

Readiness of the Bicol State College of Applied Sciences & Technology for E-Learning Modality

Vidalyn C. Geronimo¹, Rowena T. Albao²

¹² College of Science, Bicol State College of Applied Sciences and Technology, Penafancia Avenue, Naga City, 4400 Philippines

¹vcgeronimo@astean.biscast.edu.ph

¹ <https://orcid.org/1344-1349-1344-1349>

HOW TO CITE:

Vidalyn C. Geronimo, Rowena T. Albao (2026). Readiness of the Bicol State College of Applied Sciences & Technology for E-Learning Modality. International Journal of Special Education, 41(17s), 1344-1349

ABSTRACT:

E-learning readiness is one that must be reflected in making use of E-learning programs in an institutions specifically now a days that due to the onset of this pandemic, all has shifted into a technologically driven approaches be it on all academic pursuits. The focus of the study is to determine its preparedness and readiness among learners (214 receivers) and tutors (112 enablers) where it utilized quantitative-descriptive method using questionnaires in determining various students' situations as to the use of gadgets, internet connectivity, convenient time to study, encountered instructor's approaches, materials, as well as manner of communications. Data were gathered and were analyzed using weighted mean. Result showed that learning institution is now remotely prepared and ready in imposing programs as learners adapt to the new modality as it reflected the highest frequency utilized cell phone and 75% have their internet access on their respective homes. Prior to school lockdown, an institution has been implementing such remote learning as it successfully connected with students digitally using Google classrooms. The study recommends for an in-depth discussion of an e-learning modality as it continually utilized by the learners and enablers.

Keywords: Digital Literacy, Online Teaching, Pedagogical Approach, Remote Learning

COPYRIGHT STATEMENT:

Copyright: © 2026 Authors.
Open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

1. Introduction

With the onset of pandemic teaching-learning environment suddenly twisted into a digitized approach just to implement the continuity of learning acquisition of the general population of students on the various grade level. Globally, all learning institutions and various educational level has carried out the E – learning modality not just learning institutions but all establishments on the field of business dared to explore the use of social media. Major economies have lost their Gross Domestic Product (GDP) over 2020 [1].

Government all over the world have tried implementing palliative measures to address the psychological effect of the situation besides aligning business endeavour that somehow would lessen the possible onset of transmission of the Covid19. As to the learning institutions, e-learning modality has been embraced internationally just to sustain the learning process. Though Philippines marked as developing country have implemented this mode by the top most University in the country prior to the outbreak of this pandemic such as the various Higher Education Institutions (HEI's) like

University of the Philippines, University of Sto. Tomas, De La Salle University and even Bicol State College of Applied Sciences (BISCAST) uses different programs to cater to the needs of their students. These HEIs highlighted the implementation of e-learning modality but some have started exploring this technologically driven instructions. Readiness Factors have been tried investigated through an in depth study by the various educational learning institutions internationally [2]-[5]. It is the capability of prospect e-learning users in using new learning environment. Hence, BISCAST has adapted e-learning modality as part of the face to face teaching year 2018. Somehow, it was integrated into the educational strategies prior to the pandemic.

Provision for Containment

Universities and schools lockdown have several adverse consequences like interrupted learning which can cause of deprivation of opportunities for growth and development [6] as well as deprivation to receive quality education as it reflect in the Millennium Development Goals (MDG's) [7]. Implementation of this e-learning could really help and assist learning providers manage, plan, deliver and track the teaching-learning process during the closure of schools and establishments. Thus provision of e-learning materials brought challenges to many universities this time which will be investigated further to address underlying factors and challenges. Result of this study will serve as basis for the enhancement of program delivery with the integration of technology.

Objectives of the Study

This study aimed to determine the state of readiness of Bicol State College of Applied Sciences and Technology for E-learning Modality. Specifically, it sought to evaluate the level of readiness in terms of facilities and equipment, technological skills of faculty, assessment of users in the utilization of the new modality and program intervention to enhance the delivery of the new modality.

2. Methodology

It is a descriptive research design which quantitatively described the institutional status in terms of preparedness and readiness in the use of e-learning modality. It involved 214 learners and 112 instructors from the different colleges of the institution. Survey questionnaires has adopted from Mercado, C. (2008) [8]. It has been included the terms and references for the data privacy and being informed of the inclusion in the study processes. Survey instrument is composed of part 1 which determined the level of readiness, part 2 is about the users and enablers' assessment of the recent modality, and part 3 about the program intervention proposal. Data was tabulated and analyzed. Statistical tools used were weighted mean and percentage to explain the gathered data.

3. Results

Level of Readiness for E-learning Modality

It determined the present status of the users as to their environment at home and their relationship within the immediate family.

