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Barriers in the Implementation of the Blended Learning Modality in Rural Areas

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Abstract:

This study utilized descriptive method of research in barriers in the implementation of Blended Learning Modality in Rural Areas in areas of self-learning modules, facilities and equipment and assessment of learning in the schools of the identified district in a large size division in central Philippines for the school year 2020-2021. Results showed that the extent of the barriers encountered by teachers in the implementation of blended learning modality in all areas were moderate. The comparative analysis among these areas between age and number of trainings attended showed the same moderate extent of implementation barriers. The comparative analysis between the extent of the barriers in implementing blended learning based on age and number of trainings attended were not significant. Data is suggesting that teachers and school personnel should seek help from municipal LGU and other community stakeholders to help them do away with the barriers.

Keywords: Blended Learning, Implementation Barriers, Rural Education, Self-Learning Modules, Teacher Training

Introduction:

The advent of the pandemic forced nations around the world to shift to a learning modality which combines limited face-to-face, online, TV and radio and modular distance learning which is operationally called by DepEd as blended learning. It has been resorted to after the need to reopen and continue education despite the threats brought by the pandemic.

Due to the sustained virulent threat, social distancing is strictly implemented. To prevent the virus from spreading and to ensure the teachers' and learners' safety, DepEd Order No. 012 s, (2020) was issued to implement blended distance learning. Blended distance learning is a mixture of modular instruction, TV based instruction, radio-based instruction and online distance learning. Although, teachers have been acquainted to this kind of learning modality in the past, but it would be the first time that it would be used on a massive scale. Looking at various studies conducted during the pandemic, Chick, Clifton and Peace (2020) found out that there are several barriers confronted the implementation of online distance learning some of which is the lack of viable internet connection, uncooperative learners' attitude in western countries, managing learner attitudes and unreliable assessments. World Bank, (2020) also indicated the absence of printing devices, absence of qualified home tutors and the lack of needed gadgets and devices in developing countries. None of which mentioned about the technical expertise, attitude of teachers and the needed manpower for blended learning implementation.

In the district of Moalboal, several complaints were heard as to the limitations brought by the blended learning implementation. Late uploading of learning modules, absence of printing devices, lack of administrative support, insufficient training for blended learning implementation and the lack of TV and radio station partners. The lack of internet connection and mode of viable communication re also another major issue poking within the district.

To find out the exact barriers of distance learning implementation in Moalboal district, this study is embarked by the researcher. The output of this study is an action plan which aims to address the identified barriers of distance learning implementation.

Current State of Knowledge

The study of Murcia, (2016) reveals that learners who were confronted with problems were able to finish schooling through modular instruction. It addresses tardiness and absenteeism among students. Simplified materials were given, and the children were able to cope with the standards set by the department.
In the study of Fernandez and Abocejo, (2018) they revealed that students in difficult situation were able to continue schooling through modular instruction. Their study had proven that off - school instructions is a viable alternative to provide education to the masses.
Teodoro, Espiritu, Legaspi et al., (2018) strongly suggested the coming up of modular instruction for learners who simultaneously do schooling and earning for a living. They had proven that among learners were able to finish schooling and learned expected competencies even if they are hindered to attend face – to – face classes. If these students were able to go through alternative mode, then, this option is viable during this pandemic time.
Guiamalon, Alon, and Camsa (2021) disclosed that teachers needed to cross the mountains to conduct regular home visitations. Graded examinations such as summative tests could never be done online, teachers need to gather the learners in a place observing minimum health protocols to get reliable assessment results. The problem with internet connection and smart devices in various households hinders blended learning implementation, in most provinces, pure modular distance learning is the sole learning modality due to this prevalent obstacle. They disclosed further that teachers needed to cross the mountains to conduct regular home visitations. Graded examinations such as summative tests could never be done online, teachers need to gather the learners in a place observing minimum health protocols to get reliable assessment results. The problem with internet connection and smart devices in various households hinders blended learning implementation, in most provinces, pure modular distance learning is the sole learning modality due to this prevalent obstacle.

Cabardo, Cabardo, and Cabardo-Mabida (2022) also stated that although teachers were confronted with countless and compelling challenges in implementing the blended learning most especially as brought by insufficient budget, but there are some factors which provided teachers with the edge in hurdling these barriers and challenges, one of which is the amount of relevant trainings they received which posited significant positive impact on their resiliency. Highly trained teachers were able to easily source out seeking support from various stakeholders. They were more efficient in crafting and reproducing of SLMS
Clarin and Baluyos, (2022) stated that teachers need to conduct regular home visitations to monitor and support the learning of their students as well as to conduct learning interventions. Asynchronous and synchronous interventions are impossible due to absence of internet connection and smartphone devices in the majority of the households.
In the study of Cruz, (2016), she highlighted the roles of parents in the off – school instruction. If the learners can only attend school through blended leaning, the parents play vital role for their children's studies by helping their children establish routine to develop automacy of children's work.

