International Journal of Education, Business and Economics Research (IJEBER)



ISSN: 2583-3006

Vol. 4, Issue.2, Mar-Apr 2024, pp. 301-327

To cite this article: Marife B. Sesor (2024). Students' Performance in General Education Courses Using Blended Learning Modality among Private Higher Education Institutions in Tabaco City. International Journal of Education, Business and Economics Research (IJEBER) 4 (2): 301-327

STUDENTS' PERFORMANCE IN GENERAL EDUCATION COURSES USING BLENDED LEARNING MODALITY AMONG PRIVATE HIGHER EDUCATION INSTITUTIONS IN TABACO CITY

Marife B. Sesor

Bicol College Cor. J.P. Rizal & R.F. Tabuena Sts. Daraga. Albay, Philippines 4501

https://doi.org/10.59822/IJEBER.2024.4214

ABSTRACT

Technology is opening new horizons for academe which is changing the world in the phase of learning and teaching. This study assessed blended learning modality on students' performance in the general education courses in private higher education institutions in Tabaco City. The findings of the study revealed that the majority of the students have performed well in using the blended learning modality and among the nine GECs the top three courses with the highest grades are: Art Appreciation, Ethics, and Mathematics in the Modern World. Three identified factors affect the performance of the students in having this modality which are Physical Factors, Student Factors, and Teacher Factors. Institutions among the three groups of respondents along with the three variables have almost similar responses on this modality considering the environment, internet, and seminars for BLM. However, the result shows that there were Private Higher Education Institutions that compromised on some indicators provided based on the results. Among the administrators, teachers, and students the highest coping mechanism considers the environment, time management, and openness to change and development. Hence, the researcher recommends adopting more potential intervention programs in future blended-based teaching through creating a strategic plan on BLM along GECs especially with the low-performance courses as academe requisites innovation.

KEYWORDS: General Education Courses (GECs), Higher Education Institutions (HEIs), Blended Learning Modality, Coping Mechanisms, Students' Performance, Bicol College Daraga, Albay Philippines.

© The Authors 2024
Published Online: Mar 2024

Published by International Journal of Education, Business and Economics Research (IJEBER) (https://ijeber.com/) This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: http://creativecommons.org/licences/by/4.0/legalcode

1. INTRODUCTION

Improvement and advancement of teaching and learning are advancing in a worldwide period since the 21st century requires aptitudes to be obtained by the educator and the learners to manage with the requests of worldwide instruction that each school ought to address to innovation progression. It is a road to progress as people utilize innovation for scholarly purposes. Without a doubt, in most nations, fundamental instruction is these days seen not as it were as a right but moreover as an obligation, while governments are regularly anticipated to guarantee fundamental instruction, whereas citizens are regularly required by law to accomplish instruction up to a certain essential level. Worldwide instruction intercontinental strategies of educating from around the world frameworks to empower the universal improvement of natural maintainability, as well as contribute toward bracing worldwide businesses, according to EdTech Survey, (2019).

These instructive activities prioritize worldwide getting to school from the primary to the college levels, the way learning encounters plan understudies for multinational authority parts. Hence, transitioning globalization includes transitioning in so many aspects, basically within the academe agreeing to a commentary in Instruction and Instructor Preparation (Nelson, K. 2021).

Verifiably, the world went through an extraordinary development in instruction over the past two centuries. This could be seen in overall amount measures. For case, worldwide education rates have been climbing over the last two centuries, basically through expanding enrollment rates in essential teaching and learning instructions.

Secondary and tertiary education on the other hand has seen too exceptional development, with the worldwide academe basis much higher presently than a hundred long times back. Despite all these around the world changes, a few nations have been lagging primarily missing innovative signs of progress within the academe, primarily in sub-Saharan Africa, where there are still nations that have proficiency rates below 50% among the youth, Neha (2023). The need for innovative progress may influence the headway of learners, particularly nowadays when the world has uncovered numerous modern patterns in technology, Roser, M. (2022).

For that said, mixed learning could be a common outgrowth of the ubiquity of the web and over the past 20 years, online innovation has touched almost every aspect of human endeavor, including education around the world. Innovation is opening modern skylines for instruction which is changing the world in the stage of learning. It isn't fair the definition of scholarly advancement but maybe an awesome portion of it. This too has been a fundamental portion of sustaining and changing society for a long time, and so its implantation with instruction was unavoidable through globalization. Both availability and instructing strategies are being changed by innovation in numerous ways. With the unused widespread reality that has assailed all-inclusive, instructing and learning activities have been pushed online. For a time, this widespread has displayed exceptional challenges to the worldwide instructive framework, particularly in higher education institutions having been within the breakthrough approach of changes in the conventional set-ups. Grasping this inventive concept that holds the preferences of both conventional educating within the classroom and backed learning including both offline learning and online learning, indeed, may be an alter.

Also, being able to memorize remotely has made instruction more broadly open for everybody. Online instruction permits individuals who work full-time to encourage their learning remotely in their possession time, children who do not suit conventional tutoring can work at pace in a safe environment, and individuals who live an elective way of life due to ailment or travel can get an instruction. It is a road and an opportunity to individuals and it must be taken as an advantage. (Nsouli, N. 2021)

For ASEAN nations, instruction is the center of advancement and contributes to the enhancement of ASEAN competitiveness. The ASEAN Constitution, propelled in 2007, clearly emphasizes the vital significance of closer participation in instruction and asset development among ASEAN part nations. Globalization has an extraordinary effect on instruction. In this respect, one eminent academic activity is the move towards a shared national capabilities system, which points to promoting the acknowledgment of capabilities and quality affirmation within the arrangement in terms of instruction.

Agreeing with Movchan (2020), the term mixed learning describes how e-learning is coordinated or combined with a more conventional classroom setup, offering a study. This specific breakthrough learning approach makes sure that the group of onlookers remains locked in and that their general learning encounter is beneficial. The learning technique is more popular among people who have one-of- a-kind learning styles as this procedure caters to a person's needs with more adaptability and convenience. Blended learning has picked up notoriety in Asia since the current organization of improvement of mixed learning in higher education in China, Korea, Japan, and Singapore and the challenges encountered according to the International Diary. These countries are known for their progression not fair within the economy but within the instructive framework. Whereas mixed learning is well-received in Western culture, it has met with changing degrees of victory in Asia due in portion to the distinctive recognitions of educators and understudies towards mixed learning approaches. In China, for illustration, whereas mixed learning was well-received, the dominance of conventional instructing strategies goes against the conditions required for mainstream mixed learning.

In the Philippines, mixed learning was built in 2007, according to Tupas and Laguda, (2020). The Center of Mixed Learning began and had exceptionally positive reactions from the parents and understudies. In addition, blended learning (BL) is embraced in subjects like English expressly in Languages, Science, and Social Studies. It is also COVID-19 that influenced the lives of all learners from primary to tertiary levels within the Philippines last 2020. There have been numerous stories of learners being bothered by the spread of the dangerous infection as schools all over the nation were closed. All the scholarly encounters were pilot thinks about the approach.

