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RESEARCH ARTICLE

INITIAL IMPLEMENTATION OF PRINTED MODULAR DISTANCE LEARNING IN THE CITY OF NAGA-CEBU DURING COVID-19 PANDEMIC

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ABSTRACT

The global educational system has affected the largest population of learners in the history of education system due to COVID-19 pandemic. Closures of schools happened in some learning spaces of countries. This crisis has brought fears among the learners considering that they are exposed with people if face- to- face teaching-learning modality is applied in the opening of classes. This life-threatening phenomena has reduced also the opportunities for many vulnerable students, youth, and adults - who are in a disadvantaged situation - to continue their learning. On the other hand, this worldwide crisis has stimulated the education experts to come with innovations in order to address this problem in the Philippines Education System. The Department of Education has implemented the Distance learning Modalities (DLDM) for this school year 2020-2021 as an innovative approach to ensure the learning continuity while vaccine is not yet available. In Cebu, Philippines, specifically the City of Naga Division, we have adopted Printed Modular Distance Learning in which the learner is given printed modules as one of the Department of Education Learning Resources Standards. This paper described the process of the Modular Teaching-learning Modality implemented in our division. The actual observations, reliable data collection, valid concerns and issues were discussed for future studies and references.

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INTRODUCTION

The worldwide pandemic has brought the climate of fears among students, teachers, parents, and other stakeholders. This COVID-19 affected us since January 30, 2020 when the World Health Organization (WHO) declared it a Public Health Emergency of International Concern. With this, the Department of Education (DepEd) Secretary issued DepEd Memorandum (DM) No. 11, s. 2020, creating a Task Force for the management of the department's response to COVID-19 in February 1, 2020. The educational system in the Philippines faced with uncertainties on whether schools will be allowed to operate or not, and what precautionary measures will be applied in situations like this. With all these threats, challenges, and uncertainties, the directive of DepEd

Secretary Leonor Magtolis Briones is to ensure the safety, welfare and health of all students, teachers, and personnel of the department, while looking for possible ways to continue the education of the learners. The Department of Education issued the Basic Education Learning Continuity Plan (BE-LCP) that respond to the directive of the Dep Ed Secretary and give guidance on how to deliver education in this time of crisis. The Department of Education in the Philippines decided finally to open classes in October 5, 2020 despite the increasing number of COVID-19 infected people. The online surveys and regional webinars were used to gather data as the basis of the division preference as to what teaching modality they will utilize in the opening of classes. Hence, the situation for this school year is extremely different. In reference to the Regional Memorandum No. 340, series 2020 Re: Dry Run/Simulation of Self-Learning Modules, this office through the Curriculum and Learning Management, Division will conduct a monitoring and Evaluation on the implementation of the learning modality employed by the division office dependent on the schedules submitted.

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The purpose is to gather significant feedback from our school leaders, teachers, learners and other stakeholders relative to the implementation of the learning delivery modality employed in order to make necessary adjustment prior to the opening of classes this school year 2020-2021. Based on “The Basic Education Continuity Plan in the Time of COVID-19” published in May 2020, it is stated that:

“Department of Education adheres to the position of “Closure of schools or use of alternative learning modalities (e.g., online/distance learning)” in the Risk Severity Grading and Risk-based Public Health Standards provided by DOH in its Administrative Order No. 2020-0015, dated April 27, 2020, with the subject Guidelines on the Risk-Based Public Health Standards for COVID-19 Mitigation.”

Since closure of schools is not an option chosen by the Department of Education, the City of Naga Division Cebu, Philippines selected the utilization of Printed Modular Distance Learning after conducting a series of local and national online surveys. Our division recognizes the high volume and high degree of contact intensity in the school setting if we still apply the face-to-face teaching-learning modality. Moreover, the magnitude of the population directly covered by the sector, and the opening of schools become a potential hotspot for transmission and a public health concern in general. Thus, prior to the DepEd order issued by the Department of Education that covers descriptions and consideration to whatever strategy of Learning Delivery Modalities, the City of Naga Division in Cebu, Philippines has chosen the Printed Modular Distance learning following the matrix of requirements enclosed in the memorandum. This teaching strategy is fit to all learners who reside in urban and rural areas because the primary source of their learnings come from the modules provided by the Department of Education – local and national. Many people have negative perceptions and conceptions about distance learning education, considering that it shows to be poor in performance. Yet new tools and techniques such as distance learning, web-based courses, learning management systems (LMS) and Moodle are making significant contributions in the distance learning arena and increasing students’ satisfaction (Ali, 2011)

Thus, this research article aimed to expound objectively the process applied in the distribution of printed self-guided modules during the initial implementation of Modular Distance Learning (PMDL) in the City of Naga Division, Cebu, Philippines.

