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Research Article

Challenges and Adaptation in Online Classes during the Pandemic among College Students in the Philippines and Indonesia

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ABSTRACT

The technological breakthrough and the unprecedented pandemic largely impacted the educational system worldwide. The students' experiences during this time affect their acquisition of the learning outcome and well-being. Although many studies have been conducted in this area, limited information is available on the correlation between the student's challenges and adaptation between the two countries, the Philippines and Indonesia. Hence, this study attempts to fill in the void. The findings of this study revealed the following results: challenges encountered by the college students from the Philippines yielded a moderate extent ($\bar{x}=2.90$; $SD= 0.41$) while the college students from Indonesia resulted to some extent ($\bar{x}=2.80$; $SD= 0.26$); on adaptation, the college students from the Philippines showed a moderate extent ($\bar{x}=3.01$; $SD= 0.42$) while the college students from Indonesia utilized adaptation to some extent ($\bar{x}=2.01$; $SD= 0.26$). There is a positive correlation (0.153 and 0.485) between the schools in the Philippines and Indonesia. The variability in the college students' responses may have been shaped by the different factors situated around him/her such as the availability of resources, type of learning platforms, computer literacy, student personality behavior towards learning, family structure, and the physical environment. The implications of the study on policy-making, programs on mental health, and future research are discussed.

Keywords: Higher education, Challenges, Adaptation

Introduction

The fast-paced technology and profound effect of the COVID-19 pandemic on the educational landscape have a continuous effect on universities and colleges worldwide. This

global health scenario is considered an educational crisis since it largely affects the students. Based on the data presented by UNESCO then, there are around 1.5 billion learners globally who have not been able to attend schools and

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universities since March 2020 (Bania, J. and Banerjee, 2020). Specifically in the Philippines, there are about 28 million learners who have been affected since the pronouncement of community lockdown and community quarantine. The integration and adoption of e-learning technology is a transformation of the teaching and learning process that increases academic achievements among Filipino college students (Garcia, 2018). Likewise, colleges and universities in Indonesia were moved to online classes for the continuity of academic activities in response to the Circular Letter Number 4 issued by the Indonesian Ministry of Education and Culture on Prevention of Indonesian Minister of Education and Culture (Haris, Afdaliah and Haris, 2021). The online teaching-learning process has continuously been implemented in the Philippines and Indonesia in the form of a blended mode of delivery with the inclusion of face-to-face classes despite that COVID-19 is no longer considered a public health emergency (WHO, 2023).

There are arrays of positive and negative impacts of the adoption of e-learning in higher education institutions (HEIs). Some of the negative impacts that led to resistance to e-learning include an increased process-related demand for teaching and the extended provisions for the negotiation of teaching and learning activities. Moreover, the teachers receive an overwhelming flow of content, questions, and responses from students that need to be attended to (Vries *et al*, Kester; Sloep in Martins & Nunes, 2013).

Specifically, the online learning approach offers many advantages and disadvantages to students and teachers. In engaging with e-learning modalities, the technical and subject-matter expertise offers challenges in the selection and preparation of academic content. The teachers need to be equipped with enhanced cognition to transcend the subject-specific knowledge while both players need the development of high-order cognitive skills to synthesize the meaning and meta-cognition of transferred knowledge. (Martins & Nunes, 2013). Likewise, the students are challenged to abreast themselves with the new online applications and features of technology-driven ap-

proaches. The positive student outcome depends on their self-motivation and self-directed study habits since online learning is a self-paced, convenient, and flexible method in teaching-learning pedagogy.

The impact of shifting to online classes posted an implication to the realization of the expected learning outcome as well as to the whole well-being of a college student. Hence, this study was conducted which aims to determine the extent of challenges encountered and adaptation employed by the college students based on the different factors identified. Eventually, the relationship between the challenges and adaptation of the college students in the two countries was identified in the study. This hopes to contribute to the enhancement of the interim policies in this dominant mode of educational delivery in the new normal in education.

Methods

Research Design

The study employed the quantitative correlation research design. It describes the relationship between the challenges and adaptation of college students during online classes based on the different factors identified. Quantitative research uncovers the interaction and type of interaction between variables in correlated data that can denote positive, negative, or no correlation at all.

Samples

The respondents of this study were college students enrolled in the health sciences programs with a total of 1,883 from private higher education in the Philippines with 1,438 participants and in Indonesia with 445 participants. In the selection of the respondents, the researchers follow the following criteria :

1. All students enrolled in the program of studies in the Philippines that includes Nursing, Pharmacy, Medical Technology, Dentistry, and Psychology. Meanwhile, the programs included in the study from Indonesia are Diploma and Bachelor in Nursing, Physiotherapy, and Midwifery.
2. All students utilized the learning management system (LMS) of the university/

college of both countries since the questionnaire was embedded in the system.