Considerately, the primary widespread has had a significant effect on instruction not as it were within the Philippines but all over the world. Within the Philippines besides, whereas the government and well-being authorities are attempting to straighten the epidemiological bend of the dangerous infection, the Department of Education (DepEd) and the Commission on Higher Education (CHED), are two offices that maintain the instructive framework, are working on

difficult to move the methodology of instructing from customary "face-to-face" learning, or the conventional "brick-and-mortar schools" to so-called "blended learning" (The Asean Post, 2020). The deliberate of the diverse offices within the Philippines overseeing primary to tertiary instruction is to ceaselessly amplify quality education to learners within the nation by utilizing "blended learning" despite the self-evident danger of COVID-19 isn't as it were justifiable but commendable, Uy, (2020).

Undoubtedly, transitioning implies gambling from numerous angles in the scholarly field. For what it's worth although, teaching the youth even during a widespread is still vital. The student's educational modules ought to be outlined to center on learner-centered, and problem-based, joining different learning hypotheses. Hence, the Philippine Instruction Standard works with current patterns and developments counting the utilization of this blended learning approach from primary to tertiary instruction.

According to the Philippine Qualification Framework (PQF) website in 2020, developing one a kind of locking-in substance, and creating a profitable environment of blended learning, whether it is on the corporate or understudy level, isn't continuously simple and can be very challenging for numerous reasons and could be a primary figure influencing their execution or the grades in each course. The improvement of this learning strategy involves the integration of an online course program and its essential know-how by both the focus on the gathering of people and the substance engineer. That's the reason of a few of the tertiary HEIs in Bicol have acquired or subscribed to eLearning materials to manage with the academe's request and development.

Essentially, such kind of learning platforms cannot be gotten to within the absence of satisfactory web access. Typically basic to get total and simple to get to the learning fabric and to memorize in a blended learning environment. The most grounded perspective of blended learning is the chance to get personalized preparation for each person, catering to their learning needs and considering students' settings that will certainly be based on their engagements in school. This means that each student has diverse learning capabilities and not all of them are continuously on the same page in terms of getting a handle on the information and aptitudes. They may select the path through particular theme zones as they deem right.

Indeed after the surge of COVID-19, diverse colleges and colleges in the Bicol still embrace blended learning modality at the tertiary level. Right now, the Commission on Higher Education is asking on educating and learning modalities employed by Higher Education Institutions (HEIs) inside their purview beneath CMO No. 108 s. 2023. Concurring to this CMO, the blended learning modality category applies to programs that still embrace a mixed approach, comprising of the taking after prerequisites: a) For Public HEIs: at least 75% of the courses per program are delivered through onsite instruction, with the remaining courses being conducted off-site or online, b) For Private HEIs: at slightest 50% of the courses per program are advertised onsite, whereas the remaining courses are conveyed off-site or through online modalities, (CMO No. 108 s. 2023).

The academic performance of the learners is fundamentally based on their composed works, execution of academic requirements, and portfolio appraisals at all levels. These are the three

criteria that instructors are looking at to come up with the learners' normal grades for promotion to a higher grade level. As an example, written works refer to book or article audits, papers, diaries, response or reflection papers, reports, data recording and examination, research facility reports, and the development of work plans and charts.

This surveyed the students' execution with the utilization of blended learning modality within the common instruction courses in private HEIs in Tabaco City. A few HEIs embraced blended learning since COVID-19 was widespread and the analyst set a degree on surveying its execution through the students' performance within the final school year. Educators of common instruction subjects for the most part executed this approach since these have fewer practicum and onsite exercises. They surveyed all the private higher institutions in Tabaco City that executed blended learning in all nine General Education Courses for the school year 2022-2023. There are diverse variables evaluated in this modality which include the physical variables, students' variables, and the teachers' variables. The motivation of the study considers the extent of the student's interest in their learning handle in blended learning modality in all general education courses, especially with common instruction subjects, and proposes a key arranged plan to strategize the modality.

Objectives of the Study

This study assesses the following variables in the implementation of the use of blended learning modality on students' performance in general education subjects in terms of different variables:

- 1. Determine the performance of the students in the general education courses utilizing blended learning modality
- 2. Identify the factors affecting the performance of the students in terms of:
 - a. Physical Factors
 - b. Student Factors
 - c. Teacher Factors
- 3. Infer on the significant agreement on the rank order of the factors affecting the performance of the students
- 4. Examine the coping mechanism used by:
 - a. The Administrators
 - b. The Teachers
 - c. The Students
- 5. Propose a strategic plan on how to enhance the adaptation of blended learning modality in all general education courses in different programs

Theoretical Framework

In 2000, Garrison, Anderson, and Archer as the advocates of this model, distributed a hypothetical system created to structure the method of learning in a web or blended environment.

The Community of Inquiry (CoI), a show of inquiry-based instructing and learning, is based on the work of John Dewey and valuable sees of experiential learning. The CoI model depicts the necessary components to make profound and significant learning. The first phase distinguishes the instruction involvement as happening at the joining of three components: cognitive, teaching, and social.

As a premise hypothesis, it appears three major angles were designed within the destinations of the consideration to propose a vital arrangement of blended learning modality based on the result of the execution of the student's performance within the nine GECs. CoI is interconnected with the student's performance in terms of grades and all perspectives of the evaluation on the mentioned school year. The figure is subdivided into three causes which are physical factors, students' factors, and teachers' factors. The physical factors, included offices, accessibility of innovation, and the school and online environment.

On the other hand, the students' factor calculation included the intrigue of the evaluated understudies, the statistic area, and other curricular activities. In conclusion, the teachers' factor incorporates the techniques utilized in the blended learning modality and training about the common instruction educational programs. The instructor who is the facilitator, arbitrator, and advisor of the blended learning approach has great responsibilities in this modality. The educator is additionally unused to blended situations and will co-evolve with understudies as both engage with and adjust to each other and the other four components within the framework. Blended learning will adjust to pedagogies fitting not as it were for blended learning but moreover for learners planning to lock in beneficially in 21st-century social orders, which are characterized by critical diversity. Most critically, the internet has gotten to be a central point for a possibly flexible modality. Innovation for learning requires new roles for the learner and instructor and unused ways of getting to and working with substance.

Humanistic Learning Theory incorporates teachers' and students' factors and methodologies amid the blended learning modality among the nine GECs. Its advance emphasizes the freedom and autonomy of learners and teachers within the academe. It interfaces the capacity to memorize and to instruct with the fulfillment of other needs agreeing to Maslow's progression and the seen utility of the information by the learner.

The Theory of Performance by Elger 2007 is adjusted with the student's performance, and accomplishment, and the GECs as a foundation for all major courses. Agreeing to Elger (2007), there are six components of execution levels, and they are: level of information, levels of abilities, level of personality, individual components, and settled components for successful execution as performer's attitude, stream in an enriching environment, and engagement in lesson talks.

The final figure of the framework connected with all the specified components over influencing and relating with each component. The researcher interconnects that physical and human component factors contribute to the learning performance of the students.