The reviewed pieces of conceptual and research literature have provided well – founded ideas and insights which are very useful in objectively interpreting the pertinent data gathered which provide answers to the problems considered in this study.
The conceptual literature, specifically provide wide and clear ideas relative to implementation of blended learning.
The delivery of instruction other than face – to – face classes, is being given light in this section in terms of doability, effectiveness and even the challenges that these modes of delivery may encounter.
On the other hand, the research literature backs – up the aims of this research endeavor. Reviewed studies have given insights and vivid understanding relative to the barriers of blended learning implementation in the rural areas.

Theoretical Framework

This study is based on the theory of sustained optimal challenge by Yerkes and Dodson (1908). The Theory of Sustained Optimal Challenge plainly refers to the adjustment of difficulties experienced in the organization, as well as the resiliency to address inability of the people in the organization due to tangible constraints. It anchors on three principles which are continual improving over the course of teaching and learning, matching expectations with learners' aptitude and reducing learning variation.

The theory of optimal challenge suggests that individuals grow and learn as they are exposed to optimal life's challenges. In this way they develop life skills, adaptability, and resiliency. In a situation where there is variation and the phenomena become normal and routinary for an individual, it also leads to stagnation. To cope up with emerging difficulties, individuals need to adapt and learn continuously to devise mechanisms of going about the challenges. Although, individuals may be constrained with norms, principles and set of guidelines in reacting to particular stimuli-the challenge, often these constraints need to be readjusted and attuned to reality or practicability of its principles in real life applications. In attuning to cope with challenges, learning is essential, such learning should be planned, systematic and focused and learning skills and competence which aims at addressing particular challenges this refers to reducing the learning variation.

This theory applies to this study hence the teachers in the research venue were confronted with compelling barriers which serves as their challenges upon the implementation of the blended learning. They need to attune themselves, acquire skills and competence which enables them to address and effectively conquer such compelling challenges.

Objectives of the Study

This study aims to determine the extent of barriers in the implementation of Blended Learning Modality in Rural Areas in Moalboal District, Cebu Province, during the school year 2021-2022 as basis for a capacity building plan.

Methodology:

This section presents the methodology of the study. It includes the research design, respondents, the data gathering instrument, the validity and reliability of the research instrument, data gathering procedures, analytical schemes and scheme and statistical tools used in analyzing the data.

Research Design

This study will utilize a descriptive-relational method in finding out the extent of the barriers encountered by teachers in implementing the blended learning modality.
Descriptive research method provides a way to describe the nature of the situation as it exists at the time of the study. Descriptive research design is appropriate for studies which aim to find out what prevail in the present condition on relationship held opinions and beliefs, processes and effects and developing trends. It includes evaluations of the studies that were analyzed. According to Nassaji, (2015), descriptive research involves the description, recording, analysis and interpretation of the present native composition of process of phenomena.
Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection.

The researcher considers descriptive design as an appropriate method in this study because it gathers quantifiable information, and it considers the condition of the present phenomenon. This dwells into the barriers faced by teachers to the blended learning modality in the identified schools of Moalboal District.

Respondents of the Study

The respondents of the study were the 80 sample size from a population of 100 teachers of the identified schools of Moalboal District for school year 2021-2022 who have been invited to participate and have actually taken part in this study. The sample size was determined using Cochran's Formula. According to Israel, (2014) the Cochran formula allows you to calculate an ideal sample size given a desired level of precision, desired confidence level, and the estimated proportion of the attribute present in the population. Stratified proportionate random sampling was also used to determine the sample size per grade level. According to Taherdoost, (2018), proportionate random sampling is an approach for which each stratum sample size is directly proportional to the population size of the entire population of strata. That means each strata sample has the same sampling fraction.

The data below will show the distribution of respondents of this study.

Table 1
Distribution of Respondents

Schools	Population (N)	Sample Size (n)	Percentage (%)
A	7	6	7.00
B	16	13	16.00
C	7	6	7.00
D	24	19	24.00
E	15	12	15.00
F	7	6	7.00
G	7	6	7.00
H	7	6	7.00
I	10	8	10.00

TOTAL	100	80	100.00

Data Gathering Instrument

The researcher uses a self-made survey questionnaire to find out the extent of the barriers of blended learning modality in rural areas of the identified Schools.