All students who responded to the questionnaire embedded in the LMS of both schools were considered in the interpretation and analysis of the data. Those who refused to participate in the study and withdrew their participation were excluded from the study.

Ethical Considerations

This study was subjected to ethical research protocols and procedures. Since this is collaborative research from the two (2) schools, both parties agreed that the paper be submitted for approval to the Centro Escolar University Institutional Review Board (CEU-IRB), Philippines. Measures were implemented to ensure and guarantee to protection of the privacy and confidentiality of the respondents' information. Informed consent was obtained from the respondents before the conduct of data gathering. Confidentiality was maintained during the collation and analysis of data was employed. The data were encrypted and only the researchers had access to the files.

Instruments

The items in the questionnaire about the different factors that describe the challenges and adaptation of college students were generated from the qualitative research conducted by the same authors from the Philippines and Indonesia. The questionnaire in English was translated into Bahasa language for utilization of the respondents from Indonesia and underwent the backward translation in English. A pilot test was conducted among 40 students (20 students from the Philippines, and 20 students from Indonesia). The result of the pilot test of the two (2) countries yielded a Cronbach alpha of .923 which means that the item in the questionnaire is consistent to measure the variables being studied.

The first part of the questionnaire reflects the status of the internet connection utilized by the students during online classes. The second part of the questionnaire contains the perceived level of challenges experienced by the students and the adaptation employed by the students during online classes. This is

presented in a 4-point Likert scale and the result is interpreted as follows: 3.26-4.00 (to a great extent); 2.51-3.25 (to a moderate extent); 1.76-2.50 (to some extent); and lastly, 1.00-1.75 (to a small extent). The rating scale section for identified challenges experienced by the students is composed of 29 items that relate to role expectation (5 items), physical environment (6 items), physical environment 6 items), internet connectivity (2 items), technology literacy (3 items), learning pedagogy (6 items) and behavioral intentions (7 items). Moreover, the rating scale section for identified adaptations utilized by the students composed of 22 items particularly on the comfort of home environment (7 items), teaching and learning methodology (6 items), resource and infrastructure (2 items), affective domain (5 items), and financial capability (2 items).

Data Collection

Upon approval of the ethics review board and offices concerned, the data gathering was conducted by using the questionnaire in Google form which was embedded in the LMS of the two schools. Informed consent was fielded as preliminaries to the questionnaire in the Google form. All the responses that were entered in the data-based were extracted in an Excel form and considered in the interpretation and analysis of the data.

Data Analysis

The data was encoded to version 240 of SPSS for data analysis. Descriptive statistics was used: the profile of the respondents was computed and interpreted using frequency and percentage distribution, and mean and standard deviation to establish the challenges experienced by the college students and adaptation used during the online classes. Meanwhile, to measure the association between the level of challenges experienced by the college students and adaptation used during the online classes by the 2 schools of different countries, Pearson-r was employed.

Results and Discussions

The results obtained were analyzed to answer the questions presented in the statement of the problem. The results are as follows:

Table 1. Frequency and percentage distribution of respondent's school

School	Frequency	Percentage
HEI-Philippines	1438	76.4%
HEI-Indonesia	445	23.6%
Total	1883	100%

Table 1 presents the total number of respondents in the study. These are the 1,883 colleges from private higher education in the Philippines and Indonesia, this shows that 1,438 (76.4 %) are undergraduate students from the universities in the Philippines who are enrolled

in Nursing, Pharmacy, Medical Technology, Dentistry, and Psychology. Meanwhile, the programs of studies included as respondents from the school Indonesia are the undergraduate students in Diploma in Nursing, Bachelor of Science in Nursing, Physiotherapy, and Midwifery.

Table 2. Frequency and percentage distribution of respondent's home internet connectivity.

Internet Connection	Frequency	Percentage
Strong	412	21.9%
Intermittent	1339	71.1%
Limited	131	7%
Total	1883	100%

The table reflects that the majority of the respondents (71%) have an intermittent internet connection. This data was included since the gathering of data was conducted online with the questionnaire filled in Google form. There are many assertions that internet connection is the primary concern of students

during online classes (Khali, et.al, 2020; Chappay, 2020; Baloran, 2020). Specifically, a study on the experiences of students during online classes confirmed that the recurring difficulty in remote areas is unstable connectivity due to geographical location and weather conditions (Rotas, 2020).