Conceptual Paradigm

The researcher utilized the context, input, process, and product (CIPP) model that was made in the 1960s by Daniel Stufflebeam and considered a decision-oriented model that efficiently collects data to a program to recognize qualities and impediments in substance or conveyance and to make strides program effectiveness or arrange for long-standing time of a program. From that point, since blended

International Journal of Education, Business and Economics Research (IJEBER) Vol. 4 (2), pp. 301-327, © 2024 IJEBER (www.ijeber.com)

Learning has gotten expanded consideration with the innovation of internet advances into the learning and educating handle, this model is considered. Essentially all courses in higher education join data and communication innovations to a few degrees. Some researchers consider centering on blended learning that coordinates the foundation of minor subjects at the tertiary level. According to Brown Center Chalkboard (2020), COVID-19 widespread has presented vulnerability in major angles of national and worldwide society, including schools that shifted to BLM.

Context

The researcher inspected the assets and foundation within the program, such as the scope title of the study itself, the supporting CHED Memo, scholastic records of the students, and the cited related literature. The two CHED Memo concerning the common instruction subjects and the usage of blended learning as such: CHED Notice 20 s. 2013 and CHED Notice 6 s. 2022. Recorded as well are the given assessments of the students from the different higher education institutions such as the grade sheets utilized by distinctive teachers. It was moreover backed by all the recorded related studies associated with the research title.

Input

Once the objectives were surveyed, the researcher moved to the input assessment of the Framework. In the input phase are the affecting factors: physical factors' human factors of both the teachers and the students and the scholastic performance of the students. This phase moreover collects information on different factors affecting each other.

Process

The third one is the process where all the data-gathering procedures happen. Adapting components are procedures that offer assistance to the respondents' occurrences experienced within the blended learning modality. This assistant talked about the behaviors and activities that can offer assistance to them to adapt in a positive way to realize their objective within the individual GEC. It is also the phase where all the gathered data are interpreted and analyzed.

Product

At last, the researcher utilized CIPP to degree the arrangement of the proposals for advance arranging of the supportability upon execution of the blended learning modality in all the mandated nine GECs. The researcher made a strategic plan in BLM with the assistance of the investigation and appraisal of the modality and results of the study.

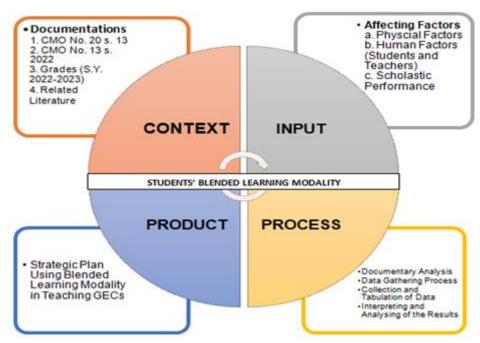


Figure 1. Conceptual Paradigm

2. METHODOLOGY

To achieve the research objectives, descriptive correlational method was used in the study which means that it fitted to explain the relationship between two or more variables without making any claims about cause and effect having large populations such as all private higher education institutions in Tabaco City consisting of different numbers of administrators, teachers, and students. This is the most appropriate method to use since facts are highly needed to identify, interpret, and assess the implementation of this approach to the respondents. The tools employed for generating responses are self-made-questionnaires.

This study used three different questionnaires, for the students, teachers, and administrators, designed with different sections. There were three phases conducted by the researcher in this study: Phase I, Phase II, and Phase III. The respondents of the study are officially enrolled students from all the courses offered in all higher education institutions in Tabaco City, administrators, and GEC teachers. To answer the problem formulated in the study, the gathered data took all the respondents so there were no sampling techniques used. It was a total enumeration of all the respondents of the three different institutions as presented in Table A.

Table A. Respondents of the Study

Schools	Respondents	Male	Female	Total
	Administrators	1	0	1
Α	Teachers	3	8	11
	Students	19	6	25
	Administrators	1	0	1
В	Teachers	3	6	9
	Students	25	75	100
	Administrators	0	1	1
С	Teachers	2	11	13
	Students	212	242	454
		Administrators		3
	Total	Teachers		33
	Total	Students		579
				615

The interpretation of data, using adjectival interpretation is shown below:

SCALE	QUANTIFICATION	ADJECTIVAL INTERPRETATION
5	4.50- 5.00	Highly Affected
4	3.50- 4.49	Affected
3	2.50 – 3.49	Moderately Affected
2	1.50 – 2.49	Less Affected
1	1.00 – 1.49	Not Affected

Correlational analysis was the data analysis method applied during the survey. A Spearman correlation was used to compute the factors affecting the students' performance using this formula:

$$ho=1-rac{6\sum d_i^2}{n(n^2-1)}$$

The data described in this method defined and predicted how variables were naturally related in the real world without the researcher attempting to alter them or assign causation between them. The reason for choosing this research design was because it could expose the data gathered from the implementation stages deeply. The data obtained through the questionnaire were cross-checked with the ones obtained through the observation, and documentation as well as the conversation among the administrators and teachers.

Finally, multiple regression analysis was done between student variables and design elements with learning outcomes to determine the significant predictors for blended learning effectiveness and what factor was mainly affecting students' performance. All the respondents were ensured of ethical adherence to informed consent procedures such as using simple language to ensure that

participants thoroughly understood research activities and expectations. With regards to confidentiality, standard data protection strategies such as protocols on conducting school research when and how to access data, clear and well- defined data management plans, and using specialized data management to ensure data protection.

3. RESULTS AND DISCUSSIONS

Table 1 show the data on the performance of the students in general education courses in private HEIs in Tabaco City. The table consists of the GEC Code as mandated by CHED ROV, its corresponding descriptions, the average grade per HEIs among the three respondents per GEC, a general weighted average of the three HEIs and the rank on the high course has the highest grades.

Table 1
Performance of Students in General Education Courses in Private Higher Education
Institutions in Tabaco City

institutions in Tabaco City											
GEC CODE	DESCRIPTION	AVER	AGE PEI	R HEIS	GWA	RANK					
		A	В	C							
GE 1	Understanding the Self	1.9	2.2	2.3	2.1	8.5					
GE 2	Readings in the PH History	1.9	2.2	1.7	1.9	6.5					
GE 3	The Contemporary World	2.2	2.1	2.0	2.1	8.5					
GE 4	Mathematics in the Modern World	1.9	1.7	1.6	1.7	2.5					
GE 5	Purposive Communication	2.0	1.6	1.8	1.8	4.5					
GE 6	Arts Appreciation	1.3	1.5	1.4	1.4	1					
GE 7	Science Technology and Society	1.8	2.0	1.6	1.8	4.5					
GE 8	Ethics	1.8	1.9	1.5	1.7	2.5					
GE 9	The Life and Works of Rizal	2.0	1.9	1.8	1.9	6.5					

Students received the highest grades in GE 6- Arts Appreciation using blended learning modality last school year. According to Straighter Line Online Education (2023), art appreciation equipped students

with the vocabulary to understand and discuss the arts while introducing them to various mediums. Because it is a great part of the culture and advancement, GE 6 is sustainable in using BLM. Various visuals can be viewed and interpreted online that do not require face-to-face discussions.

