Students' Satisfaction On Blended Learning During The New Normal: Input To Curriculum Review

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ABSTRACT
Blended learning has been popular during this new normal. It is a mixture of online and face-to-face mode of learning. This study assessed the level of students' satisfaction in blended learning and its effect to the academic performance of college freshmen. A concoction of quantitative and qualitative approach was used in this study. In quantitative approach, descriptive-correlation design was employed. Sixty students enrolled in Mathematics in the Modern World of Bachelor of Science in Fisheries were respondents of the study. Findings showed 62 percent are male, 93 percent are single, most or 45 percent have available internet connection but sometimes stable, 78 percent use mobile data connection and smartphone found to be the rank 1 available gadget at home; the mean grade of students is 85.88 with standard deviation of 5.5; the over-all satisfaction level of students with the used of blended is 4.31 describes very much satisfied. The grade of students differ when grouped according to sex. Sex and classroom interaction significantly associated in the improvement of students performance in mathematics. It is concluded that teaching and learning process at this new normal is very challenging however all teachers need to take the challenge of teaching in order to achieve the maximum satisfaction and optimum academic performance as well. Blended learning has been difficult to implement but once instruction is done with all-out interaction where every learner are encourage to raise their doubts and clarified by teacher, where instructions are effective, instructors welcome all members to be comfortable during discussions, where there is observance of proper discipline and when the gadgets being used are in good technical condition. If students have sufficient and advanced technology as well as robust internet access, the blended learning system would have been an effective learning and teaching approach.

Keywords:blended learning, online learning, face-to-face, interaction, instruction, course management

INTRODUCTION
Effective teaching has been delivered on-site and with different instructional approaches and strategies. Education focuses on strategies on physical classroom atmosphere prior to pandemic. However, COVID-19 has disrupted most of the industries in the world (Madinah, 2020;). , according to new data released on March 03, 2021 by UNICEF, schools for more than 168 million children globally have been completely closed for almost an entire year due to COVID-19 lockdowns. Furthermore, around 214 million children globally – or 1 in 7 – have missed more than three-quarters of their in-person learning.

This very complex problem on healthcare brought challenges to all sectors of education (Kumar, 2021). That is, on how to quickly respond to the needs of learners who stay at home throughout the pandemic. Since administrators and curriculum planners disagree with academic freeze, education continue through alternative delivery modes of teaching. Hence, the immediate respond to the above-mentioned to the health crisis were: using module, online class or a blend of two or more strategies. Mahyoob (2020) opines that "the need for education updating was required because of the fast advances in technology". Although we cannot deny the fact that those immediate solution could only cater minimum learning, it was found out in the study of Zhao (2021) that "during school lockdowns, the teachers made adjustments in teaching and learning designs guided by the policies implemented by the institution".

Some conducted distance learning with the use of module while some embraced online classroom by learning different apps and learning management system. Hence, teaching-learning process continued as having been commended by the study of Madinah (2020) that education is the only industry that is completely transferred to online mode in most countries around the world during this health crisis. Several strategies on distance learning came out. Nevertheless, Many among the stakeholders do not agree on the effectiveness and efficiency on the use of module or online class specially learners, parents and teachers.

Many encountered difficulty on how learners grasp information without elaboration and explanation from teachers (especially in the field numbers), many parents and even teachers came across problems on computer skills, and many learners encountered time constraints in finishing their bulky modules where all the activities are required to finish before the scheduled module retrieval. Many wish to go back on site however, the order to higher education institutions like CSU is to conduct classes on Blended learning. This is the reason why the researcher wants to test whether or not blended learning is effective among learners in the higher education set-up and if learners, teachers and parents are really satisfied with the use of blended learning