Table 3. Mean and standard deviations of respondent's challenges during online class

Challenges	HEI-Philippines			HEI-Indonesia		
	Mean	SD	VI	Mean	SD	VI
Role Expectation	2.73	0.65	Moderate extent	2.00	0.44	Some extent
Physical Environment	2.87	0.64	Moderate extent	2.14	0.52	Some extent
Internet Connectivity Experience	2.66	0.71	Moderate extent	2.23	0.45	Some extent
Technology Literacy	2.84	0.84	Moderate extent	2.00	0.41	Some extent
Learning Pedagogy	3.21	0.52	Moderate extent	2.09	0.35	Some extent
Behavioral Intention	3.11	0.50	Moderate extent	2.05	0.31	Some extent
Challenges	2.90	0.41	Moderate extent	2.08	0.26	Some extent

*VI – Verbal Interpretation

The table presents the mean scores and SD for the extent of challenges college students encounter during online classes. On challenges, the college students from the Philippines yielded a moderate extent (\bar{x} =2.90; SD= 0.41) while the college students from Indonesia resulted to some extent (\bar{x} =2.80; SD= 0.26). Specifically, the greatest challenge for the Philippines students is related to learning pedagogy

(\bar{x} =3.21; SD= 0.54). Particularly, it pertains to the following challenges: on submission of requirement and module post-task (\bar{x} = 2.92; SD= 0.82); fast-paced delivery of content-based schedule \bar{x} = 2.86; SD =0.85); different strategies and approaches of teachers in the delivery of the course content (\bar{x} = 2.95; SD= 0.78); limitations on interactions with classmates for group requirements (\bar{x} = 2.94; SD= 0.89); and

lastly, voluminous content and lessons in every modules of the course (\bar{x} = 2.94; SD= 0.85). Similarly, the findings of the study conducted through survey and academic interviews wherein the 100 undergraduate and postgraduate students from Sri Lanka mentioned that lack of communication with teachers, high demands of self-study, and the number of assignments delivered online discouraged them from studying (Gamahe, et.al, 2022).

Meanwhile, the challenges encountered by the students from Indonesia pertain to internet connectivity (\bar{x} = 2.23; SD=0.45). Specifically, it pertains to poor internet connection (\bar{x} = 2.90; SD= 0.80) and unavailability of appropriate laptops and gadgets suitable for online classes (\bar{x} = 2.21; SD= 0.84). The finding is similar to the study conducted by Suliworo, et. al. (2020) among 60 students in Indonesia on learning analytics to predict students' achievement in

online learning during the pandemic on implementation of early childhood curriculum using Moodle. The study shows that complaints about the sudden online learning about the power bandwidth resulted in slow system response which eventually led to less effective student-learner interaction.

Concerning previous studies (Barrot, et.al,2021; Ade. et.al, 2022; Gamage, et.al, 2022; Rotas and Cahapay, 2022), the current study has complemented their findings that role expectation (\bar{x} =2.73; SD= 0.65: \bar{x} =2.00, SD= 0.44), physical home environment (\bar{x} = 2.86; SD=0.64: \bar{x} = 2.14; SD=0.54), technology literacy (\bar{x} = 2.84; SD=0.84: \bar{x} =2.00; SD=0.41), and behavioral intention (\bar{x} = 3.11: SD=0.50 : \bar{x} =2.05: SD=0.31) are the challenges experienced by the students within the context of COVID -19 pandemic.

Table 4. Mean and standard deviations of respondent's adaptation during online class

Adaptation	HEI-Philippines			HEI-Indonesia		
	Mean	SD	VI	Mean	SD	VI
Comfort of Home Environment	3.03	0.48	Moderate extent	2.07	0.33	Some extent
Teaching-Learning Methodology	3.14	0.57	Moderate extent	1.94	0.38	Some extent
Resources and Infrastructure	3.03	0.56	Moderate extent	2.10	0.34	Some extent
Affective Domain	3.03	0.57	Moderate extent	1.80	0.38	Some extent
Financial Capability	2.67	0.68	Moderate extent	2.16	0.53	Some extent
Adaptation	3.01	0.42	Moderate extent	2.01	0.26	Some extent

