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Research Article

Education During Pandemic: The Adoption of Learning Resource on Wifi Hub Expanded Electronic Learning in Sarangani (LR on WHEeLs) in Alabel 4 District

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ABSTRACT

The purpose of this study is to look into teachers' willingness to use the Learning Resources on Wi-Fi Hub for Expanded e-Learning (LR on WHEeLs) as a flexible learning option to extend the reach of e-learning to remote villages, particularly those outside of the service coverage of major telecommunications companies and internet service providers.

This study employs quantitative research, with data collected via an online survey questionnaire. Purposive sampling was also used to select respondents from Alegria National High School. The collected data was statistically analyzed using weighted mean.

The teachers' readiness on LR on WHEeLs anchored to the uses of ICT revealed the following: first, the school staff and the department as a whole provide ICT professional development. Second, ICT-based activities and materials for teaching were frequently used, and subsequently, teachers were confident in their ICT skills. This indicates that the majority of teacher-respondents had adapted to so-called 21st-century learners. However, it has been revealed that the difficulties encountered by participants in the use of LR on WHEeLs include a lack of interest on the part of teachers, a lack of benefit from using Technology in teaching and learning, and an absence of adequate content/materials. As a result, proper reinforcement must be provided to teachers through training, orientation, and seminars, as well as the provision of the support needed and materials for the use of LR on WHEeLs.

Keywords: *Education, Wi-Fi, Learning Resources*

Background

According to Ghavifekr and Rosdy (2015), the integration of Information, Communication, and Technology (ICT) in education refers to the use of computer-based communication that is integrated into the daily classroom instructional process. The authors went on to say that

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teachers are viewed as key players in incorporating ICT into their daily classrooms in order to prepare for the era of digitalization. According to Marc Prensky, a digital native learner or 21st century learner is someone who lived technological world and is able to access the internet from a young age. Various studies have shown that integrating ICT into learning today contributes to students' learning progress. Basri et al. (2018) study, proved that the use of ICT in the classroom has a significant impact on students' academic performance. The authors even defined students' academic performance as the improvement of the students' current state of knowledge and skills, as reflected in their GPA, as well as in the development of their personality traits and academic growth from lower levels of study to higher levels.

Education experts have incorporated innovations in strategies, pedagogies, and even the integration of technologies in teaching in order to meet the needs of the so-called 21st century learners inside the classroom, which correlates to better learning. However, the education sector, like all other sectors of the economy, is not immune to the effects of the COVID 2019 pandemic. The quarantine protocols imposed by the government to mitigate the spread of the virus halted the majority of people's daily operations.

To ensure that learning continues unhindered as the country battles the pandemic, the delivery of distance learning approach was imposed in all schools under the DepEd umbrella. With the preferred Modular Learning of students, the Department of Education will provide Self-Learning Modules (SLMs) with alternative learning delivery modalities to be offered for various types of learners across the Philippines. With face-to-face classes still prohibited due to the public health situation, the integration of SLMs with alternative learning delivery modalities (modular, television-based, radio-based instruction, blended, and online) will assist DepEd in ensuring that all learners have access to quality basic education for SY 2020-2021.

Research Methods

Participants

Table 1. The respondents of this study are the teachers of Alegria National High School and Alegria Central Elementary School

School	Population
Alegria National High School	34
Alegria Central Elementary School	31
Grand Total	**65**

Data Gathering Method

In order to collect the necessary data for the study, the researcher took the following steps. First, I sought permission from the School Division Superintendent's office to conduct the study. Second, once the DS AND ASDS were approved, the researcher immediately distributed the survey questionnaires to the teachers via online forms. The survey questionnaire used in the study was adapted from the Kamaruddin et al. (2017) study on Teachers' Levels of ICT Integration in Teaching and Learning. Third, the instrument was retrieved as soon as the teachers finished answering the survey questionnaire; finally, the data collected was statistically analyzed using weighted mean.

Results and Discussion

Table 2. Level of knowledge and skills of Teachers in using ICT

Indicator	Not Capable (1)	Fair (2)	Good (3)	Excellent (4)
1. I know how to operate / use blackboard or board.	0	5	41	19

Indicator	Not Capable (1)	Fair (2)	Good (3)	Excellent (4)
2. I know how to use operate / use overhead projector	0	10	52	3
3. I know how to use operate / use television / video	0	6	40	19
4. I know how to use operate / use digital camera	0	0	42	13
5. I know how to use operate / use audio application	2	16	40	7
6. I know how to use operate / use smart phone	0	7	45	18
7. I know how to use operate / use computer	0	8	43	14

Table 1 displays the level of knowledge and skills of teachers in the use of ICT. According to the data, item 2; I know how to use/operate overhead projector received the highest frequency counts of 52 out of 65 or 80 percent and was classified as Good, followed by item 6; I know how to use/operate smart phone received the second highest frequency counts of 45 out of 65 or 69.23 percent and was classified as Good, and item 7; I know how to use/operate computer received the third highest frequency counts of 43 out of 65 or 66.15 percent and was classified as Good

In general, according to table 1, the majority of respondents are Good in their level of knowledge and skills of teaching in using ICT, which is supported by Ghavifekr & Rosdy (2015), who stated that teachers are seen as key players in using ICT in their daily classrooms as preparation for the current digital era.

