

# Blended Learning Approach in Mindanao State University-Lanao National College of Arts and Trades: Maximizing Engagement and Addressing Connectivity Challenges

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DOI: <https://doi.org/10.47772/IJRISS.2026.10100267>

Received: 18 January 2026; Accepted: 25 January 2026; Published: 03 February 2026

## ABSTRACT

This study investigated the implementation and impact of a blended learning approach at Mindanao State University-Lanao National College of Arts and Trades (MSU-LNCAT), focusing on maximizing student engagement and addressing connectivity challenges. It examined the demographic profile of participating senior high school students and their attitudes toward blended learning, exploring the relationship between these factors. A correlational design was employed, using a questionnaire to collect data. The study addressed the following questions: (1) What is the demographic profile of the respondents (age, gender, grade level, parents' education)? (2) What are the learners' attitudes toward blended learning in terms of experience and motivation? (3) Is there a significant relationship between students' demographic profile and their attitudes toward blended learning? Frequency and percentage distribution were used to analyze demographic data. Mean and standard deviation were used to assess attitudes toward blended learning. Pearson correlation was used to determine the relationship between demographic factors and attitudes. The findings indicated that the respondents were primarily in their early adulthood and exhibited moderately positive attitudes toward blended learning. Key challenges identified included unreliable internet connectivity and the need for effective online learning guidance. Furthermore, the demographic profile of the students did not significantly correlate with their attitudes toward blended learning. These results suggest that while blended learning holds promise, addressing connectivity issues and providing adequate support are crucial for maximizing student engagement.

Keywords: blended learning, student attitudes, connectivity challenges, technology integration, higher education

## INTRODUCTION

Blended learning, which strategically combines face-to-face instruction with online learning activities, is increasingly recognized as a promising approach to enhance student engagement and improve learning outcomes, especially in resource-constrained environments (Tucker et al., 2017). By leveraging the strengths of both traditional and online modalities, blended learning can provide students with more flexible, personalized, and engaging learning experiences while addressing the limitations of purely online or purely face-to-face instruction (Dziuban et al., 2018).

A positive attitude toward blended learning is crucial for its successful implementation. Students who embrace blended learning are more likely to actively participate in online activities, seek help when needed, and take ownership of their learning (Humphrey, 2013). Addressing challenges such as unreliable internet access is also critical. Understanding students' attitudes toward blended learning in conjunction with these challenges is therefore essential for educators seeking to design and implement effective blended learning programs.

In the context of MSU-LNCAT, where there is a commitment to integrating technology into education, it is important to explore the potential of blended learning to enhance the learning experience for senior high school students. This study aims to investigate the implementation and impact of a blended learning approach at MSU-LNCAT, focusing on maximizing engagement and addressing connectivity challenges. It provides insights for educators seeking to optimize their teaching practices and improve student outcomes within the specific context of MSU-LNCAT.

## METHODOLOGY

This study utilized a descriptive correlational design to investigate the relationship between senior high school students' demographic profiles and their attitudes toward blended learning at MSU-LNCAT.

- Respondents: The respondents were 40 senior high school students at MSU-LNCAT during the school year 2021-2022.
  - Instrument: Data was collected using a questionnaire that included sections on:
    - Demographic information (age, gender, grade level, parents' education).
    - Attitudes toward blended learning (assessed using Likert-scale items measuring experience and motivation).
  - Procedure: The questionnaire was administered to the respondents after obtaining informed consent.
  - Data Analysis: Data were analyzed using frequency and percentage distribution, mean and standard deviation, and Pearson correlation.
- Problem 1. What is the profile of the respondents in terms of: age, gender, grade level, and parents' educational attainment?**

Table 1

Demographic Profile of the Respondents

Categories	Frequency	Percentage
<b>Age</b>		
17-18	14	35.0
19-20	26	65.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>
<b>Gender</b>		
Male	14	35.0
Female	26	65.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>
<b>Grade</b>		
Grade 11	20	50.0
Grade 12	20	50.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>
<b>Mother's Education</b>		
Elementary	11	27.5
High School	18	45.0

College	7	17.5
Master's	4	10.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>
<b>Father's Education</b>		
<b>Elementary</b>	<b>14</b>	<b>35.0</b>
<b>High School</b>	<b>16</b>	<b>40.0</b>
<b>College</b>	<b>6</b>	<b>15.0</b>
<b>Master's</b>	<b>2</b>	<b>5.0</b>
Doctor's	2	5.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>