*VI – Verbal Interpretation

The table reflects the mean scores and SD for the extent of adaptation utilized by college students during online classes. The adaptation based on identified factors employed by the college students from the Philippines shows a moderate extent (\bar{x} =3.01; SD= 0.42) while the college students from Indonesia utilized adaptation to some extent (\bar{x} =2.01; SD= 0.26). Specifically, the most numbered adaptation strategies used by the students from the Philippines are related to teaching-learning methodology (\bar{x} =3.14; SD=0.57). Particularly, it pertains to the following adaptation strategies: availability of instructional materials/modules (\bar{x} = 2.92; SD= 0.83); self-paced learning (\bar{x} = 2.87; SD= 0.83); flexible time for learning (\bar{x} = 2.85; SD= 0.86); easy access to materials and related documents needed for assignment completion any

time of the day (\bar{x} = 2.93; SD= 0.82); immediate response of teachers to students (\bar{x} = 2.68; SD= 0.81); and lastly, attendance to individual needs of students by the teachers handling the course/subject (\bar{x} = 2.85; SD= 0.79). On the contrary, Barrot, et.al. (2021) asserted investigating the 200 students enrolled in a private higher education institution in the Philippines that the respondents had limitations in completing the requirements for certain subjects and had difficulties in selecting the learning areas and study schedule in online classes during the pandemic. However, the findings confirm the result of the cross-sectional study conducted among 145 Dentistry students as the respondents wherein 87.6% reported a high degree of comfort adapting to technology (Hung, et.al., 2020. However, the findings on

behavioral intention contradict the result of the study by Hung, et.al. (2020) wherein, the findings reflected that dentistry students have difficulty focusing on their schoolwork (43.1%) and have difficulty finding motivation to study (44.5%).

In addition, the adaptation strategies employed by the students from Indonesia pertain to financial capability ($\bar{x}=2.61$; $SD=0.53$). Specifically, it pertains to cost-cutting off daily expenses ($\bar{x}= 2.80$; $SD= 0.91$) and landing a part-time job ($\bar{x}= 2.30$; $SD= 0.84$). The pandemic brought about not only the crisis and inequalities in the educational system but also in the

economy within and across countries. These assertions were confirmed by Adakwah (2021) and Day, et.al. (2021) on the relationship of online classes to the economic profile of students. Also, Barot (2021) mentioned that financial problems experienced by students in a developing country during the pandemic are linked to a lack of financial resources to access to internet, educational materials, and equipment necessary for online learning. However, the findings made a positive impact on the students since they were able to practice cost-effectively in daily living and some students were able to have an online job while studying.

Table 5. Pearson Correlation of Respondents' Challenges and Adaptation

		HEI-Philippines		HEI-Indonesia	
		1	2	1	2
Challenges	Pearson Correlation	1	0.153	1	0.485***
	Sig. (2-tailed)		0.000		0.000
Adaptation	Pearson Correlation	0.153***	1	0.485**	1
	Sig. (2-tailed)	0.000		0.000	

***Weak Correlation = 0.10 – 0.29

**Moderate Correlation = 0.30 – 0.49
Significant Correlation

The table presents the relationship between the challenges and adaptations based on identified factors among college students from the Philippines and Indonesia. On both challenges and adaptation, there is a positive correlation between HEI-Philippines and HEI-Indonesia. The correlation coefficients (0.153 and 0.485) suggest a positive linear relationship, and the low p-values (0.000) indicate that these correlations are statistically significant. The sudden transition to online teaching and learning can be affected by geographical location. The findings of the study are similar to assertions by Gamage et.al. (2022) that learners particularly those living in rural areas were affected by the extent of internet access, available electronic devices, new learning environment, and mental health imbalance.

Conclusions

Among all the different challenges and adaptations of college students in both countries, the findings reveal that the quality of learning acquisition and students' transformed

environment were most affected by the pandemic. The peculiarity of the students' responses may have been shaped by the different factors situated around him/her such as the availability of resources, type of learning platforms, computer literacy, student personality behavior towards learning, family structure, and the physical environment. Future research may further investigate the mentioned contributing factors that lead to adaptations of students in online classes.

The findings of this study may provide the students with relevant information to surpass hurdles during online classes since many schools are continuously adopting the same mode of delivery in the teaching-learning process. The data of this study highlights students' mental health. The pandemic largely affects the students' mental well-being (Copeland et.al (2021); Fawaz et.al (2021); Barot et.al. 2021). This can be a reference in providing attention to the aftermath effect of the pandemic on students. The school administrators and teachers may also use the findings of this study to

establish policies and programs that will focus on students' mental health.

The limitations encountered in this study need to be acknowledged and addressed. Although there is a relatively large sample size, the participants were limited to only two schools in different countries with students enrolled in health sciences programs. Future research may expand the context of the study to higher education institutions of both private and government-owned/ state universities. To illustrate the robustness of the findings, future research may consider investigating the teacher's experiences to widen the perspective on other actors in the teaching-learning process. On a final note, the pandemic phenomenon has undoubtedly transformed the educational landscape worldwide. Both the positive and negative impacts made the education system stronger and will survive future threats.

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