OBJECTIVES OF THE STUDY

This research aims to accurately describe and exponentially highlight the initial implementation of modular teaching-learning modality in the City of Naga. Specifically, this research seeks to comprehend the following:

- State the process of printed modular distance learning initial implementation in the City of Naga;
- Determine the problems and issues encountered during the dry runs as part of printed modular distance learning initial implementation in the City of Naga;
- Propose interventions to improve the printed modular distance learning in the City of Naga.

METHODOLOGY

This paper is a descriptive research that utilized data from reliable sources such as actual observations during the initial implementation, administrative memoranda from national, regional, and division offices, topical and latest published research materials, web portals and peer collaboration within the City of Naga, Cebu. Based from the collected data, this will be organized, presented, and analyzed to determine the varied concerns, issues, gaps and problems faced during the initial implementation. The content of this paper can be used for other related studies and review of related literature as a valid source of reference in making a research related to distance learning modalities. Additionally, this paper identified the struggles and difficulties in order to find appropriate solutions and interventions to improve the initial implementation of printed modular teaching-learning modality in the City of Naga.

PRESENTATION OF DATA AND ANALYSIS

The Printed Modular Distance Learning in the City of Naga, Cebu, Philippines is adopted in accordance with the directive of the office of the President that no face-to-face classes shall be held until the vaccine for COVID-19 becomes available. This is the first time that the Department of Education allows this kind of learning delivery modality for the formal education. The series of descriptive discussions were analyses from varied date gathered in order to describe the process taken in the initial implementation of this research study.

Initial Implementation of Printed Modular Distance Learning: The initial implementation of Printed Modular Distance Learning in the Division of Naga, Cebu, Philippines utilized the Most Essential Learning Competencies (MELCs) in the production of printed modules which is considered as the primary learning material in this kind of learning modality. Further, this initial implementation is in accordance with the issuances of memoranda from the national to division of the Department of Education.

The Schools Division of City of Naga through the School Governance and Operations Divisions conducted an orientation through webinar with the purpose to update the schools in the division on the reporting of the Learner Enrollment Survey Form (LESF) for school year 2020-2021. In relation to this, the Learner Enrollment and Survey Form module in the Learner Information System was distributed last June 10, 2020 as stated in the National Memorandum DM-PHRODFO-2020. Daily reporting of enrollment data was done to monitor the number of incoming learner registrants. Problems have arisen during the initial implementation as to how students will have access to education amidst this pandemic. Educators, parents, and students have different views on this issue, but the Department of Education has proposed solutions to ensure learning continuity in education. The success of the selected delivery Modality is dependent to different sectors – Teachers, parents, students, Department of Education family, Local Government Units and private stakeholders. In determining the strategy to implement for this school year 2020-2021, the City of Naga Division conducted a webinar on “Joint Orientation on Suggested Strategies in

Implementing Distance Learning Delivery Modalities (DLDM) Google Suite and Microsoft Office 365”.

This is in accordance to Regional Memorandum No. 0375, series 2020, which disseminates a memorandum from the Office of the Undersecretary Diosdado M. San Antonio of the Curriculum and Instruction. The memorandum includes the suggested strategies and crucial plans for Learning Delivery Modalities such as: General Guidelines and Considerations, Descriptions and Considerations for each Distance Learning Delivery Modalities, Map of the Learning Resources Needed for Each Sub- Category of distance learning delivery Modalities, Weekly Home Learning Plan and Individual Learning Monitoring Plan and Sample weekly Home Learning Plan. The purpose of this National Memorandum is to address the potential challenges during the implementation. Through this, our division was able to determine the strategy needed in our area. All teachers in the City of Naga Division were trained and equipped with these information and forms through Learning Action Cell (LAC) sessions in preparation for the opening of classes as mandated in Division memorandum No. 290, series 2020. This is to ensure the readiness of teachers and school leaders for the implementation and management of learning delivery modalities with policies and COVID-19 response framework and to provide guidance to the field officials in making informed decisions related to the implementation of the different learning modalities appropriate to their content.

In addition, Printed Modular Distance learning is the safest learning delivery strategy applicable in the City of Naga-Cebu Division. Operational complications are inevitable during the initial implementation but the division has surpassed these challenges. It can be seen through the full cooperation of our parents and learners during the orientation meetings before the series of dry run was conducted from elementary to secondary schools. The schools proactive response has made a positive impression in the community and it has added a specific details as to the assistance that a parents and teachers can give to the learners. The all-out support of our local government units and private sector stakeholders both in financial and moral aspects have motivated the residents to contribute something in one way or another. Also, the solidarity of our Department of Education family in the area of writing, checking, printing and sorting of modules who work hand in hand in the true spirit of unity and mutual help. There are lot of help that Department of Education provide like working through mass media to deliver the information accurately. This should also go to parents because they are the learning facilitators at home. All Radio, TV, texts and calls through phone, and chats through messenger can be a means of open communication to give tips and advices on how to better support their children.