USERS LEARNING ENVIRONMENT	PERCENTAGE
Living with parents	89.5%
Working students	17.7%
Utilized cellphone during online learning	90.2%
With internet access	75%
Convenient time is 1344-1349am	60.5%

Table1. Users Environment

The above data showed that most users mostly live with their parents and 17.7% are working students. 90.2% utilized cellphones as the major gadgets in e-learning modality, 75% has internet access and convenient time is 8 to 10am.

Enabler' Knowledge and Skills

On this part reflected the faculty's technical knowledge, skills and how they integrate technology which is pedagogical in nature.

ENABLER'S KNOWLEDGE & SKILLS	PERCENTAGE
Question & answer method	83.1%
Utilize Kahoot, and quiz app	14.5%
Quiz whizzer	2.4%
Use of Power Point Presentation	88.7%
Infographics	25%
Text	41.9%

Table II. Enabler's Technical Skills1

During online session, 83.1% respondents said that teachers use questions and answer as one of the strategies in lesson presentation, 14.5% utilize kahoot, 14.5% use quizz app, 2.4% quiz whizzer.

The highest frequency of enablers' approach to present the lesson is through the utilization of PowerPoint presentation, which is 88.7%, 41.9% utilized reading text and 25% used info graphics.

USERS ASSESSMENT	PERCENTAGE
Open with the instructor when called	78.2%
can follow the idea of the topic discussed	83.1%
teacher can assess understanding	53.2%
instructors often request for sharing of opinion	58.1%
Instructor utilized other media in support for his/her explanation of the subject matter.	51.6%
Session topic is relevant as discussed by the instructor	46.8%
Rated 4 out of 5 in a scale as to the instructor's audio when in synchronous session	46%
Instructor clarity of discussion.	47.6%

Table III. Teaching-Learning Process1

It showed in the above data that 78.2% can communicate openly with the instructor when called during the synchronous session. 83.1% responded that they can follow the idea of the topic discussed by the instructor when in synchronous session. Most of the time (53.2%) was the response of the students if the teacher

can assess understanding when in synchronous session. Most of the time (58.1%) instructors often request for sharing of opinion or idea about the topic discussed. 51.6% respondent expressed that instructor utilized other media in support for the explanation of the subject matter.

USERS ASSESSMENT	PERCENTAGE
No one from the family can advise to support students' comprehension of the topic read from offline material	66.9%
Meet the required timeline for submission of the subject's output	57.3%
They find it hard to manage their time at home	79%
There are so many household chores	58.9%
Lack of motivation	39.5%
No other resources at home	37.9%
They can't understand the instruction given	19.4%
lack of domestic support	10.5%

Table IV. Teaching-Learning Process2

Reflected in the data above that 66.9% responded stated no one in the family can assist or help on the matter of comprehension of the topics engaged during offline activities. 57.3% stated that users were able to meet the required timeline for the submission of the outputs required. 79% responded that it is hard for them to manage their time at home for they were occupied by some parents, and siblings to perform household chores task. 58.9% expressed that they are pre-

occupied by the home task especially when no parent around at home and leave with them the responsibility to take care siblings. Due to these situations, users are lacking motivation to study and learn at home, besides they find it hard as to secure other resources where they can add up to enhance what they have on their e-learning materials as a result they could not understand well the instruction given as 19.4% responded and 10.5% stated that they lack domestic support.

USERS ASSESSMENT	PERCENTAGE
Rated their understanding of the instructor's discussion of the subject matter	48.4%
Readings are provided and relevant when offline	48.4%
Material content pages are navigable, with multiple opportunities for student interaction & evaluation through discussion boards, chats, etc.	47.6%
Essays and presentations are included as assignments, peer review is part, and discussion board, and chat are used to assess critical reflective thinking.	40.3%
Feedback is provided for each answer, questions, and multiple types are included (self-	41.1%

test, quiz, written assignments, discussion and chats.	
Interactions include email, text messages, discussion, communication occurs during chat session and collaboration	47.6%
Reading ability and comprehension from the materials given when offline.	54.8%

Table V. Teaching-Learning Process3

On the above data reflected that 48.4% rated their understanding of the instructor's discussion of the subject matter whilst 48.4% responded that readings are provided and relevant when offline and 47.6% responded that the material content pages are navigable, with multiple opportunities for student interaction & evaluation through discussion boards, chats, assignments, tests, quizzes & surveys. 40.3% responded that essays and presentations are included as assignments, peer review is part, and discussion board. Chat are used to assess critical reflective thinking. 41.1% responded that feedback is provided for each answer, questions, and multiple types are included (self-test, quiz, written assignments, discussion and chats. 47.6% interactions include email, text messages, discussion, communication occurs during chat session and collaboration. 54.8% reading ability and comprehension level from the materials given when offline.