Statement of the Problem
General:
This study will explore the satisfaction of students on the Use of Blended Learning modality.
Specific:
1. What is the profile of students in terms of
    a. Sex;
    b. Civil status;
    c. Stability to internet connection;
    d. Access to Internet/Wi-fi; and
    e. Availability of gadgets;
2. What is the academic performance of students in Mathematics?
3. What is the satisfaction level of teachers and students on the blended learning strategy.
4. Is there a significant difference on the satisfaction level of students when grouped according to their profile variables?
5. Is there a significant relationship between the academic performance of students in Mathematics and their:
    a. profile; and
    b. satisfaction level on blended learning strategy
Qualitative part of the study boils down to the following questions:
1. What do you hate most about the blended learning?
2. Did you encounter any problem/s associated to the use of blended learning? If you have, would you mind to name them?
3. Was there anything missing in the blended learning? If there is, what was it ?
4. Would you like your next courses or subjects by this coming semester to continue to be delivered in the same manner?? Why?
5. Are you amenable with the simultaneous (live) lessons in blended learning? Why?
6. What are your opinions about the evaluation processes (exam, homework etc.) in blended learning?"

RESEARCH METHODOLOGY
Research Design
This study was a hybrid of quantitative and qualitative approach. On quantitative approach, a descriptive-comparative design was employed.

Participants
The participants of this study was all freshmen students enrolled in Mathematics in the Modern World under the program Bachelor of Science in Fisheries of first semester of the S.Y. 2022-2023.

Locale of the study
The study was conducted at CSU-Aparri campus particularly at the College of Fisheries and Aquatic Sciences with 70 enrolled freshmen students.

Instrument
The instruments used in the study was structured questionnaires and interview guide. The questionnaires for students composed of two parts. Part 1 included profile of the respondents and the second part was the satisfaction level as perceived by students. Part 2 of the questionnaire was adapted from the study of Naaj, (2012). On the other hand, the interview guide that was used in its qualitative part was adapted from Ozudogru (2021).

Statistical Tools

There were statistical tools to be used in the study. Frequency counts, percentage, mean and standard deviation were used to describe the profile of students. Weighted mean was used to interpret the satisfaction level with the following description

Rating Scale	Descriptive Value
4.2-5	Very much satisfied
3.4-4.19	Much satisfied
2.51-3.25	Satisfied
1.76-2.5	Somewhat Satisfied
1-1.75	Not satisfied at all

T-test was used to test the significant difference on academic performance and dichotomous variables while Anova was used to test differences on academic performance and non- dichotomous variables.

RESULTS AND DISCUSSION

This chunk of the study presents the findings deduced from the gathered data which theoretically answer the statement of the problems.

Profile of Students

Table 1:Frequency Distribution of Students in terms of Profile variables

Profile	Frequency(n=60)	Percentage
Sex		
Male	23	38
Female	37	62
Civil Status		
Single	56	93
Married	4	7
Stability to internet connection:		
Available and stable	7	12
Available and sometimes stable	27	45
Available but slow	26	43
Access to Internet/WIFI		
Mobile connection/data	47	78
Piso net	1	2
Wireless (WIFI)	11	18
Cable	1	2
Available Gadgets at Home	Frequency(n=60)	Rank
Desktop Computer	1	3.5
Personal Computer	2	2
Smartphone	56	1
Smart Tablet	1	3.5

Table 1 displays the profile of students with respect to sex, civil status, stability of internet connection, accessibility to internet and availability of gadgets at home. Most or 62 percent among the Bachelor of Science in Fisheries freshmen students are female. This is an evident that not only the males are interested to understand the aquatic sciences but also female. Among the 60 students, single students is the utmost number and least are married. Apparent to this, the Cagayan State University-Aparri does not discriminate anyone in accommodating students who want to continue in pursuing their education. When it comes to stability to internet connection, the most frequent is "available and sometimes stable" having a 45 percent among responses. This implies that there is no consistency in the receiving of information and an interruption on grasping of information due to the above reason. Hence the teaching-learning process is may also be affected. Among the freshmen students, 47 or 78 percent uses mobile connection/data for the reason that it is portable and they can access the internet wherever they go unlike using wireless(WIFI) and cable, they are just connected at home and once you go out, you can no

longer access to the net. Piso net is another portable way of internet accessibility but it is not maximized by students because of few Piso net station yet within the area. Most students used smartphones with a frequency of 56 or 93 percent. Aside from the fact that smartphone is the most affordable among the gadgets available in the market, smartphone is most likely to the most portable.