The questionnaire consists of two (2) parts: Part I is about the personal profile of the respondent such as age, and relevant training/seminar-workshops attended. Part II is to gather responses on the respondents' perception as regards the extent of barriers faced in implementing blended learning in areas of self-learning modules, facilities and equipment and assessment of learning with 10 item survey questionnaires for each variable.

Validity

Validity simply means a test instrument is accurately measuring what it's supposed to Noble., (2017). Validity is the accuracy and meaningfulness of influences drawn from research findings. It is the degree to which results obtained from the analysis of the data represent the phenomena under study Mugenda, (2015). To determine the validity of the instrument, the sufficiency of the content and the appropriateness of the questions, the instrument was presented to three (3) validators who experts in this study are relatively.
The expert evaluated the research instrument using Carter Good and Douglas Scates. The computed mean was 4.59 which is interpreted as excellent.

Reliability
Reliability refers to how consistently a method measures something Taherdoost, (2018). This means that an instrument is reliable if results are consistent using the same method under the same circumstances.
Cronbach alpha was applied to measure the coefficient of reliability of the instrument. The reliability coefficient should be 0.8≥@ 0.7 to be acceptable.
The reliability of the instrument was conducted once. It was administered to the 30 Elementary teachers of identified schools of Moalboal District who are not respondents of the study.
The reliability index was .902 which is described as Excellent

Data Gathering Procedure
After the research instrument found valid and reliable, the researcher asked permission from the Schools Division Superintendent then channeled to the Public Schools District Supervisor of District of Moalboal for the conduct of the study. After the approval, the questionnaires were distributed to the respondents who are the teachers of Moalboal District. The data collected are tallied and carefully analyzed and interpreted using appropriate statistical tools with the aid of the Statistical Package for Social Sciences (SPSS).

Statistical Tools
The data were analyzed in relation to the research objectives presented in Chapter 1.
Objective No. 1 which determined the profile of the teacher-respondents employed the frequency count and percentage scoring. Frequency statistics simply count the number of times that each variable occurs, such as the number of males and females within the sample. Measures of central tendency give one number that represents the entire set of scores, such as the mean Hole, (2017). Percentage is calculated by taking the frequency in the category divided by the total number of participants and multiplying by 100% (Hole, 2017).
Objective No. 2 which determined the extent of the barriers encountered by teachers in the blended learning implementation on self-learning modules, facilities and equipment and assessment of learning utilized the weighted mean. Mean also known as the arithmetic average, is the sum of the values, divided by the total number of values (Mesiar & Špirková, 2016).
The mean scores for the level of Teachers' readiness on the implementation of SLMs were interpreted with the use of the following indicator:

Mean Score Range	Verbal Interpretation
4.50-5.00	Very High Extent

3.50 – 4.49	High Extent
2.50 – 3.49	Moderate Extent
1.50 – 2.49	Low Extent
1.00 – 1.49	Very Low Extent

Objective No. 3, which determined the extent of the barriers encountered by teachers in the blended learning implementation when grouped according to identified profiles employed the mean.
Objective No. 4, which determined the significant difference in the extent of the barriers encountered by teachers in the blended learning implementation when grouped and compared according to identified profiles employed the Mann Whitney U test. The Mann-Whitney test is also known as the Wilcoxon test, a non- parametric test for independent samples which should not be confused with the Wilcoxon signed-ranks test for related samples. It is also an alternative for the independent samples t-test when assumptions required by the latter aren't met by the data. It is appropriate in to be used in this study hence data in this study are compared based on variable groupings in a non-normal responses' distribution. According to Bluman, (2018), if the p-value is less than or equal to 0.05 level of significance, then reject the null hypothesis. If the p-value is greater than 0.05 level of significance, accept the null hypothesis.

Results and Discussion:

Table 2
Profile of the Respondents

Variables	Categories	Frequency	Percentage
Age	Younger (below 37 years old)	42	52.50
	Older (37 years old and above)	38	47.50
Number of Training/Seminars Attended	Few (below 11)	43	53.80
	Many (12 and above)	37	46.30

Table 2 presents the frequency and percentage of the demographic profiles of the respondents in accordance to each category. As shown in the table, the respondents were young hence younger constituted 52.50 percent of the respondent groups or a frequency of 42. It could be noted that they were less trained in implementing the blended learning modality as evidenced 43 teachers with a percentage of 53.80 who achieved only a few trainings relative to blended learning implementation.
Barriers In The Implementation Of Blended Learning Modality In Rural Areas According To The Following Aspects

This section presents the discussions on the barriers in the implementation of blended learning modality in rural areas according to the following aspects. The areas covered are self-learning modules, facilities and equipment and assessment of learning.