4. Discussion

It is very crucial to incubate independent learning among students in an e-learning environment. The findings indicate that a considerable number of respondents experience challenges that would prevent independent learning. Specifically, 66.9% responded that no one from the family can advise to support students' comprehension of the topic read from offline material. 57.3% were able to meet the required timeline for submission of the subject's output. 79% found it difficult to manage their time at home, 58.9% stated that there are pre-occupied with a household chores. Many students still reported lack of motivation (39.5%), limited learning resources (37.9%), difficulty understanding the given instructions (19.4%), and lack of domestic support (10.5%). These findings suggest that students' home

environment and available support systems play a significant role in their readiness and success in e-learning.

5. Conclusion

In reference to the integration of technology prior to the pandemic BISCASST were able to set up the e-learning integration with the traditional teaching-learning process. With that, it made an edge for some enablers and users during the onset of pandemic to engage in e-learning modality. However, this process brought some challenges and factors to both enablers and users:

- 1) Enablers' and Users' environment and family relationships are one factor to consider while on teaching-learning processes.
- 2) Economic status is of great factor for the users and enablers to acquire quality material for digital learning such as cellphone, laptop, internet connection, and other technological paraphernalia.
- 3) Convenient time for study coincides with the family's preparation of daily household routine which claimed as it interferes the learners' time to engage in the e-learning modality.
- 4) It is reflected in the study that enablers utilized minimal apps and the usual PowerPoint which has been introduced year 1987 when delivering their deliverables as part of their teaching processes. Hence, an update of technological knowledge and skills should be introduced among enablers to enhance or update to be able to align with the user's skills and learning ability.
- 5) It is an indication that home learning is not for all and various learning competencies is not suited in the inclusion for e-learning modality

such as the need for the development of skill-based competency wherein it required to have an actual footage of skill delivery.

6) Enablers should be given more opportunity to be trained in the utilization of recent trends needed in the assessment of users' knowledge and understanding.

7) Institutional linkages and partnership should be enhanced to gather best practices in the adaptation of e-learning modality. Further, provision for infrastructure environment to enhance both enablers and users for a limited confirmation of their learning and skills.

8) There should be an institutional Learning Management System to be establish to enhance remote education wherein enablers can deliver customized learning content and enablers should be well acquainted of their usage through

trainings or workshops.

Confusion on the term online learning and remote education is on hand now. There are limitations noted in this study. First, respondents could be better distributed on the various HEIs in the locality or even regional level private or public institutions. Second, in depth discussion is recommended about pedagogical approach of enablers on e-learning modality. Finally, a comparative discussion between pedagogical approach and technological approach should be enhance to address its difference in the new normal setting for some adapt the traditional teaching using online but how about the in depth cognitive background of e-learning. However, results of the study will be utilized to enhance the level of readiness of the institution as well as the technological content and skills of enablers.

References

- Abodunrin, O., Oloye, G., & Adesola, B. (2020). Coronavirus pandemic and its implication on global economy. *International Journal of Arts, Languages and Business Studies*, 4.
- Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the e-learning system usage during the COVID-19 pandemic. *Education and Information Technologies*, 25, 5261–5280. DOI: 10.1007/s11344-1349-10219-y
- Hashim, H., & Tasir, Z. (2014). E-learning readiness: A literature review. In *2014 International Conference on Teaching and Learning in Computing and Engineering* (pp. 267–271). IEEE. DOI:10.1109/LaTiCE.2014.58
- Mercado, C. (2008). Readiness assessment tool for an e-learning environment implementation. *International Journal of the Computer, the Internet and Management*, 16(Special Issue), 18.1–18.11.
- Nwagwu, W. E. (2020). E-learning readiness of universities in Nigeria: What are the opinions of the academic staff of Nigeria's premier university? *Education and Information Technologies*, 25(2), 1343–1370. DOI:10.1007/s11344-1349-11344-1349
- Rohayani, A. H. (2015). A literature review: Readiness factors to measuring e-learning readiness in higher education. *Procedia Computer Science*, 59, 230–234. DOI:10.1016/j.procs.2015.07.564
- Sachs, J. D. (2012). From millennium development goals to sustainable development goals. *The Lancet*, 379(9832), 2206–2211. DOI:10.1016/S1344-1349(12)61344-1349
- Widyanti, A., Hasudungan, S., & Park, J. (2020). E-learning readiness and perceived learning workload among students in an Indonesian university. *Knowledge Management & E-Learning*, 12(1), 18–29. DOI:10.34105/j.kmel.2020.12.002

7. Acknowledgements

The researcher acknowledges the faculty members of Bicol State College of Applied Sciences and Technology (BISCAST) for their voluntary participation and valuable contributions to this study. The researcher also extends appreciation to the academic mentors and institutional officials whose guidance and support facilitated the successful completion of the research.

8. Author Declaration

The author declares that there is no conflict of interest.