



ENHANCING BLENDED DISTANCE LEARNING DELIVERY THROUGH ELECTRONIC PUBLICATION ON MOBILE PHONE (PROJECT EP_uMP)

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Completed 2022



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Republic of the Philippines
Department of Education
REGION X – NORTHERN MINDANAO
SCHOOLS DIVISION OF OZAMIZ CITY

APPROVAL SHEET

In fulfillment of the requirements for the Basic Education Research Fund, this study entitled, **"Enhancing Blended Distance Learning Delivery through Electronic Publication on Mobile Phone (Project EPuMP)"** prepared and submitted by **Ronald A. Catedral** is hereby recommended for acceptance and approval.

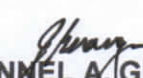
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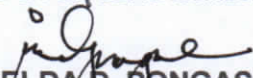
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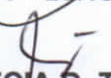
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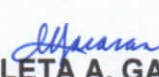

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CERTIFICATE OF ORIGINALITY

We/I hereby attest to the originality of this research paper and have cited properly all the references used. I further commit that the final research study emanating from the approved proposal shall be original content. We/I also declare that the intellectual content of this BERF study is a product of our/my work.


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Our **LEARNERS**: *The **Diamonds** of the **Fortress**.*
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Enhancing Blended Distance Learning Delivery through Electronic Publication on Mobile Phone (Project EPuMP)

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ABSTRACT

This pandemic, had affected the classes of our students not only in Tabid National High School but in other schools in the country. However, learning cannot be paralyzed as a result of this crisis. This action research is called Project EPuMP (Electronic Publication on Mobile Phone). Electronic Publication (ePub) on Mobile Phone is an online or offline mobile application that turns printed learning modules into an electronic and interactive platform using the students' mobile phones. So, this is simply bringing the bulky and heavy printed modules into more interactive, convenient, and carry-all-the-way learning modules. The study is based on the concept that mobile technologies can support distance learning. Knowing the students nowadays, they are more interested in using their mobile phones rather than reading textbooks. The project has employed study participants of 22 Grade 11 and 21 Grade 12 students of Tabid National High School, Schools Division of Ozamiz City during the School Year 2020-2021. The data were analyzed and reported using mean and standard deviation through the student's GPA Data Capture Form. Therefore, students grade increased when using Electronic Publication using Mobile Phones (EPuMP).

Keywords: *electronic learning, mobile learning, digital learning, electronic publication, kotobee software*

Acknowledgment

The researcher extends his great appreciation and gratitude to the God Almighty, sound mind which enable to conduct and finish this study amidst the pandemic and personal challenges in life. Thank you, DepEd Regional Office for providing funds to the Division Offices and for choosing me as one of those lucky few researchers granted with the BERF funding. Thank you, DepEd Ozamiz City and Tabid National High School for giving me this opportunity to conduct this research.

I. Context and Rationale

COVID-19 has emerged as a dangerous threat to public health. Originating in Wuhan Province in China, this highly contagious illness caused by the novel coronavirus SARS-CoV-2 took less than a month to be declared a "public health emergency of international concern"

by the World Health Organization. Subsequently, it grew into a pandemic within a month, affecting more than three million worldwide and nearly two lakhs succumbing to the infection, the numbers rising as we speak (WHO, 2020). The global effects of this outbreak have been far beyond just medical concerns. As international and national borders are sealed, economies slashed, livelihoods uncertain, and billions quarantined at their homes to contain the infection, this pandemic has disrupted the world order, with every nation facing unique challenges due to the outbreak. These psychosocial and politico-economic effects are expected to outlast the duration of COVID-19 (Gardini, 2020).

In order to ensure that quality basic education must continue, Secretary Briones then introduced the guidelines for the department on how to deliver quality basic education in the time of the pandemic. The secretary introduced the distance learning modality while implementing strict compliance to all learners' health, safety, and welfare, teachers and personnel of DepEd ("Briones, education ministers unite to ensure learning continuity amid COVID-19 | Department of Education", 2020).