Table 3
Barriers in the Implementation of Blended Learning Modality in Rural Areas in Self-Learning Modules

Item	Mean	Interpretation
1. Lack of capability building training in crafting a competency coherent and pedagogically appropriate SLMs/SLHTs	3.10	Moderate Extent
2. Insufficient budget for reproduction of SLMs./	2.88	Moderate Extent
3. Absence of viable internet connection in school for doing research work in search for references	3.65	High Extent
4. Unavailable access to viable internet connection for research purposes among learners.	3.54	High Extent
5. Absence of partner radio station for radio-based instruction	3.53	High Extent

6. Insufficient printing materials for module printing.	2.76	Moderate Extent
7. Insufficient supply of covid-19 essentials to ensure protection of teachers and parents during distribution and retrieval.	2.88	Moderate Extent
8. Absence of partner TV station for TV-based instruction.	3.44	Moderate Extent
9. Unavailability of resources needed for distribution and retrieval such as Sugbo Box.	3.13	Moderate Extent
10. Delayed uploading of SLMs by division office for printing.	3.08	Moderate Extent
Overall Mean	3.20	Moderate Extent

Table 3 presents the overall results for the barriers in the implementation of blended learning modality in rural areas in self-learning modules. It recorded the lowest rating o item number 6 Insufficient printing materials for module printing with a rating of 2.76. It obtained the highest rating on item number 3 Absence of viable internet connection in school for doing research work in search for references with a rating of 3.65 which is equivalent to high extent.

This means that majority of the teachers doesn't have personal internet connections or they are only dependent on prepaid wifi modems which usually have very poor signals especially in remote areas. This also indicates further that schools within the research venue doesn't have stable and viable internet connection too. Majority of the schools in the research venue are located in hinterlands for which both phone and internet signal are scarce. This situation added to the burden of teachers, this will delay their downloading of SLM soft copies for reproduction as they need to travel for kilometers much more if both the school location and their residence is in the hinterland. Monitoring of student learning and providing asynchronous and synchronous interventions becomes improbable too, teachers need to hurdle travelling on foot the rugged terrains to conduct home visits even if it is in the midst of virulent threats.

These findings support the assertions of Clarin and Baluyos, (2022) upon stating that the modular distance learning, let alone new normal education is littered with countless challenges, ranging from insufficient budget to unsupportive parents to absence of communication and internet connection brought by lack of devices in each household and absence of internet signal.

Table 4
Barriers in the Implementation of Blended Learning Modality in Rural Areas in Facilities and Equipment

Item	Mean	Interpretation
1. Insufficient printing devices in school.	2.70	Moderate Extent
2. Insufficient number of laptops for encoding of SLHTs and SLMs.	2.93	Moderate Extent
3. Unavailability of viable internet connection in school to conduct synchronous and asynchronous online instruction.	3.98	High Extent
4. Unavailability of devices essential for synchronous and asynchronous online instruction in various households.	3.80	High Extent
5. Unavailability of viable internet connection to conduct synchronous and asynchronous online instruction in various households.	3.96	High Extent
6. Absence of safe shelter serving as drop off and pick up point of SLMs.	2.69	Moderate Extent
7. Absence of electrical connection in respective households.	2.73	Moderate Extent
8. Absence of TV in respective households for TV-based instruction.	3.25	Moderate Extent
9. Absence of transistor radio in various households for radio-based instruction.	3.45	Moderate Extent
10. Absence of school computer laboratory for online distance learning.	3.96	High Extent
Overall Mean	3.34	Moderate Extent

Table 4 presents the discussions on barriers in the implementation of blended learning modality in rural areas in facilities and equipment. The overall mean is 3.34 or a verbal description that is Moderate Extent. It recorded on item number 6 Absence of safe shelter serving as drop off and pick up point of SLMs the lowest mean 2.69 which is which is equivalent to moderate extent.

It obtained the highest mean on item number 3 Unavailability of viable internet connection in school to conduct synchronous and asynchronous online instruction with a mean 3.98 which is high extent.

This is indicative that majority of the schools as well as the teachers reside in the hinterlands wherein there is no available signal and if there is, signal is very weak or poor. No teacher wouldn't ever acquire internet connection if there are affordable and available internet provider. In the research venue, the available internet signal provider is the point to point which are extremely expensive for the teachers to afford who have meager salaries and ample financial priorities. It couldn't be acquired also through the MOOE as the installers can't present official receipts. If schools and teachers could afford to have strong internet signal, the problem would lurk within the households,

majority of the households in the hinterlands for which most schools are located couldn't afford to have internet connections and smartphone devices.