Table 2: Final Grade of BSF students in Mathematics in the Modern World

Grading Scale (description)	Frequency (n=62)	Percentage
90-100 (Outstanding)	15	24
85-89 (Very Satisfactory)	27	44
80-84 (Satisfactory)	10	16
75-79 (Fairly Satisfactory)	10	16
Mean	85.88	
SD	5.50	

Table 2 reckons an average performance of BSF students in Mathematics with a mean of 85.88 describes as very satisfactory with a standard deviation of 5.5. This further implies that the have commendable performance in the subject with the use of Blended learning mode of teaching.

Table 3:Students' Satisfaction on Blended learning

Statements	Weighted Mean	Description
Interaction		
1. A blended learning session keeps me always alert and focused.	4.25	Very much satisfied
2. Interaction is adequately maintained with the lecturer when he/she is on the other side of the blended learning classroom.	4.4	Very much satisfied
3.Having students from the opposite gender on the other side of the blended learning classroom listening to what I say might restrict my participation.	4.1	Much satisfied
4.A blended learning course makes it more important for students to visit the lecturer during office-hours	4.28	Very much satisfied
5. I cannot interrupt the lecturer to ask a question when he/she is on the other side of the blended learning classroom.	4.25	Very much satisfied
6. I am satisfied with the quality of interaction between all involved parties.	4.48	Very much satisfied
7. I am dissatisfied with the process of collaboration activities during the course.	3.53	Much satisfied
8. I am satisfied with the way I interact with other students.	4.35	Very much satisfied
9. I am satisfied with my participation in the class.	4.33	Very much satisfied
Weighted mean	4.22	Very much satisfied
Instruction		
1.The use of blended learning technology in this course encourages me to learn independently.	4.38	Very much satisfied
2. My understanding is improved compared to similar courses I studied before.	4.28	Very much satisfied
3. My performance in exams is improved compared to similar courses I studied before.	4.28	Very much satisfied
4. I am satisfied with the level of effort this course required.	4.43	Very much satisfied
5. I am dissatisfied with my performance in this course.	3.72	Very much satisfied
6. I believe I will be satisfied with my final grade in the course	4.37	Very much satisfied
7. I am satisfied with how I am able to apply what I have learned in this course.	4.43	Very much satisfied
8. If I had known this was going to be a blended learning class, I would not have taken it	3.8	Much satisfied

9. I am willing to take another course using the blended learning delivery mode	3.72	Much satisfied
10. I am satisfied enough with this course to recommend it to others.	4.28	Strongly Agree
11. Compared to face-to-face course settings, I am less satisfied with this learning experience.	3.88	Much satisfied
12. I enjoy working on assignments by myself.]	4.22	Very much satisfied
Weighted mean	4.15	Much satisfied
Instructor		
1.The instructor makes me feel that I am a true member of the class.	4.50	Very much satisfied
3. The instructor uses blended learning technology appropriately.	4.28	Very much satisfied
4. Class assignments were clearly communicated to me.	4.27	Very much satisfied
5. Feedback on evaluation of tests and other assignments was given in a timely manner	4.32	Very much satisfied
Weighted mean	4.37	Very much satisfied
Course Management		
1. Discipline is highly observed when the lecturer is on the other side of the blended learning classroom.	4.52	Very much satisfied
2. The lecturer/supervisor always takes attendance.	4.53	Very much satisfied
3. I attend video conferencing classes the same way I attend face-to-face classes.	4.37	Very much satisfied
Weighted mean	4.47	Very much satisfied
Technology		
1. The instructor's voice is audible.	4.5	Very much satisfied
2. Course content shown or displayed on the smart board is clear.]	4.38	Very much satisfied
3. The microphone is in good working condition.	4.35	Very much satisfied
4. The video image is clear and comprehensive when the lecturer is on the other side of the blended learning classroom.	4.37	Very much satisfied
5. Technical problems are not frequent and they do not adversely affect my understanding of the course.]	4.23	Very much satisfied
6. The technology used for blended teaching is reliable.]	4.3	Very much satisfied
Weighted mean	4.36	Very much satisfied
Overall Weighted Mean	4.31	Very much satisfied