Another main feature of BE-LCP is the adoption of multiple learning delivery modalities, with blended learning and distance learning as major options. These modalities will be offered appropriately depending on the situation of the learners' households. As one of the educational institutions of the Division of Ozamiz City, Tabid National High School has used printed modular learning as means of distance alternative learning delivery. The high cost of printing materials and maintenance of inkjet printers motivated the proponent to conduct this study and decided to develop an online-offline mobile platform using the existing DepEd Computerization Program (DCP) Tablet PCs to lessen the cost of module production and at the same time enhance the delivery mode of learning.

The study is based on the concept that mobile technologies can support distance learning. Knowing the students nowadays, they are more interested in using their mobile phones rather than reading textbooks (Kukulska-Hulme & Viberg, 2018). Inquiry-based learning is an efficient strategy in motivating learners to explore and find answers to the

questions that arise in their minds. It molds learners to develop their ability to think critically and to powerfully design and control their actions and destiny. Mobile technology is an example of this learning process, but it lacks practical strategies (Suarez et al., 2018).

In implementing blended distance learning, teachers, learners and parents face alarming issues and concerns. It was observed that even with the presence of parents at home, students still need an inner interest and motivation in answering the learning tasks assigned to them. At this time of the pandemic, parents are distracted by the demands of daily life (Đurišić & Bunijevac, 2017). Some of these distractors are low-income, inflexible work hours and communication barriers. Some parents are unable to attend school activities or participate in their children's schooling regularly. Since the home turns into the classroom, some parents do not prepare their role as teachers. Many parents struggle to perform this task, especially those with limited education and resources (Yan, 2020).

The discussion above supports the need to develop localized and contextualized learning modules that would fit in the students' interest that even in the absence of the parents, the students would still want to learn and enjoy the tasks given to them. In the 21st century, the information and communication technology explosion increases the use of digital devices for many purposes in work and informal and non-formal education. This study analyzes existing literature based on the definition of the concepts, terminology used, differences, fundamental perspectives, benefits, disadvantages, and finally, the similarities and differences of e-learning (electronic learning), m-learning (mobile learning), and d-learning (digital learning). It reveals that e-learning and m-learning are subsets of d-learning. On the other hand, some learning tools could be considered as m-learning and e-learning (Basak et al., 2018).

Mobile phones have become so ubiquitous that they have become an important part of our lives. Mobile subscriptions exceed 6 billion subscriptions globally. Adopting mobile phones with smart technologies has increased fast, coinciding with more utilization of their Internet capabilities. With the abundance of knowledge the Internet provides, mobile phones become an invaluable pathway for that knowledge. The fact that these gadgets are well-liked

by students makes them one of the best tools to be adopted by educational institutions (AITameemy, 2017).

II. Proposed Innovation, Intervention and Strategy

The proposed intervention is dubbed Electronic Publication (ePub) on Mobile Phone is an online or offline mobile application that turns printed learning modules into an electronic and interactive platform using the students' mobile phones. So this is simply bringing the bulky and heavy printed modules into more interactive, convenient and carry-all-the-way learning modules. They could bring their learning devices in any part of their learning space, whether on their farm or under the tree's shade, while doing simple house chores. Even if the students are tasked by their parents to workhouse chores, answering the learning modules is not an obstacle in implementing continuing education. The increasing growth of mobile technology in our society has become a reality. This paper was designed to study the different factors that influence students' behavior in mobile technologies for learning.

ePub using Kotobee software will be installed in the cellular phones of the students. Once installed, the application is now readily available to use. The application contains all the modules intended for Grade 11 for the whole semester. They must click on the module number intended to be answered for the week. Animated discussions on the topic will make the application more interesting and enjoyable. The students will answer the questions by simply choosing from the options provided. They could learn the correct answer right away because they could not proceed to the next item with the wrong response. In this case, the students could be allowed to correct their responses submitted right there and then. The matrix of activities regarding the implementation of the project is shown in Table 1.