Moreover, a report by the Rand Corporation in 2020 found that art appreciation can connect people deeply to the online world and open new ways of seeing it in different various mediums. The study

of art appreciation develops several skills that are in demand by every employer across industries and that are relatable to the demand for technology in this generation. It is followed in rank by GE 8- Ethics and GE 4- Mathematics in the Modern World. Ethics is a crucial aspect that ensures the success of any individual through traditional interactions or online platforms that talk about human righteousness.

Quora 2021 says that studying ethics online helps individuals understand the moral principles and values that guide decision-making in terms of incorporating online self-assessment. It also helps students to look at their own lives and evaluate actions, choices, and decisions through online evaluation. On the other hand, GE 4 which is Mathematics in the Modern World, is at the same rank.

An overall study of Edutopia by Holland in 2021, stated that blended learning can improve elementary to tertiary math subjects through assessing online outcomes of the students. The most important aspect of teaching mathematics subjects using BLM is considering what engages, helps, and grows students' numeral literacy and understanding. Online activities in both GE 8 and GE 4 are a great sustenance to students in using blended learning modality.

On the contrary, GE 1- Understanding the Self is at the lowest rank among the nine GECs. Since the interactions of the students have been limited, socialization during blended learning classes has been also put in confines. It is supported by the study of Montera 2020, stating that student engagement has an important influence on achievement and learning in higher education. This thereafter, understanding the lessons in GE 1 has to be balanced with more engagements. It mirrors the quality of the institution and is an excellent indicator of student academic success.

Though it also has a high GWA, GE 1 tends to have more incorporation of the curriculum to the engaging activities and assessment among students. The importance when we have a better understanding of self is that it may lead to experience as unique and separate individuals. It may be empowered to make changes and to build on our areas of strength as well as identify areas where we would like to make improvements.

On the other hand, social sciences must take consideration for people to understand how to analyze not only their behavior but also the behavior and motivations of their peers. The social sciences also give us a better understanding of how to create more inclusive and effective institutions, Liberto (2023).

Further, according to the University of the People in 2023, social studies is one area in education where content integration is key. Students are given reading material that corresponds with the current learning topics.

The second table identifies the factors affecting the performance of the students in terms of the physical facilities answered by the three administrators from different HEIs. There were ten listed indicators to be assessed with the use of a Likert scale.

Table 2 A
Physical Factors Affecting the Students' Performance (N=3)

Indicators		5		4		3		2		1	TWM	AI
	<i>(f)</i>	(wm)	(f)	(wm)	(f)	(wm)	(f)	(wm)	(f)	(wm)		
1. Assures that the	2	3.33	1	1.33	0	0	0	0	0	0	4.66	HA
syllabi/ syllabus meets												
the courses intended												
learning outcomes in the												
respective GE subject												
regardless of the												
environment.												
2. Ensure the teaching-	2	3.33	1	1.33	0	0	0	0	0	0	4.66	HA
learning process by												
adapting and												
implementing aligned												
outcome-based												
approaches through												
blended learning												
environment.												
3. All of the teaching	3	5.00	0	0	0	0	0	0	0	0	5.00	HA
strategies in blended												
learning applicable in all												
demographic settings.												
4. Reassures that the	3	5.00	0	0	0	0	0	0	0	0	5.00	HA
content of the syllabus												
meets the general												
education program												
outcomes as prescribed												
by												
the respective CMO.												
5. The use of e-learning	1	1.67	1	1.33	0	0	0	0	0	0	4.00	A
systems in blended												
learning modality helps												
in assessing												
student's performance at												
home.												
6. The facilities and	2	3.33	1	1.33	0	0	0	0	0	0	4.66	HA
teaching environment is												
a major factor needed in												
this												
modality.												
7. Securing the	3	5.00	0	0	0	0	0	0	0	0	5.00	HA
availability of												

International Journal of Education, Business and Economics Research (IJEBER) Vol. 4 (2), pp. 301-327, © 2024 IJEBER (www.ijeber.com)

technology and internet												
connectivity is needed in												
the teaching modality.												
8. The faculty members	2	3.33	1	1.33	0	0	0	0	0	0	4.66	HA
are equipped with												
knowledge,												
skills and trainings to												
facilitate blended												
learning modality in GE												
subjects in												
the school premises.												
9. The institution has	1	1.67	1	1.33	0	0	0	0	0	0	4.00	A
secured internet												
connectivity during												
blended												
learning classes.												
10. The institution caters	2	3.33	1	1.33	0	0	0	0	0	0	4.66	HA
to the needs of the												
instructors												
and students in blended												
learning classes.												
Average											4.63	HA

Legends		
Scale	Quantifications	Adjectival Interpretation
5	4.50-5.00	Highly Affected
4	3.50-4.49	Affected
3	2.50-3.49	Moderately Affected
2	1.50-2.49	Less Affected
1	1.00-1.49	Not Affected

Table 2 presents the data from the school administrators showing how the different indicators affect the student's performance on physical factors including environment, setting, etc. inside the school premises or in any other area where BLM takes place.

All the indicators given were either highly affected or affected in the institutions. The computed total weighted mean of the ten indicators was 4.63 which means that all the indicators are highly affected in the three different HEIs.

In several countries, a low level of education is due to inadequate level of physical facilities. Physical facilities provide students with an adequate atmosphere conducive to learning. Modern physical facilities are important and have positive effects on student learning and performance (Shami and Hussain, 2020).

School facilities are physical factors that will greatly contribute to quality education.

According to Teixeira et. al., (2019), physical factors are designed to affect learning processes based on three characteristics: They must be natural (e.g. light and air quality), stimulating (e.g. colors and complexity), and individualized (e.g. flexibility of learning spaces).

The results showed that the relationship between physical school factors and student achievement is highly correlated. Physical factors also describe the materials used in BLM as such are indicators one and two: assuring that the syllabi/syllabus meets the course's intended learning outcomes in the respective GEC regardless of the environment and ensuring the teaching-learning process by adapting and implementing aligned outcome-based approaches through the blended learning environment. These two are highly affected. Three of the most agreed-upon physical factors also are indicators three, four, and seven. These three are about the content of the syllabi, teaching strategies, and internet connectivity at the school premises or settings.

Alignment is important to provide a method for determining the course appropriateness and on the other hand teaching strategies play an important role in classroom and blended learning instruction. Without the use of the strategy and material, teachers would be aimlessly projecting information that doesn't connect with the learners or engage them. Mainly, strategies help learners participate connect, and add excitement to the content being delivered using BLM.

Lastly, the importance of having secured internet connectivity is a must in BLM. Access to the internet is fundamental to achieving the vision for the future that the world is committed to achieving in 2030, Dogniez (2019). It can improve the quality of education in many ways and it opens doorways to educational resources in the new modes of learning.

Moreover, Table 2 B is about the students' factors affecting their performance in the nine GECs. It also has ten indicators and is assessed through the same scale. Students have the biggest number who responded in this study which is 579.

Table 2 B
Student Factors Affecting the Performance (N=579)

Indicators		5		4		3	2	2		1	TWM	AI
	(f)	(wm)	(f)	(wm)	(f)	(wm)	(f)	(wm)	<i>(f)</i>	(wm)		
1. Benefited from the	0	0	256	1.77	228	1.18	95	0.32	0	0	3.27	MA
course content and												
understood the subject												
matter of GE subjects												
taught in blended												
learning												
modality.												

