study reveals that students, with a technological profile indicating 5 or more years of internet usage, predominantly use smartphones as their primary device for internet access, relying on cellular networks. The preferred teaching-learning environment, highlighted by the synchronous discussion factor, emphasizes the importance of proactive communication between teachers and students, crucial in the context of the new normal. The preferred teaching strategy/platform, a combination of Google Classroom + Facebook Application (Closed Group and Messenger), is synchronous, aligning with the students' preference for late afternoon classes. Notably, Teaching Strategy/Platform emerges as the most crucial variable for effective online learning.

The Development Communication Department is advised to implement the recommended teaching strategy/platform and consider late afternoon scheduling for core subjects particularly those with laboratories. Collaboration with Local Government Units is encouraged to provide necessary resources, fostering an environment conducive to online learning. Future research opportunities lie in exploring additional variables, ensuring a comprehensive understanding of learning dynamics during the New Normal.

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