This supports the contention of Clarin and Baluyos (2022) upon stating that teachers need to conduct regular home visitations to monitor and support the learning of their students as well as to conduct learning interventions. Asynchronous and synchronous interventions are impossible due to absence of internet connection and smartphone devices in the majority of the households.

Table 5
Barriers in the Implementation of Blended Learning Modality in Rural Areas in Assessment of Learning

Item	Mean	Interpretation
1. Shortage of time in reviewing accomplished modules as basis for remediation	3.38	Moderate Extent
2. Shortage of time to prepare worksheet for enrichment instruction	3.06	Moderate Extent
3. Non-completion of Modules as bases summative test	2.84	Moderate Extent
4. Insufficient time to check learners' portfolio	2.76	Moderate Extent
5. Shortage of time in constructing varied types of tests	2.86	Moderate Extent
6. Incomplete learners' journal as major output	3.01	Moderate Extent
7. Absence of rubric as basis in scoring learners' output	2.55	Moderate Extent
8. Shortage of time in preparing performance tasks for learners	2.89	Moderate Extent
9. Shortage of time in preparing individual assessment for learners	2.86	Moderate Extent
10. Lack of internet connection for performance assessment.	3.61	High Extent
Overall Mean	2.98	Moderate Extent

Table 5 presents the discussions on the barriers in the implementation of blended learning modality in rural areas in assessment of learning. The overall mean is 2.98 or an equivalent Moderate Extent. It obtained the lowest mean on item number 7 Absence of rubric as basis in scoring learners' output with a mean of 2.55 which is equivalent to moderate Extent. It recorded the highest mean on item number 10 Lack of internet connection for performance assessment with a mean 3.61 which is equivalent to high extent.

Consistently, absence of internet connection is the concern and prime barrier to implementing blended learning within the research venue. Problems dwelt in downloading references and SLM soft copies, failure to have asynchronous learning interventions and monitoring of student learning to having online assessments, all of which trace back to lack of internet connection. This problem is not only limited to schools and teachers but to each individual household which is harder to address.

This supports the contentions of Guiamalon, Alon, and Camsa, (2021) upon disclosing that teachers needed to cross the mountains to conduct regular home visitations. Graded examinations such as summative tests could never be done online, teachers need to gather the learners in a place observing minimum health protocols to get reliable assessment results. The problem with internet connection and smart devices in various households hinders blended learning implementation, in most provinces, pure modular distance learning is the sole learning modality due to this prevalent obstacle.

Barriers In The Implementation Of Blended Learning Modality In Rural Areas When Grouped According To The Aforementioned Variables

This portion exhibits the barriers in the implementation of blended learning modality in rural areas when grouped according to the aforementioned variables. The grouping variables are age and number of trainings/seminars attended relevant to blended learning implementation.

Table 6
Barriers in the Implementation of Blended Learning Modality in Rural Areas in Self-Learning Modules When Grouped According to Age

Categories	Younger Mean	Interpretation	Older Mean	Interpretation
1. Lack of capability building training in crafting a competency coherent and pedagogically appropriate SLMs/SLHTs	3.14	Moderate Extent	3.05	Moderate Extent
2. Insufficient budget for reproduction of SLMs./	2.88	Moderate Extent	2.87	Moderate Extent

3. Absence of viable internet connection in school for doing research work in search for references	3.69	High Extent	3.61	High Extent
4. Unavailable access to viable internet connection for research purposes among learners.	3.55	High Extent	3.53	High Extent
5. Absence of partner radio station for radio-based instruction	3.52	High Extent	3.53	High Extent
6. Insufficient printing materials for module printing.	2.95	Moderate Extent	2.55	Moderate Extent
7. Insufficient supply of covid-19 essentials to ensure protection of teachers and parents during distribution and retrieval.	3.00	Moderate Extent	2.74	Moderate Extent
8. Absence of partner TV station for TV-based instruction.	3.52	High Extent	3.34	Moderate Extent
9. Unavailability of resources needed for distribution and retrieval such as Sugbo Box.	3.38	Moderate Extent	2.84	Moderate Extent
10. Delayed uploading of SLMs by division office for printing.	3.24	Moderate Extent	2.89	Moderate Extent
Overall Mean	3.29	Moderate Extent	3.09	Moderate Extent

Table 6 presents the discussions on the Barriers in the Implementation of Blended Learning Modality in Rural Areas in Self-Learning Modules When Grouped According to Age. The overall means which are 3.29 and 3.09 with equivalents Moderate Extent for both younger and older respectively.

It is an indication that age and maturity is not a contributory factor in molding abilities among the teachers to address barriers to implementing blended learning instruction. As experiences comes with age in most times, it is implicative further that relevant experiences can't help teachers develop resiliency to the identified barriers and that both younger and older teachers have the same clamors regarding downloading, reproduction, checking and recording of SLM results.