International Journal of Education, Business and Economics Research (IJEBER) Vol. 4 (2), pp. 301-327, © 2024 IJEBER (www.ijeber.com)

2. Attained the learning	358	3.09	195	1.35	26	0.13	0	0	0	0	4.57	НА
outcomes of the course												
with an effective e-												
learning system.												
3. Encouraged to	385	3.32	99	0.68	95	0.49	0	0	0	0	4.49	A
participate in class												
discussions and to share												
ideas and knowledge												
with others according to												
my												
interest.												
4. Experienced	438	3.78	85	0.59	30	0.16	26	0.08	0	0	4.61	НА
difficulty due to lack of												
availability												
of some resources.												
5. Participated in all the	429	3.70	150	1.03	0	0	0	0	0	0	4.73	HA
assessments and												
evaluations of our												
instructor.												
6. Exercised the right	572	4.93	4	0.03	3	0.02	0	0	0	0	4.98	HA
manners and conduct	0.2	.,,,		0.00		0.02					, 0	
during blended												
learning.												
7. Comprehended the	429	3.70	150	1.03	0	0	0	0	0	0	4.73	HA
lessons but prefer face	T∠)	3.70	150	1.03			U				-1. /3	
to												
face classes.												
8. Experienced having	468	4.04	85	0.59	16	0.08	10	0.03	0	0	4.74	HA
time constraint in	1 00	4.04	0.5	0.59	10	0.08	10	0.03			4.74	
answering all the activities and												
assessments during												
blended learning												
classes. 9. Preferred to have	348	3.01	150	1.03	79	0.41	2	0.01	0	0	4.46	A
face to face assessment	348	3.01	130	1.03	19	0.41		0.01	0	0	4.40	A
of performances in GEC.												
	420	2.70	150	1.02	0	0	0	0	0	0	4.72	TTA
10. Developed interest	429	3.70	150	1.03	0	0	0	0	0	0	4.73	HA
during class with												
blended												
learning approach.											. =-	TT.
Average											4.53	HA

The total weighted mean computed in this table is 4.53 which means that the indicators are also highly affected based on the calculated answers of the students. Exercising the right manners and conduct during the blended learning modality has the highest agreed of implementation which is 4.98 total weighted mean of the respondents.

Regardless of the teaching and learning modality, students must exercise good manners at school. It is believed by Ray and Robert (2020) that good manners are a strong indication of how people behave in the future. It may indicate how individuals could be reliable, dependable, and selfless. This will better help students to be flexible in all general education courses in terms of coping and acceptance. Further, it also plays a crucial role in nurturing positive character traits and values in students. Having this modality that caters to modernized strategies, students must also be guided in not just the knowledge but the values amidst the new modalities in the academe.

Table 2 C shows the teacher factors affecting the students' performance. There were 33 teachers who assessed the ten listed indicators. Since teachers are considered facilitators of learning, this table identified the factors that contributed to their teaching styles and strategies during the blended learning modality in general education courses mandated by CHED as the foundation subjects in the tertiary levels regardless of the program offerings.

Table 2 C
Teacher Factors Affecting the Students' Performance (N=33)

Indicators		5		4		3	4	2		1	TWM	AI
	<i>(f)</i>	(wm)										
1. Assures that the	13	1.96	10	1.21	10	0.91	0	0	0	0	4.08	A
syllabi/ syllabus meets												
the courses												
intended learning												
outcomes in the												
respective GE subject.												
2. Ensure the teaching-	23	3.48	7	0.85	3	0.27	0	0	0	0	4.60	HA
learning process by												
adapting												
and implementing												
aligned outcome-based												
approaches through												
blended learning												
modality.												
3. All of the teaching	20	3.03	11	1.33	2	0.18	0	0	0	0	4.54	HA
strategies in blended												
learning are aligned with												
the expected outcomes of												
the subject and												
are associated with												

International Journal of Education, Business and Economics Research (IJEBER) Vol. 4 (2), pp. 301-327, © 2024 IJEBER (www.ijeber.com)

appropriate evaluation.												
4. Reassures that the	23	3.48	10	1.21	0	0	0	0	0	0	4.69	HA
content of the syllabus	23	3.48	10	1.21	U		U	U	0	U	4.09	пА
meets the general												
education program												
outcomes as prescribed												
by												
the respective CMO.												
5. The use of e-learning	26	3.93	7	0.85	0	0	0	0	0	0	4.78	НА
systems in blended												
learning modality helps												
in assessing												
student's performance.												
6. The facilities and	30	4.46	3	0.36	0	0	0	0	0	0	4.82	HA
teaching environment is a												
major factor												
needed in this modality.												
7. Securing the	18	2.73	12	1.45	3	0.27	0	0	0	0	4.45	A
availability of technology												
and internet												
connectivity is needed in												
the teaching modality.	24	3.64	7	0.85	2	0.18	0	0	0	0	4.67	HA
8. The faculty members are equipped with	<i>2</i> 4	3.04	/	0.83	2	0.18	U	U	0	U	4.07	пА
knowledge,												
skills, and training to												
facilitate blended												
learning modality in												
GE subjects.												
9. The institution has	23	3.48	8	0.97	2	0.18	0	0	0	0	4.63	НА
secured												
internet connectivity												
during blended learning												
classes.												
10. The institution caters	20	3.03	10	1.21	3	0.27	0	0	0	0	4.51	HA
to the needs of the												
instructors												
and students in blended												
learning classes.												
Average											4.58	HA

All the ten indicators are either highly affected or affected. The total weighted mean of this table is 4.58 which means that the indicators were highly affected by teacher factors. The most agreed indicator has a 4.82 total weighted mean which means that the facilities and teaching environment a major factors needed in BLM. Watts and Firestone (2023), the teaching environment is a physical, psychological, and instructional atmosphere in both face-to-face and online classes.

Further, a learning environment that is positive because of the teachers can lead to greater student achievement and can create students who are comfortable, confident, and risk-takers. Smith (2020) believes that the teacher has an affecting factor on student performance, especially in securing and developing a learning environment where students feel motivated to learn within the boundaries and expectations.

Moreover, related studies it support that teachers can make a difference in their student's academic performance by being consistent with grading policies, giving students detailed instructions for completing assignments, and cultivating a supportive classroom atmosphere.

Table 3, assessed the significant agreement of the factors affecting the performance of the students in general education courses. It shows the significant agreement among physical, teacher, and student factors.

Table 3
Significant Agreement on the Factors Affecting the Performance of Students in General Education Courses

Factors	Computed	Computed	Tabulated	Decision
	rho	t-value	t-value at	
			1%	
A. Physical Facilities	± .22	.64	2.58	Ho= accepted
& Teacher Factors				
B. Teacher & Students' Factors	± .92	7.22	2.58	Ho= rejected
C. Physical Facilities & Students'	± .05	.14	2.58	Ho= accepted
Factors				

The computed t-value of teacher and student factors has a high value which is 7.22. This means that there is a large difference that exists between the teacher and the student factors. Showing the different factors and indicators in the instrument, the teachers are more affected by the materials and strategies used in BLM while the student's main concerns are the environment and the way of learning. On the other hand, both A and C factors have balanced values and accepted hypotheses which means that all the tested and supported documents in physical facilities and teacher factors and physical facilities and student factors have significant agreement, one factor affects the other among the administrators, teachers, and students.