The data in table 1 presents the profile of the student-respondents. It can be noted that the majority 26 or 65 percent of students are within the age bracket 19-20 and only 14 or 35 percent are within the age category 17-18. As to gender, 26 or 65 percent are females and only 14 or 35 percent are males. As regard to grade level, 20 or 50 percent are Grade 11 and Grade 12. In terms of the mother's education, majority 18 or 45 percent are High School level and graduate. This is closely followed by elementary level and graduate with a frequency of 11 or 27.5 percent. Furthermore, 7 or 17.5 percent are college level and graduate and only 4 or 10.0 percent are master's degree holders. With regards to the father's education, the majority 16 or 40 percent are high school level and graduate, this is closely followed by elementary level and graduate with a frequency of 14 or 35 percent. Six (6) or 15 percent are college level and graduate and 2 or 5.0 percent are master's and doctor's degree holders.

The data imply that the students are on their early adulthood and female students. More so, both parents obtained high school diploma, and few are college graduate, graduate, and post graduate holders.

## Problem 2. What is the attitude of the learners in online classes in terms of: experience and motivation?

Table 2

### *Attitude towards Online Learning in Terms of Experience*

Statements	Mean	Standard Deviation	Interpretation
1. It is difficult to understand online learning without getting acquainted with appropriate guidance.	3.55	0.78	Highly Agree
2. It is difficult to favour online learning on regular basis due to least face to face interaction among students and teachers.	3.45	0.78	Moderately Agree
3. Online learning is often avoided as it promotes social isolation.	3.15	1.00	Moderately Agree
4. Slow computer and poor internet connections discouraged to use online learning.	3.60	0.67	Highly Agree

5. Using online learning makes learning interesting.	2.90	1.13	Moderately Agree
6. Online learning highly motivates the students for taking advance courses.	3.10	0.96	Moderately Agree
7. As a useful program suggested for peers to utilize online learning for online learning material.	3.25	0.93	Moderately Agree
8. Students and teachers' interaction is weak through online learning.	3.17	0.90	Moderately Agree
9. Lack of interaction between students in an online learning would impede their learning process.	3.25	0.93	Moderately Agree
10. I have yearned for face-to-face interaction with classmates and instructors in an online course.	2.80	0.97	Moderately Agree
<b>Overall Mean</b>	<b>3.22</b>	<b>0.43</b>	<b>Moderately Agree</b>

Legend:

ScaleRangeDescriptive Rating

43.5 – 4.0Highly Agree

32.5 – 3.49Moderately Agree

21.5 – 2.49Less Agree

11.0 – 1.49Disagree

Table 2 presents the means and verbal interpretation of the students' attitude towards online class in terms of experiences. The student-respondents moderately agree of the experiences they had met in the online class as revealed in the overall mean of 3.22 with a standard deviation of 0.43. The highest mean is obtained by statement "Slow computer and poor internet connections discouraged to use online learning" with a mean rating of 3.60 and a standard deviation of 0.67 verbally described as highly agree. This is followed by the statement "It is difficult to understand online learning without getting acquainted with appropriate guidance" with a mean rating of 3.55 with a standard deviation of 0.78.

The data suggest that the students find the intermittent connection as a serious problem in the online class. The finding collaborates with Toquero, (2020) that the problem of poor internet connection is giving so much trouble to fully adapt to online education even before the pandemic began. Aside from that, it is without a doubt unsuccessful in making education affordable. As a matter of fact, the Philippines ranked 66<sup>th</sup> out of 85 countries in the 2020 Digital Quality of Life Index with issues concerning expensive, low quality of service and internet connection along with the need to upgrade the telecommunication's electronic infrastructure.

Additionally, the students find the online learning difficult to understand without proper guidance of the faculty. This finding finds support Gilmour (2020) that the most common challenge to online class relates to the learners. Nearly half (47%) said the learners have trouble being self-directed enough to make good use of the technology, and 25% reported learners not being interested in using technology. The other challenges focused on their own circumstances including not enough knowledge about technology to take full advantage of its affordances (26%), not having enough planning time (25%), and not having the budget to implement as they would like (22%).

On the other hand, the statements rated low by the respondents are “I have yearned for face-to-face interaction with classmates and instructors in an online course” and “Using online learning makes learning interesting” with mean ratings and standard deviations of 2.80 and 2.90 and 0.97 and 1.13 respectively. The data indicate that the students are less interested in online class as compared to the face-to-face classes. Moreover, they are looking forward of having in person classes in the future.