This result conforms to the assertions of Gueta and Janer (2021) when they disclosed that the challenges and difficulties encountered y teachers in the new normal education setting choose no age and position of teachers. Master teachers and seasoned teachers expressed the same clamors which could be accounted mostly to lack of internet connection and unsupportive parents who either don't help facilitate learning or personally answer the SLMs and assessment activities of their children.

Table 7

Barriers in the Implementation of Blended Learning Modality in Rural Areas in Facilities and Equipment When Grouped According to Age

Categories	Younger Mean	Interpretation	Older Mean	Interpretation
1. Insufficient printing devices in school.	2.60	Moderate Extent	2.82	Moderate Extent
2. Insufficient number of laptops for encoding of SLHTs and SLMs.	2.90	Moderate Extent	2.95	Moderate Extent
3. Unavailability of viable internet connection in school to conduct synchronous and asynchronous online instruction.	4.19	High Extent	3.74	High Extent

4. Unavailability of devices essential for synchronous and asynchronous online instruction in various households.	4.00	High Extent	3.58	High Extent
5. Unavailability of viable internet connection to conduct synchronous and asynchronous online instruction in various households.	4.17	High Extent	3.74	High Extent
6. Absence of safe shelter serving as drop off and pick up point of SLMs.	2.90	Moderate Extent	2.45	Low Extent
7. Absence of electrical connection in respective households.	2.86	Moderate Extent	2.58	Moderate Extent
8. Absence of TV in respective households for TV-based instruction.	3.43	Moderate Extent	3.05	Moderate Extent
9. Absence of transistor radio in various households for radio-based instruction.	3.64	High Extent	3.24	Moderate Extent
10. Absence of school computer laboratory for online distance learning.	4.05	High Extent	3.87	High Extent
Overall Mean	3.47	Moderate Extent	3.20	Moderate Extent

Table 7 discusses the barriers in the implementation of blended learning modality in rural areas in facilities and equipment when grouped according to age. The overall means are 3.47 and 3.20 with equivalents Moderate extent respectively for both younger and older teachers.

This is indicative that both younger and older teachers were hurdling the same shortness or absence of facilities and equipment in implementing blended learning. Both teachers suffer from the lack of viable internet connections, insufficiency of printing devices for reproduction of SLMs and absence smartphone and computer devices in respective households which could be used for both synchronous and asynchronous instruction and learning interventions. Acquisition of these materials depend on the school allocation and the capacity of parents in each household which is beyond the control of teachers despite their levels of maturity and experiences.

This supports the contention of Clarin and Baluyos (2022) upon stating that the barriers and challenges encountered by teachers in the new normal setting are mostly attributed to insufficient budget allocation, absence of support from LGU and other stakeholders and the lack of printing materials and devices which emanates from insufficient funds.

Table 8

Barriers in the Implementation of Blended Learning Modality in Rural Areas in Assessment of Learning When Grouped According to Age

Categories	Younger Mean	Interpretation	Older Mean	Interpretation
1. Shortage of time in reviewing accomplished modules as basis for remediation	3.52	High Extent	3.21	Moderate Extent
2. Shortage of time to prepare worksheet for enrichment instruction	3.21	Moderate Extent	2.89	Moderate Extent
3. Non-completion of Modules as bases summative test	2.98	Moderate Extent	2.68	Moderate Extent
4. Insufficient time to check learners' portfolio	2.81	Moderate Extent	2.71	Moderate Extent
5. Shortage of time in constructing varied types of tests	2.98	Moderate Extent	2.74	Moderate Extent

6. Incomplete learners' journal as major output	3.10	Moderate Extent	2.92	Moderate Extent
7. Absence of rubric as basis in scoring learners' output	2.55	Moderate Extent	2.55	Moderate Extent
8. Shortage of time in preparing performance tasks for learners	2.90	Moderate Extent	2.87	Moderate Extent
9. Shortage of time in preparing individual assessment for learners	2.90	Moderate Extent	2.82	Moderate Extent
10. Lack of internet connection for performance assessment.	3.83	High Extent	3.37	Moderate Extent
Overall Mean	3.08	Moderate Extent	2.88	Moderate Extent

Table 8 discusses the overall results for barriers in the implementation of blended learning modality in rural areas in assessment of learning when grouped according to age. As indicated on the table, the overall means are 3.08 and 2.88 with equivalent Moderate Extent for both younger and older respondent groups.