The above table exhibits an overall weighted mean of 4.31 describes as "very much satisfied" implying a positive satisfaction of students in using the blended learning mode used by their teachers particularly on Interaction, Instruction, Instructors, Course management and Technology. Although there are uncontrollable issues in technical aspects, still they manage to learn and assimilate the topics being discussed to the optimum level. This jibes to the findings revealed in table 2 on the performance of students having an average of 85.88 describes as very satisfactory.

This approves the finding of Awamleh (2020) that that "students were satisfied with the blended program and online learning environments, satisfaction was generally high with 83.4%". However, the findings above indicated that course management is assessed by students having the highest weighted mean of 4.47, Awamleh (2020) found out that the quality of the teaching received the highest satisfaction level where interaction significantly affected self-study.

Table 4:Significant differences on the Students' Satisfaction when grouped according to sex

Sex	Mean	df	Mean Difference	t-value	Probability value	Statistical Inference
Female	4.24	59	0.617	9.742	0.000	Highly significant
Male	4.35					

This study hypothesized that there is no significant differences on the Students' Satisfaction when grouped according to profile particularly sex. The above table shows a rejection on the null hypothesis since the probability value is 0.0000(p<0.05). It further elucidates that the satisfaction of male students is significantly higher than female.

Table 5:Significant differences on the Students' Satisfaction when grouped according to selected variables

Variables		Sum of Squares	df	Mean Square	F	Proba.	Statistical Inference
Civil Status	Between Groups	2.100	51	0.041	0.439	0.964	Not significant
	Within Groups	0.750	8	0.094			
Stability	Between Groups	19.317	51	0.379	0.395	0.979	Not significant
	Within Groups	7.667	8	0.958			
Internet access	Between Groups	40.267	51	0.790	1.354	0.343	Not significant
	Within Groups	4.667	8	0.583			
Gadgets	Between Groups	6.850	51	0.134	0.326	0.807	Not significant
	Within Groups	0.000	8	0.000			

Table 5 is a supplementary table for table 4 which test the same hypothesis, there is no significant differences on Students' satisfaction when grouped according to civil status, internet stability, internet access and availability of gadgets. It is inferred that there is no significant differences on students' satisfaction when grouped according to the above variable since the probability values are 0.964, 0.979, 0.343 and 0.807 respectively.

Table 6:Significant relationship between mathematics in the modern world and their profile and satisfaction on blended learning.

Variables	r-value	Probability	Statistical Inference
I. Profile			
a. Sex	-.341[**]	0.008	Highly significant
b. civil status	0.019	0.887	Not significant
c. Stability	0.116	0.376	Not significant
d. Internet access	0.029	0.826	Not significant
e. Gadgets	0.221	0.090	Not significant
II. Students' Satisfaction	-0.143	0.276	Not significant

Table 6 exhibits significant relationship between mathematics performance of students and the profile and satisfaction of students in blended learning. Findings have shown that sex is significantly related to the performance of students. It reckons that female students who were coded "0" as lower code have better performance than the other.