Table 3. Level of ICT Integration in Teaching and Learning

Indicator	Never (1)	Sometimes (2)	Often (3)	Frequently (4)
1. I use ICT to prepare lesson and report in teaching and learning	0	26	25	14
2. I use internet to teach teaching materials	0	32	23	10
3. I use ICT to communicate with students and parents	1	30	25	9
4. I use ICT especially computer and its application in teaching and learning.	1	28	29	7
5. I use ICT to monitor and evaluate children progress or performance	1	26	27	11
6. I use ICT to make presentation slides/delivery of classes	0	19	27	19
7. I use ICT to provide and prepare online work or assignment.	2	30	26	7

According to the table, item 2 in the level of ICT Integration in Teaching and Learning of Teachers received the highest frequency counts of 32 out of 65 or 49.23 percent marked as occasionally, followed by items 3 and 7 with the same total of frequency counts of 30 out of 65 or 46.15 percent revealed as occasionally, and item 4 with a frequency count of 29 out of 65 or 44.62 percent revealed as frequently.

In general, this data indicates that the majority of respondents are incorporating ICT into their teaching and learning activities, which is deemed necessary during this time of crisis.

Table 4. Problem in Implementing ICT Integration in Teaching and Learning

Indicator	Strong Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1. Lack of awareness	2	48	14	1
2. Lack of technical support	8	38	18	1
3. Constraint of time in school	6	36	22	1
4. Limited knowledge and skill	5	42	18	
5. Limited understanding on how to integrate ICT in teaching and learning	6	36	22	1
6. Lack of software / website that can support ICT integration	5	24	36	0
7. Lack of electronic devices / tool e.g. computer	9	22	31	3

Item 1 had the highest frequency count (48 out of 65, or 73.85 percent) and was marked as disagree, followed by item 4; limited knowledge and skill had 42 out of 65, or 64.62 percent, and was marked as disagree.

Furthermore, the results show that the majority of respondents have little difficulty implementing ICT integration in teaching and learning because teachers are already using computers. However, with regard to the integration of new trends or application of ICT in the teaching and learning process, teachers require more training and workshops.

Discussion of Results

1. The majority of the respondents were ages 30 to 49 years old and were generally females. Most of the participants are engaged in computers for 3 years or more that is why their usage varies from sometimes to most of the times.
2. Provision of training by the school staff and training on introductory courses on internet use and general applications (basic word-processing, spreadsheets, presentations, databases, etc.) are the highest rated variables in the professional development of ICT. Moreover, teachers integrated ICT in making activities and materials for teaching which includes; (1) preparing exercises or tasks for students, (2) communicating parents online, (3) browse/search the internet to collect information to prepare lessons. Data on ICT skills of teacher revealed to be confident as teachers participated in a discussion forum on the internet and usually did editing text online containing internet links and images.
3. The problems encountered by the teachers on the usage of LR on WHEeLs includes; lack of interest of teachers, no or unclear benefit of the use of the project for teaching and lack of adequate content/materials for teaching.

Conclusion

Based on the findings, it is possible to conclude that teachers' readiness for the Learning Resource on WIFI Hub Expanded Electronic Learning in Sarangani (LR on WHEels) as a flexible learning option in the face of the covid-19 pandemic should be reinforced and intensified. Because teachers are already using ICT in the classroom, any issues that arise can be addressed by holding a series of trainings, orientations, and seminars to ensure that they are

fully equipped to use this program. Teachers are motivated to make changes if they find the activity relevant and gain the competence that will give them a sense of enjoyment, making their tasks easier, and providing activities that will suit the learners' needs during this pandemic.

The learners of the twenty-first century are the generation of active learners who want to be involved in the learning process. Essentially, newly hired and digital immigrants teachers must be aware of the new developments in education in terms of ICT integration. With proper observation of the students' needs, we will be able to provide not only learning strategies tailored to their needs, but also ongoing professional development for teachers.

Table 5. Action Plan

OBJECTIVE / TARGET	ACTIVITY / TASK / STEPS	PERSONS INVOLVED	TIME FRAME	RESOURCE NEEDED	EXPECTED OUTPUT
Establish a training or seminar-workshop for all teachers about the use of LR on WHEels	Organize training for LR on WHEels	Principal All teachers	December 2020 to July 2021	5,000.00	Teachers will be familiar and expert on the use of LR on WHEels as flexible learning option amid pandemic.
Conduct Parents Orientation about LR on WHEels	Orient parents about the purposed and advantages of LR on WHEels,and get feedback from the parents as basis for future development of the project.	All parents	January 2021	3,000.00	Parents will inform about the benefits of LR on WHEels as flexible learning option
Development of learning content materials	Create Contextualize learning materials to suit the needs of learners	All Teachers	January 2021 to July 2021	3,000.00	Develop Contextualize learning materials for learners.

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