This is connotative that experience and chronological maturity doesn't make a teacher more resilient to the challenges and barriers in having efficient assessments during the blended learning modality for the new normal education setting. A cursory look at the table would make a one sees that the items are unanimously rated by both respondent groups as an indication of at par barriers faced by teachers' despite of their age.

This supports the contentions of Guiamalon, Alon and Camsa (2021) upon revealing that teachers despite of age or other demographic profiles needed to cross the mountains to conduct regular home visitations. Graded examinations such as summative tests could never be done online, teachers need to gather the learners in a place observing minimum health protocols to get reliable assessment results. The problem with internet connection and smart devices in various households hinders blended learning implementation, in most provinces, pure modular distance learning is the sole learning modality due to this prevalent obstacle.

Table 9

Barriers in the Implementation of Blended Learning Modality in Rural Areas in Self-Learning Modules When Grouped According To Number of Trainings/ Seminars Attended

Categories	Few Mean	Interpretation	Many Mean	Interpretation
1. Lack of capability building training in crafting a competency coherent and pedagogically appropriate SLMs/SLHTs	3.19	Moderate Extent	3.00	Moderate Extent
2. Insufficient budget for reproduction of SLMs./	2.84	Moderate Extent	2.92	Moderate Extent
3. Absence of viable internet connection in school for doing research work in search for references	3.49	Moderate Extent	3.84	High Extent
4. Unavailable access to viable internet connection for research purposes among learners.	3.42	Moderate Extent	3.68	High Extent
5. Absence of partner radio station for radio-based instruction	3.37	Moderate Extent	3.70	High Extent
6. Insufficient printing materials for module printing.	2.98	Moderate Extent	2.51	Moderate Extent
7. Insufficient supply of covid-19 essentials to ensure protection of teachers and parents during distribution and retrieval.	3.09	Moderate Extent	2.62	Moderate Extent
8. Absence of partner TV station for TV-based instruction.	3.58	High Extent	3.27	Moderate Extent

9. Unavailability of resources needed for distribution and retrieval such as Sugbo Box.	3.40	Moderate Extent	2.81	Moderate Extent
10. Delayed uploading of SLMs by division office for printing.	3.16	Moderate Extent	2.97	Moderate Extent
Overall Mean	3.25	Moderate Extent	3.13	Moderate Extent

Table 9 presents the results for the barriers in the implementation of blended learning modality in rural areas in self-learning modules when grouped according to number of trainings/ seminars attended. As shown in the table, the overall means are 3.25 and 3.13 which have equivalents Moderate Extents.

Data is revealing that teachers encountered at par extents of barriers producing self-learning modules despite of their trainings. A deeper look at the table make it noticeable that most of the barriers concern about budget insufficiency and lack of stable internet connections which no amount of training of teachers could ever improve and address.

This result did not confirm the contentions of Cabardo, Cabardo and Cabardo-Mabida (2022) upon stating that although teachers were confronted with countless and compelling challenges in implementing the blended learning most especially as brought by insufficient budget, but there are some factors which provided teachers with the edge in hurdling these barriers and challenges, one of which is the amount of relevant trainings they received which posited significant positive impact on their resiliency. Highly trained teachers were able to easily source out seeking support from various stakeholders. They ere more efficient in crafting and reproducing of SLMS

Table 10

Barriers in the Implementation of Blended Learning Modality in Rural Areas in Facilities and Equipment When Grouped According to Number of Trainings/ Seminars Attended

Categories	Few Mean	Interpretation	Many Mean	Interpretation
1. Insufficient printing devices in school.	2.84	Moderate Extent	2.54	Moderate Extent
2. Insufficient number of laptops for encoding of SLHTs and SLMs.	2.98	Moderate Extent	2.86	Moderate Extent
3. Unavailability of viable internet connection in school to conduct synchronous and asynchronous online instruction.	4.07	High Extent	3.86	High Extent
4. Unavailability of devices essential for synchronous and asynchronous online instruction in various households.	3.91	High Extent	3.68	High Extent
5. Unavailability of viable internet connection to conduct synchronous and asynchronous online instruction in various households.	4.09	High Extent	3.81	High Extent
6. Absence of safe shelter serving as drop off and pick up point of SLMs.	2.81	Moderate Extent	2.54	Moderate Extent
7. Absence of electrical connection in respective households.	2.77	Moderate Extent	2.68	Moderate Extent
8. Absence of TV in respective households for TV-based instruction.	3.42	Moderate Extent	3.05	Moderate Extent
9. Absence of transistor radio in various households for radio-based instruction.	3.44	Moderate Extent	3.46	Moderate Extent

10. Absence of school computer laboratory for online distance learning.	3.84	High Extent	4.11	High Extent
Overall Mean	3.42	Moderate Extent	3.26	Moderate Extent

Table 10 presents the overall results for barriers in the implementation of blended learning modality in rural areas in facilities and equipment when grouped according to number of trainings/ seminars attended. As revealed in the table. The overall means for respondent with few and several trainings were 3.42 and 3.26 both are equal to moderate extent verbal ratings.