Students' satisfaction on Blended learning does not contribute mathematics performance of students. Contrary to the findings of Zeqiri, et. al (2021) that blended learning contributes to students' satisfaction which eventually leads to students' improved performance and Giannousi, et.al (2009) that "students' satisfaction has been acknowledge as an important factor in order to estimate the effectiveness of a course, specially a blended course.

Students' satisfaction had been acknowledged as an important factor in order to estimate the effectiveness of a course, especially a blended course.

Table 7:Significant relationship on mathematics in the modern world grade and satisfaction on blended learning on particular categories.

Variables	r-value	Probability	Statistical Inference
Interaction	0.149	0.025	Significant
Instruction	-0.125	0.343	Not significant
Instructor	-0.086	0.512	Not significant
Course Management	-0.112	0.394	Not significant
Technology	0.075	0.571	Not significant

Table 7 demonstrates the significant relationship on mathematics in the modern world grade and satisfaction on blended learning on particular categories and found significant relationship of the grade of students and their satisfaction on their interaction with a correlation coefficient of 0.149 with a probability value of 0.025. This

implies that the higher the level of satisfaction in terms of interaction, the higher the grade of students. More likely, interactive students learn better than those passive students. This could further explains that students who inquire or raise questions during class discussion of either online or face to face learn more because they will be enlightened by the explanation of their teachers of whatever doubts they have in minds.

This is parallel to the findings of Dinh, et.al (2021) that "social environment factors, namely students' interaction with their instructors and teachers' performances in class play a significant role in motivating students to pursue BL courses as well as feel less pressure in the classroom". Likewise similar findings revealed on the study of Zeqiri, et.al (2021) that course management and interaction positively impact students' satisfaction and performance. The interaction has a more significant effect on both satisfaction and performance outcomes from blended learning.

Responses to the question "What did you dislike most about the blended learning?"

The students all seem to have no negative insights regarding the blended learning yet some of them have some sort of difficulties such as the following:

"Internet sometimes don't work properly" – stated by most of the students who stressed some dislike towards the blended learning

"Lack of motivation. Another disadvantage is that, depending on how you set up blended learning, it might diminish the motivation"

"The one thing I dislike the most was the inconsistent Scheduling of Class where some students and including myself being left behind in lessons by other Students in the same class."

"Sometimes I disliked blended learning because I can't focus through online class because there are so many assumptions in our house and sometimes the internet is not available, that's why I'm thankful that the full face to face learning is restored"

"Sometimes I don't really understand the lecturer due to data connection when if it video conferencing." – Briefly stated by one or two of them.

Responses to the question "Have you experienced any problems related to the blended learning? If you have, what were these problems?"

The most common among the responses being supplied is the technical difficulties relating to internet connectivity which causes them physical trouble in engaging to the class interaction. These following are some of these:

"My problems include: 1. Unreliable (low-tech) technology, 2. Dissolution of learning attention 3. Instructions from the professor sometimes hard to understand due to lack of interaction 4. It cannot simulate traditional learning experience, hence, physical interaction always yields best results for learning."

"Yes, I have encountered a problem related to Blended learning as I have said in the first question the scheduling is not superb, it resulted in being left behind in lessons."

"Yes, that is the slow internet connection." – Popularly been stated by the students.

Responses to the question "Was there anything missing in the blended learning? If there is, what was it?"

Majority of the students have responded that there is nothing missing in the blended learning which has not been affirmed by few saying:

"The insufficient physical interaction between teachers and students."

"Perhaps the missed opportunity of blended learning is the advancements in digital communication and competitively make students and professors engaged."

"Other challenges unique to doing blended learning activities at home are poor motivation/ self-directedness, and lack of time and/or time management skills."

Responses to the question "Would you like your next courses to continue to be delivered in the form of distance education? Why?"

The students expressed that the succeeding courses must not be done through the distance education and that they would prefer to have a physical interaction (face-to-face). Almost all of the students have the same thought regarding having their next courses in an in-school modality.

"No. Blended learning is still in its infancy and more research and improvements are required so that learning in Universities would not be compromised with two, simultaneous, equal usage of digital and physical modality."