The next table shows the coping mechanisms used by the administrators. There were five indicators used and the administrators had to answer yes or no depending upon their mechanisms in BLM.

Table 4 A
Coping Mechanisms Used by the Administrators (N=3)

Indicators	Yes	Rank	No	Rank
1. Modifying the activities and discussion	1	3	2	1
to suit the learner's needs and to align				
with the most essential learning				
competencies having a flexible				
modality and strategic plan				
2. Considering the	3	1	0	-
environment for teaching to				
have secured internet				
connectivity				
3. Having a sense of time management	3	1	0	-
and openness to change and				
development				
4. Peer monitoring support from the	2	2	1	2
stakeholders in providing materials for				
the learners.				
5. Utilization of environment,	3	1	0	-
technology, the internet, and other				
learning software applications and				
platforms that can aid in flexible learning				
modality				

Three administrators agreed that they highly considered three different coping mechanisms with the use of BLM in general education courses. First is considering the environment for teaching to have secured internet connectivity. Though this has brought the HEIs additional financial costs, internet connection is mainly important in BLM. It offers access to a wide range of online learning platforms and courses that supplement traditional classroom education.

Meanwhile, Adonis 2020 believed that sluggish internet connection provided a significant barrier to students, particularly those in remote places. Therefore, administrators cope with this modality by adding stable internet connectivity and considering platforms and software that benefit the learners. It is also connected with the second highly used indicator which is the development and utilization of environment, technology, the internet, and other learning software applications and platforms that can aid in flexible learning modality. As mentioned, one of the three private institutions have subscribed to an online learning platform which is Quipper which aids this institution in preparing and facilitating blended learning classes.

Lastly, having a sense of time management and openness to change is also used by the three administrators as a coping mechanism. Not all administrators have testified that they weren't

prepared for advancement in the academe, especially with this modality shift. They also underwent seminars and trainings to further engage with this modality. According to the administrators, embracing change helped them to be adaptable with new academic circumstances and lean flexible into the opportunities they offer. On the other hand, Table 4 B represents the coping mechanisms used by the teachers. Table 4 B has the same indicators used in the administrators so it assessed the coping mechanisms of the facilitators of this modality on how highly affected they are.

Table 4 B
Coping Mechanisms Used by the Teachers (N=36)

Coping Mechanisms	Yes	Rank	No	Rank
1. Modifying the activities and discussion to suit the learner's needs and to align with the most essential learning competencies with a flexible modality and strategic plan	32	5	4	1
2. Considering the environment for teaching to have secured internet connectivity	36	1	0	-
3. Having a sense of time management and openness to change	36	1	0	-
4. Peer monitoring support from the stakeholders in providing materials for our learners.	35	4	1	2
5. Utilization of technology, the internet, and other learning software applications and platforms that can aid in flexible learning modality	36	1	0	-

According to Stauffer (2022), the BLM is the reinforcement of multiple types of instructional materials along the way which means that the teachers have to cope with newly purchased or subscribed equipment and systems to support this modality which is under the indicator number five, rank one, because all the 36 teachers have agreed upon.

Mark Rose (2020) added that organizations of any size can optimize return on investments by saving costs while increasing engagement and retention through integrating e-learning into instructor-led programs.

The second coping mechanism is having a sense of time management and openness to change which the teachers must exercise during this shift of modality in GEC. According to Hart in 2020, the implementation of the effectiveness must focus on the reaction of the involved individuals, the learning, the behavior, and lastly the results which are also connected with indicator numbers two and three. Maintaining a safe and orderly environment that is still essential in blended learning is also considered by the teachers as their coping mechanism because having a conducive environment makes an individual productive.

Quora (2020) states that a safe school is one where teaching and learning are not distracted, disruptions are minimized and violence and fear are not present. The most effective approach to creating a safe environment in BLM requires a comprehensive and coordinated effort of the school administrators and teachers.

Lastly, table 4 C shows the results of the coping mechanisms of the students in using blended learning modality in GECs. It has ten indicators also answerable by yes and no. 579 students answered this part.

Table 4 C
Coping Mechanisms Used by Students (N=579)

Coping Mechanisms	Yes	Rank	No	Rank
1. Consult the teachers to cope with the	572	1.5	7	9.5
distractions faced during blended learning				
classes				
2. Use internet blocking site to just focus on the	569	5.5	10	5.5
useful resources in GECs				
3. Limit unnecessary use of technology during	566	7.5	13	3.5
scheduled learning				
4. Set achievable academic goals to stay on task	571	3.5	8	7.5
5. Create a study environment that is free from	562	9	17	2
auditory distractions and that has a conducive				
pace				
6. Prevent from engaging in irrelevant talks	566	7.5	13	3.5
during blended learning class discussions and				
assessment				
7. Watch educational videos on handling	569	5.5	10	5.5
distractions made by competent professionals				
along BLM				
8. Seek advice from parents to mitigate the	571	3.5	8	7.5
distractions experienced in daily learning				
9. Seek help from the teachers to overcome the	572	1.5	7	9.5
distractions I encounter when learning				
10. Read articles on how blended learning aids	560	10	19	1
students in learning motivations				

According to Cao (2023), blended learning has been found to have a positive impact on student outcomes such as performance, attitude, and learning achievement in various countries. Among the ten indicators, there were two that got the highest yes answers which are: seek help from the teachers to overcome the distractions encountered when learning and consult the teachers to cope with the distractions faced during blended learning classes. As teachers are the facilitators of learning, therefore they do not operate under the traditional concept of teaching but rather are meant to guide and assist students in learning through flexible materials, styles, and strategies.

It is followed by the numbers four and eight indicators. Number four is setting achievable goals to stay on task which showed that students made personal remedies or solutions by setting their goals. This was perceived that despite the distractions faced by the students in BLM, they can bounce back and strategize by setting personal goals to meet and accomplish tasks. This is in line with the Army and Navy Academy (2019) which emphasized that students should have a goal-setting mindset for it is a key part of achieving long-term success. Goals help students to focus on the journey to a collection of set achievements, meaning they allocate their resources and time more efficiently and can access motivation during times when they may feel like giving up.

Further, the number eight indicator is seeking advice from parents to mitigate the distractions experienced in daily learning. On the Annie Casey Foundation blog in 2022, it was stated that parental involvement securely sets students up to develop a lifelong love of learning which researchers say is the key to long-term success.

On the other hand, the least important among all the ten indicators is to read articles on how blended learning aids students in learning motivations. They said that the more they experienced it the more they would set solutions and mitigations rather than simply reading articles that they never experienced in a real glimpse yet.