This is a connotation that the number of relevant trainings did not help teachers become more effective in dealing with the barriers relative to facilities and equipment in implementing blended learning. Acquisition of facilities and equipment is dependent on budget allocated to schools or support accorded by various stakeholders which couldn't be improved through relevant trainings.

This result is contrary to the contentions of Herburger, Holdheide, and Sacco (2020) when they disclosed that teachers manifested varying abilities to surpass the barriers in implementing modular distance learning. In the area of securing stronger internet connections, the younger significantly manifested age over the older ones while in terms of acquiring facilities and equipment, the younger ones' preference comforts which they acquired personal devices through their personal resources but in terms of reproduction of SLMs, the older printed in advance compared to their counterparts.

Table 11

Barriers in the Implementation of Blended Learning Modality in Rural Areas in Assessment of Learning When Grouped According To Number of Trainings/ Seminars Attended

Categories	Few Mean	Interpretation	Many Mean	Interpretation
1. Shortage of time in reviewing accomplished modules as basis for remediation	3.42	Moderate Extent	3.32	Moderate Extent
2. Shortage of time to prepare worksheet for enrichment instruction	3.19	Moderate Extent	2.92	Moderate Extent
3. Non-completion of Modules as bases summative test	3.05	Moderate Extent	2.59	Moderate Extent
4. Insufficient time to check learners' portfolio	2.88	Moderate Extent	2.62	Moderate Extent
5. Shortage of time in constructing varied types of tests	2.98	Moderate Extent	2.73	Moderate Extent
6. Incomplete learners' journal as major output	3.02	Moderate Extent	3.00	Moderate Extent
7. Absence of rubric as basis in scoring learners' output	2.60	Moderate Extent	2.49	Low Extent
8. Shortage of time in preparing performance tasks for learners	2.98	Moderate Extent	2.78	Moderate Extent
9. Shortage of time in preparing individual assessment for learners	2.95	Moderate Extent	2.76	Moderate Extent
10. Lack of internet connection for performance assessment.	3.70	High Extent	3.51	High Extent
Overall Mean	3.08	Moderate Extent	2.87	Moderate Extent

Table 11 presents the results on barriers in the implementation of blended learning modality in rural areas in assessment of learning when grouped according to number of trainings/ seminars attended. The overall means are 3.08 and 2.87 with equivalents Moderate Extent respectively for both lowly trained and highly trained teachers.

This is an indication that both respondent groups find so much difficulty in implementing effective and efficient assessment of learning practices despite if they are well trained or not. The amount of training they received did not help in making them more effective in convincing parents to merely guide in answering the assessments instead of answering them all by themselves which defeats the purpose of assessment. It could be noted that both respondent groups struggled in implementing interventions through online synchronous and asynchronous

approaches due to lack of stable internet connection along with the absence of smartphones devices in each household which could hardly be improved through training of teachers.

This supports the contentions of Guiamalon, Alon and Camsa (2021) upon disclosing that teachers needed to cross the mountains to conduct regular home visitations. Graded examinations such as summative tests could never be done online, teachers need to gather the learners in a place observing minimum health protocols to get reliable assessment results. The problem with internet connection and smart devices in various households hinders blended learning implementation, in most provinces, pure modular distance learning is the sole learning modality due to this prevalent obstacle.

Comparative Analysis Of Barriers In The Implementation Of Blended Learning Modality In Rural Areas When Grouped And Compared According To The Aforementioned Variables

This area presents and discusses the overall comparative analysis of the barriers in the implementation of blended learning modality in rural areas when grouped and compared according to the aforementioned variables using Mann Whitney U test.

Conclusion:

The study found that the teacher respondents were generally young and had attended few trainings. Major barriers to implementing blended learning included the lack of viable internet connection in schools, particularly affecting research, online instruction, and performance assessment. These issues were most prominent in areas related to self-learning modules, facilities, and assessment of learning. Comparisons based on age and number of trainings showed only a moderate extent of difference across all areas, and statistical analysis revealed no significant relationship between these variables and the barriers encountered. Thus, regardless of age or training, teachers face similar challenges. The study concludes that teachers should pursue further education and training, and that schools—especially in remote areas—should prioritize acquiring reliable internet access through government funds or stakeholder support. Collaborative efforts among all educators are essential to overcome these shared barriers and improve the effectiveness of blended learning delivery.

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