"No. It is better to actual study in a school because I'm able to learn, listen, and focus."

"No, I rather attend full face to face class than having a blended learning."

Responses to the question "Are you amenable with the simultaneous (live) lessons in blended learning? Why?"

More students seem to be amenable with the simultaneous (live) lessons in blended learning than that of those who are not. These are the most common responses:

"Yes I can, it's the only way for me to learn anything. That's why I'm quite amenable through this lessons."

"Yes because the way our teacher/s teach us the lessons was easy to understand."

"Yes, I'm responsible for following lessons because it's my responsibility."

Some of those who have disagreed stated:

"No. They are unreliable, for now. These online lessons are also quite hard, not because the course is hard, but there is no direct interaction of the student to the professor and queries are not articulated precisely, unlike traditional classrooms. Although, professors are now integrating technology and consensus are good reference, blended learning live lessons may become acceptable in the future. "

"No because if it is compared to face to face there is the big difference at all."

Responses to the question "What are your opinions about the evaluation processes (exam, homework etc.) in blended learning?"

Majority of the students expressed positive insights regarding the evaluation processes in blended learning. Some of them said that the internet helps them accomplish their tasks more easily.

"It is swift, accurate, and cannot be falsified. So, even though blended learning has weaknesses, this may be considered a strength for the modality. Because technological association to academic evaluation is more efficient than human checking of quizzes, exams, and homework."

"I can easily research about the homework with the help of the internet"

"Some students are having a hard time in answering their exams and home works online due to their unstable internet connection so the instructor must give considerations to those students to have fairness in this matter " – One of them stated contrarily

SUMMARY OF FINDINGS

The study composes sixty freshmen students enrolled in the degree Bachelor of Science in Fisheries. Sixty two percent are male, 93 percent are single, most or 45 percent have available internet connection but sometimes stable, 78 percent use mobile data connection and smartphone found to be the rank 1 available gadget at home; the mean grade of students is 85.88 with standard deviation of 5.5; the over-all satisfaction level of students with the used of blended is 4.31 describes very much satisfied. The grade of students differ when grouped according to sex. Sex is a factor that affect the mathematics performance of students. Interaction significantly contributes the improvement of students performance in mathematics.

Some students had no objections to blended learning, while others raised concerns about internet access, which hampered their study. Apparently, the majority of students have said that the internet connection was the main source of their problems in blended learning, which is quite troubling. Eventually, nothing is missing in the blended learning system, however a small percentage of them have stated a lack of personal interaction and financial help in terms of internet connection. Almost all of the students assert that their next courses must not be done through the distance education and that they can hardly adapt to blended learning. In contrary, most of the students are very amenable that the simultaneous lessons have somehow been helpful to their learning. Majority of the students affirmed positive assumptions regarding online evaluation system to be very effective and efficient.

CONCLUSION

Teaching and learning process at this new normal is very challenging however all teachers need to take the challenge of teaching in order to achieve the maximum satisfaction and optimum academic performance as well. Blended learning has been difficult to implement but once instruction is done with all-out interaction where every learner are encourage to raise their doubts and clarified by teacher, where instructions are effective, instructors welcome all members to be comfortable during discussions, where there is observance of proper discipline and when the gadgets being used are in good technical condition. If students have sufficient and advanced technology as well as robust internet access, the blended learning system would have been an effective learning and teaching approach.

With the existence of internet connectivity challenges, students would prefer to study through face-to-face education. However, actors in the field of education could no longer get rid of online with a mixture of face-to-face. The researcher therefore recommends that the use of blended learning should be done really with proper interaction, effective instruction coupled with the observance of classroom discipline. Technical condition of students should be properly addressed so that there is an ideal learning during online discussion. Furthermore, in designing an online learning atmosphere, there should have been a considerations on the factors that dissuade learning particularly on internet access.

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