Table 1. Matrix of Activities in the Implementation of EPub on Mobile Phone

Timeline	Activity	Persons/ Responsible
March 2021	Baseline data gathering	Proponent Class Advisers
March 2021	Designing and developing the ePub using Kotobee application	Proponent
March 2021	Installation of the application in the DCP Tablets to be distributed to Grade 11 and Grade 12 students	Proponent Learners

April to July 2021	Project Implementation, Monitoring and Evaluation	Proponent School Head SEPS – Planning & Research Class Advisers
July 2021	Endline data gathering	Proponent Class Advisers

III. Action Research Questions:

This action research will be implementing Project EPuMP to enhance students' performance in the blended distance learning modality. The study aims to answer the following research questions:

1. How do the participants perform academically before Project EPuMP?
2. How do the participants perform academically during Project EPuMP?
3. Is there a significant difference between the academic performances of the participants before and during Project EPuMP?

IV. Action Research Methods

Research Design. The study is action research by design. In this project, the students' burden of skimming and scanning the pages of the printed modules and the low interest in reading will be addressed. Action Research enables teachers to work on problems specific to their classrooms. The action research procedures allow teachers to resolve their teaching challenges. Action Research guides teachers on asking a focusing question, defining terms, collecting relevant data, using an analysis process that rules out bias, and includes methods that yield validity and reliability (Reed, 2017).

Setting. The action research was conducted in Tabid National High School. Tabid National High School was founded in 2001 and is part of District 10 in the Division of Ozamiz City. It is almost eight (8) kilometers away from the School's Divisions Office and is in a rural area. The Tabid National High School envisions every student to be functionally literate, equipped with the necessary skills, knowledge, and desirable values of a self-reliant and volatile citizen molded by competent and productive teachers.

Participants and Other Sources of Data and Information. The project has employed study participants of 22 Grade 11 and 21 Grade 12 students of Tabid National High School during the School Year 2020-2021. The students will be provided with ePub on the Kotobee application on their respective mobile phones. Class adviser class records will be the sources of students' academic performance data before and during the implementation of Project EPuMP. Students' grade point average in Quarter 2 will be the baseline data, and the student's grade point average in Quarter 3 will end line data. The student's grade point average will be gathered from the class advisers using the Students' GPA Data Capture Form (Appendix B).

Data Gathering Methods. A documentary review and analysis of the student's grade point average were conducted to determine the participants' academic performance after implementing Project EPuMP. Project EPuMP was implemented in Quarter 3, meaning students will be exposed to ePub on a Mobile Phone environment during the quarter. After implementing the project, a documentary review and analysis of the student's grade point average in Quarter 3 was conducted. The grades have indicated the students' academic performance during Project EPuMP.

Ethical Considerations. In this particular study, the researcher upholds respect, justice, and fairness to gain confidence and honest responses from the participants. They also maintain authenticity and confidentiality. The participants in this study were assured that their personal information, experiences, and thoughts will be confidential, as no one in this study knew about them except the researchers. They would also be reminded to deal with the questions truthfully and honestly. Finally, the study solicits voluntary participation from the participants. They were properly informed of the project beforehand through the Informed Consent Form (Appendix A).

Data Analysis Plan. The student's grade point average in Quarters 2 and 3 were subjected to descriptive statistics such as mean, standard deviation, counts and percents. To determine the significant difference or increase in the data sets, paired t-test was employed.

The participants perform academically during Project EPuMP. Table 2 showed that the participants performed academically and improved their grades in the 3rd quarter based on the students' GPA data capture form of grade 12 Scorpio students.

Significant difference between the academic performances of the participants before and during Project EPuMP. There is a significant difference between the academic performance of the participants before and during Project EPuMP. Based on the students' GPA data capture form in Table 2, most of the grades are increasing from quarter 2 to quarter 3.

Reflection

As an ICT teacher, I realized the importance of distance learning modality using self-learning modules in this new normal situation where face-to-face classes can cause danger to the health of every individual student and teacher. Enhancing blended distance learning delivery through electronic publication on mobile phones will cater to our students online and offline. Through this research, our learners can scan, read and even answer the questions in the E-SLM with interactive activities, especially in this time of the pandemic brought about by COVID 19.

VI. Action Plan

Once the study is reviewed and final report is approved by the approving authority, the research output will be presented to a group of teachers, school heads and supervisor of the district. Presentation to research conferences and publication of the paper will also be tried out by the researcher. The researcher will also recommend to other schools of the district and to the district supervisor and to the Schools Division Superintendent in the Division of Ozamiz City for possible policy formulation based on the outcome of the study.

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