Finally is the proposed strategic plan on how to enhance the adaptation of blended learning modality in all general education courses in different program offerings at tertiary levels. In essence, the three-year strategic plan entails the development of a sustainable blended learning system among private higher education institutions in Tabaco City for developing educational innovation of blended learning modality in the nine GECs. This will support the administrators, instructors, and students in developing their education strategy. Further, this affirms that active and in-depth learning must be central to the study program and that an effective combination of offline and online learning activities and instructions among all the nine general education courses will offer more opportunities to achieve a good students' performance with the use of this modality. This shared strategic plan encompasses both the development and management of technical facilities and the collective development of expertise in nine different courses.

3. CONCLUSIONS

Based on the findings, the following are the conclusions:

1. Performance of the Students in the General Education Courses Utilizing Blended Learning Modality

The majority of the students have performed well in using blended learning modality among the nine GECs. Two of the major factors contributing to the student's performance are the availability of technology and internet connectivity that affect teaching modality and the class discussions and sharing ideas and knowledge with others during blended learning classes. Students' performance is also influenced by the teaching strategies of GEC instructors who are equipped with knowledge, skills, and training to facilitate blended learning modality. Moreover, students are highly engaged and receive high grades in Arts, Ethics, and Mathematics which are subjects that tend to have more discussions, formulas, and theories. Students need more attention on the subjects that have to have

engagement and face-to-face evaluations such as Understanding the Self and Social Sciences which need to have personal sharing of thoughts and experiences.

2. Factors Affecting the Performance of the Students

Three identified factors affect the performance of the students in having blended learning modality which are the Physical Factors, Student Factors, and the Teacher Factors. Evaluating the effects of these factors and their associated dimension on this modality from the administrators', teachers', and students' perspectives revealed that these factors are the main drivers influencing blended learning modality. The physical factor that affects the students' performance most is internet connectivity issues in the blended learning modality. When it comes to the facilities and teaching environment as one of the major factors needed also in this modality, the HEIs highly agreed to its availability along the school premises or in their own environment study pace of students. The administrators have considered secured internet connectivity in the workplace but the students' environment varies on the demographic locations. The students have constraints in answering all the activities and assessments during blended learning interest in participation and assessment is being compromised. Students also prefer having face-to-face assessments in GEC which means that BLM is effective in class discussions only. Lastly, the teacher factors include teaching styles, training, and skills using blended learning modality. The teaching strategies that have been influenced by the facilities and teaching environment of the instructors have the highest affecting factor among the listed indicators.

3. Significant Agreement on the Factors Affecting the Performance of the Students

Teachers are more affected by the materials and strategies used in BLM while the student's main concerns are the environment and the way of learning. On the other hand, physical factors and teacher factors have balanced values which means that there is significant agreement, one factor affects the other among the administrators, teachers, and students.

4. The Coping Mechanism Used by the Administrators, the Teachers, and the Students

Among the administrators and teachers, the highest coping mechanisms considered: the environment for teaching to have secured internet connectivity. For an institution to work with the effectiveness of this modality, maintenance includes stable internet and new equipment and funding for quality education resources. It will also have standardized testing to assess the institution's achievement amidst the shift of modality. Keeping up with this modality needs maintenance and safeguarding the resources to provide adequate learning spaces, equipment, and environment for students.

Further, having a sense of time management and openness to change and development is a must for all administrators and teachers for they are the main facilitators of learning. It would instill an intrinsic sense of integrity within students and provide them with the skills necessary to thrive in diverse, dynamic environments.

5. Proposed Strategic Plan for Blended Learning Modality

Strategic planning in BLM focuses on the future of the school itself, providing an intentional way to reflect on performance and determine where to implement initiatives to make positive changes in

teaching strategies and methodologies for the future. It can also be used by the respondents to strategize with the low-performance general education courses with the use of BLM.

4. RECOMMENDATIONS

Based on the foregoing findings and conclusion, the researcher recommends the following:

- 1. Adopt more potential intervention programs in future blended-based teaching and learning approaches that will increase the student's performance in the nine general education courses more specifically the least performed courses.
- 2. Replicate the study in other HEIs both public and private contexts or use in support of quantitative measurement or mixed methods to have different points of lens and basis for physical, teachers, and students factors for training and program development on using blended learning modality.
- 3. As per the teachers' and students' recommendations in the questionnaires, blended learning is more effective with the use of visuals such as videos, PowerPoint presentations, and other animated presentations that will engage the interests of the learners regardless of the courses being taught. Since students nowadays are more engaged with technology and trends, they prefer moving visuals which need to be maximized and upgraded. There are a lot of E-Systems that are being used in blended learning modality that can be purchased or subscribed into by the HEIs.
- 4. Utilize a safe online and offline environment for blended learning modality that will help the administrators, teachers, and students cope with the distractions of blended learning modality; having a sense of time management and openness to change and development is a must in this approach.
- 5. Strategize on how teaching materials be aligned and generic to all GECs when using BLM to meet the mandated learning competencies and outcomes mandated in the CHED CMOs.

REFERENCES

Adonis, M. (2020). Challenges hound online opening classes. https://newsinfo.inquirer.net/1344074/challenges-hound-online-opening-of classes.

Ali, R. (2022). Implementation of Blended Learning in Higher Education: A Case Study of Adoption and Diffusion. https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2546&context=theses1.

Alvarez, A. (2020). Learning from the problems and challenges in blended

learning: Basis for faculty development and program enhancement. https://files.eric.ed.gov/fulltext/EJ1285361.pdf.

Anglia, N. (2021). How do facilities affect student learning?. https://www.nordangliaeducation.com/bis-houston/news/2021/04/19/how-do-facilities-affect-student-learning

Anzaldo, G. (2021) Modular Distance Learning in the New Normal Education amidst Covid-19. https://www.ijscia.com/full-text-volume-2-issue-3-may- jun-2021-263-266/

Army and Navy Academy. (2019). Why Setting Goals is Important for Students

https://www.armyandnavyacademy.org/blog/why-setting-goals-is-important-for- students/

Bath and Bourke. (May 2020). Promoting self-directed learning through the

implementation of cooperative learning in a higher education blended learning environment.https://www.researchgate.net/figure/The-blended-learning-design-process-Bath-Bourke-20107_fig6_324561632.

Bond et al., (May 2020). The effect of two educational technology tools on

studentengagement in Chinese EFL courses. International Journal Educational Technology in Higher Education. https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-021-00263-0.

Brown Center Chalkboard, (2020). https://www.brookings.edu/articles/how-is-covid-affecting-student-learning/

Cao, W, (2023). A meta-analysis of effects of blended learning on performance, attitude, achievement, and engagement across different countries. https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.

Carman, J. M. (2005). Blended Learning Design: Five Key Ingredients. Blended

Learning Design: 5 Key Ingredients, (August), 1–

10.https://doi.org/10.1109/CSSE.2008.198.

Castro, A. (2019). Learning without Learning in the New Normal: College

Education Students Lived Experiences in Blended Learning Modality.

https://scimatic.org/storage/journals/11/pdfs/394.pdf.

Christian, S. (2019). Success and Retention in Online and Hybrid Courses Lane Community College Online Teaching and Learning Project Phase I.

Crawford, R. (July 2020). Rethinking teaching and learning pedagogy for

education in the twenty-first century: blended learning in music education, https://www.tandfonline.com/doi/abs/10.1080/14613808.2016.1202223.