Table 3

*Attitude towards Online Learning in Terms of Motivation*

Statements	Mean	Standard Deviation	Interpretation
1. Online learning offer maximum engagement of students.	3.43	0.90	Moderately Agree
2. Online learning ensures the effectiveness for presenting the work in class.	2.90	0.95	Moderately Agree
3. Doing assignment and reading lectures web notes are easy for students to manage and learn.	3.00	1.10	Moderately Agree
4. Online learning makes the students to become slaves to technology.	3.05	1.10	Moderately Agree
5. Use of online learning is easier and better than using books/journals in the library	2.93	1.07	Moderately Agree
6. I am motivated when online class is conducted.	2.77	1.14	Moderately Agree
7. Regularly check my Google classroom to avoid missing activities.	3.53	0.88	Highly Agree
8. Would like to have online classes even when the pandemic is over.	2.95	1.18	Moderately Agree
9. The fact that is no formal classroom type environment other than an online class appeals to me.	3.08	1.16	Moderately Agree
10. Online class is very effective nowadays.	2.75	1.24	Moderately Agree
<b>Overall Mean</b>	<b>3.04</b>	<b>0.62</b>	<b>Moderately Agree</b>

Legend:

Scale Range Descriptive Rating

43.5 – 4.0 Highly Agree

32.5 – 3.49 Moderately Agree

21.5 – 2.49 Less Agree

11.0 – 1.49 Disagree

Table 3 reveals the attitude of the students toward the online class in terms of motivation.

It can be deduced from the table that the students are moderately motivated in the online class as depicted by the overall mean of 3.04 with a standard deviation of 0.62. The highest mean rating is attained by the statement “Regularly check my Google classroom to avoid missing activities” with a mean rating of 3.53 and a standard deviation of 0.88 verbally described as highly agree. This is followed by the statement “Online learning offer maximum engagement of students” with a mean rating of 3.43 and a standard deviation of 0.90. The data suggest that the students always monitor the Google classroom to avoid missing tasks posted by the faculty. In like manner, they are also motivated in their class hence, they have the perception that online class can offer them more engagement in the activities design by their teachers.

On the other hand, rated low by the respondents are statements “Online class is very effective nowadays” and “I am motivated when online class is conducted” with mean ratings of 2.75 and 2.77 respectively. The data imply that the students perceived the online class as less effective compared to the conventional face-to-face class. Moreover, they are also less motivated in the online class.

### Problem 3. Is there a significant relationship between the profile and attitude of the students towards online class?

Table 4

*Correlation Analysis between Attitude towards Online Class and Profile of the Students*

Independent Variables	Correlation Coefficient (r)	Probability	Interpretation	Decision on Ho
Age	0.15	0.36	Negligible	Accept
Gender	0.05	0.75	Negligible	Accept
Grade Level	0.03	0.85	Negligible	Accept
Mother’s Education	0.08	0.61	Negligible	Accept
Father’s Education	0.12	0.45	Negligible	Accept

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 4 displays the correlation analysis between the attitude of the students towards the online class and their profile. It can be inferred from the table that age with probability level of  $0.36 > 0.05$ ; gender  $0.75 > 0.05$ ; grade level  $0.85 > 0.05$ ; mother’s education  $0.61 > 0.05$ ; and father’s education  $0.45 > 0.05$ . The data suggest that the probability level of all the independent variables is greater than the probability level of 0.05 hence, the null hypothesis is accepted on this ground. Therefore, age, gender, grade level, mother and father’s education are not significantly related with the student’s attitude towards the online class.

The data imply that the students’ attitude towards the online class are not affected by their profile such as their age, gender, grade level, and parents’ education. Furthermore, the students’ attitude towards online class cannot be determined by their demographic profile.

## Conclusions

Based on the significant findings of the study the following conclusions are drawn:

1. The respondents are in their early adulthood. This is because they are still in their senior high school years. Since during early adulthood, individuals continue to develop logical thinking it is of utmost importance that the teachers will focus on asking higher order thinking questions to facilitate the development of the critical and

logical thinking of the students. Alternative form of assessment may be employed such as reflection paper, learning logs, journal, and others rather than on the conventional paper and pen test.

2. The students are less favorable with the online class as depicted by the statements in their experiences and motivation specifically on the downsides of this learning modality. It could be much better that blended learning will be implemented with the use of other social media platforms to accommodate students with poor internet connection.

3. The demographic profile of the students such age, gender, grade level, mother's education, and father's education had no significant relationship to their attitude towards the online learning.

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