Dey, P. and Bandyopadhyay, S. (May 2019). Blended learning to improve the

quality of primary education among underprivileged school children in India.https://www.researchgate.net/publication/328724660_Blended_learning_to

_improve_quality_of_primary_education_among_underprivileged_school_childre n_in_India

Dogniez. (2019). Internet for Education: Key Considerations For Advancing

Sustainable Development. Dotmagazine. Retrieved March 29, 2023, from https://www.dotmagazine.online/issues/socially-responsible-digitalization/doteditorial-ethical-standards-for-digital/internet-for-

education#:~:text=The%20Internet%20for%20education&text=Internet%20acces

s%20opens%20doorways%20to,extend%20their%20range%20of%20learning

EdTech Review, (2019). Connect Your Classrooms with Others Around the

World with Empatico. https://www.edtechreview.in/trends- insights/insights/connect-your-classrooms-with-others-around-the-world-with- empatico/

Finlay et al., (June 2021). A virtual versus blended learning approach to higher

education during the COVID-19 pandemic: The experiences of a sport and exercise science student cohort. Journal of Hospitality, Leisure, Sport & Tourism Education, volume 30.

Holland, N. (2021). Using Blended Learning to Strengthen Math Skills. https://www.edutopia.org/article/using-blended-learning-strengthen-math-skills/

Holmes, K. A., & Prieto-Rodriguez, E. (2018). Student and Staff Perceptions of a

Learning Management System for Blended Learning in Teacher Education. Australian Journal of Teacher Education, 43(3), 21-34. DOI: https://dx.doi.org/10.14221/ajte.2018v43n3.2

Huang, J.; Matthews, K.E.; Lodge, J.M. (May 2022). Blended Learning in a

Higher Education Context: Exploring University Students' Learning Behavior. https://www.mdpi.com/2227-7102/13/5/514.

Hussain, Shahzad, Ali. (July 2019). A Qualitative Study on Practices and Issues

of Blended Learning in Higher Education Introduction-The Opening. HP Development Company.

Hutagalung and Gaol. (February 20, 2020). The trends of blended learning in

South East Asia.https://link.springer.com/article/10.1007/s10639-020-10140-4.

Johler, M. (October 06, 2022). Collaboration and communication in blended

learning environments, volume 7.

https://www.frontiersin.org/articles/10.3389/feduc.2022.980445/full.

King, M. (March 29, 2021). Challenging Assumptions in Blended Learning –

Lessons for the Future. https://elearningroyalholloway.blog/2021/03/29/challenging-assumptions-in-blended-learning-lessons-for-the-future/.

Lima et al., (July 2021). Blended Learning in Higher Education: Diversifying

Models and Practical Recommendations for Researchers.

https://www.frontiersin.org/articles/10.3389/feduc.2022.957199/full.

Maphalala, et.al. (November 2022). South African Secondary School Discussions

on Digital Learning and Pandemic Preparedness.

https://www.researchgate.net/publication/365362333_South_African_Secondary

_School_Discussions_on_Digital_Learning_and_Pandemic_Preparedness.

Marikyan, D. & Papagiannidis, S. (2023) Unified Theory of Acceptance and Use

of Technology: A review. https://open.ncl.ac.uk/theory-library/unified-theory-of- acceptance-and-use-of-technology.pdf.

Medina, L. C. (2018). Blended learning: Deficits and prospects in higher

education. Australasian Journalof Educational Technology, 34(1). DOI: http://dx.doi.org/10.14742/ajet.3100.

Milad, M. (January 2019). The Pedagogical Development of Blended Learning:

Multiple Perspectives.https://www.researchgate.net/publication/3291 69160ThePedagogical_DevelopmentofBlended

_Learning_Multiple_Perspectives.

Movchan, M. (September 20, 2022). Advantages and Disadvantages of Blended

Learning. https://raccoongang.com/blog/advantages-and-disadvantages- blended-learning/

Müller, C. and Mildenberger, T. (November 2021). Facilitating flexible learning by

replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. Educational Research Review, volume 34. https://doi.org/10.1016/j.edurev.2021.100394.

Nelson, K. (2020). Blended Learning -An Approach in Philippine Basic Education Curriculum in New Normal: A Review of Current Literature. Horizon

 $https://link.Blended+Learning+3A+A+Review+of+Current+Literature.+Horizon+Review+of+Publishing\&rlz=1C1YTUH_enPH1017PH1017\&oq$

Nelson, K. (2021). Education in the Context of Globalization and How it Impacts Teachers.https://www.bolton.ac.uk/blogs/education-in-the-context-of-globalisation-and-how-it-impactsteachers#:~:text=Some%20big%20benefits%20of%20globalisation,of%20living%20across%20the%20globe.

Nida et al., (May 2020). The Blended Learning with WhatsApp Media on

Mathematics Creative Thinking Skills and Math Anxiety.

https://eric.ed.gov/?id=EJ1266566.

Nsouli, N. (September 2021). Educational Expert Insight: Technology in Online Education.https://elearningindustry.com/the-use-of-technology-in-online-education.

Oweis, M. (2018). Effects of Using a Blended Learning Method on Students'

Achievement and Motivation to Learn English.

https://downloads.phpilotstudy.com/journals/edri/2018/7425924.pdf

Roser, M. (June 1, 2022). Millions of children learn only very little. How can the

world provide a better education to the next generation?https://ourworldindata.org/better-learning.

International Journal of Education, Business and Economics Research (IJEBER) Vol. 4 (2), pp. 301-327, © 2024 IJEBER (www.ijeber.com)

Sankar, J.P., et.al. (September 2022). Meta-analyses of differences in blended and traditionallearning outcomes and students' attitudes. https://www.frontiersin.org/articles/10.3389/fpsyg.2022.926947/full.

Saurabh, K., &Ranjan, S. (2020). Compliance and Psychological Impact of Quarantine in Children and Adolescents due to Covid-19 Pandemic. Indian Journal of Paediatrics, 87, 532-536. https://doi.org/10.1007/s12098-020-03347-3. Selhorst-Koekkoek and Rusman. (Mar 10, 2023). International Journal of Mobile

and Blended Learning (IJMBL), volume 15. International Association for Mobile Learning.

Thai et al., (2020. Mapping the Development of ICT from the Trend of Blended

Learning: A Systematic Literature Review of the Blended Learning Trend in Education.https://icce2021.apsce.net/wp-content/uploads/2021/12/ICCE2021- Vol.II-PP.-410-418.pdf.

Veletsianos, G. and Houlden, S. (2019). An Analysis of Flexible Learning and

Flexibility over the Last 40 Years of "Distance Education". https://eric.ed.gov/?id=EJ1236208.

Xu et al., (August 2020). COVID-19 diagnostic testing: Technology perspective.https://onlinelibrary.wiley.com/doi/full/10.1002/ctm2.158.

Zimba et al., (2021). Implementation of Blended Learning in Higher Education: A

Case Study of Adoption and Diffusion.

https://ro.uow.edu.au/cgi/viewcontent.cgi?article=2546&context=theses1.