The challenge today is to reduce the negative impact of this pandemic in the learning of our students and build on this experience to get back on a path of faster improvement in the utilization of Printed Modular Distance Learning. As educational system in the Philippines is trying to cope with this crisis, we must also be thinking of how we can recover stronger in this time of difficulty due to COVID-19 pandemic. So continuing education through alternative learning pathways, as soon as possible, must also be a top priority right now, to ensure the interruption to education is

as limited as possible. We urgently need to support teachers, parents/caregivers, innovators, communications experts and all those who are in position to provide education, whether through radio programs, home-schooling, online learning and other innovative approaches (Education Cannot Wait)

Problems and Issues in the Initial Implementation of Printed Modular Distance Learning:

The dry run or simulation of self-learning modules which is to test the applicability and steps in the flow of distribution had revealed minor issues and problems during the process of implementation that was done in groups in the identified Barangay Purok Centers of City of Naga. Teachers visited each purok in the barangay to inform the purok official about the dry run and to assess readiness of the purok center and safety for the distribution of self-guided module. A survey forms were filled-out with necessary personal information of the purok president for future references. All the data collected through the purok survey form were consolidated for monitoring and evaluation of the Department of Education – Division Level. With a renewed sense of responsibility and sense of urgency, teachers’ orientation was conducted for them to be well-guided on the information dissemination of the guidelines intended for parents and learners. Guidelines on how to assist the learners in answering the module at home was explained and queries were properly addressed emphasizing the need to close the learning gaps in opportunities and assuring that all students have the same chances towards quality education.

Upon checking the learner’s information in enrollment platform both online and offline, there were students who did not indicate their complete address and contact numbers needed for the verification purposes. The teacher implementers prepared the learners by putting their names on the identified locations and informing their parents on the activity scheduled to done which is the distribution of self-guided modules through call, text and messenger. Furthermore, school heads coordinated with the Barangay Captains regarding the activity to assure the proper preparation prior to the conduct of module distribution. Maintaining engagement is vital for the welfare of our learners who greatly affected with this COVID-19 pandemic. Based on the actual observations and valid experiences of teachers in the field during the Self-Guided Module distribution, these are the:

- Difficulty in segregating the learners by Purok in each barangay due to incomplete information.
- Sudden adjustment from face-to-face classes to Modular Distance Learning with very limited engagement among
- learners
- Struggling parents trying to balance work being a learning facilitator at home.
- Unavailability of internet signal or slow internet connection (text, call and messenger)
- Untrained teachers and school leaders to implement Printed Module Distance Learning
- Insufficient copies of self-guided modules due to late and unverified enrollees
- Unfocused learners with high levels of anxiety

There is little to no evidence of cooperation between countries when this is an excellent opportunity to do so. In China, teachers quickly adapted to a new national cloud platform to serve resources to students for free (Schleicher, 2020). This readiness in China to use new solutions by teachers enabled the impact of the new situation to be mitigated on learning in schools, which is a strategy that other countries can learn from as they face the rapid spread of the virus (OECD, 2020). Problems and issues encountered in this stage can be easily resolved when there is cooperation among the members of the community. The education sector, together with the parents and learners must embrace this adopted learning modality. It is important to stay connected with the school by any means necessary. For all students, this is also a time to develop socio-emotional skills and learn more about how to contribute to society as a citizen. The role of parents and family, which has always been extremely important, is critical in that task (Public Health Update, 2020).

Description Analysis for improvement of Printed Modular Distance Learning Initial Implementation: The multiple issues and problem faced during the initial implementation of Printed Modular Learning Modality are manifestations that there are still areas of concerns that need to find solution to improve this learning strategy. The Department of Education is studying these gaps and working in progress to provide the learners the best education amidst the worldwide pandemic struggles. In Regional Memorandum PPRD No. 20, series 2020 which is the “Contextualized Enrollment Mechanism Of DepEd SOCCSKSARGEN for the Opening of Classes”, this communication states that the office deems to formulate effective mechanisms on how to manage the enrolment procedures as basis of schools in coming up with strategic interventions vis-à-vis varied teaching modalities appropriate to the school’s context. This provides clear directions for a responsive and strategic approach in implementing enrolment procedures aligned to public health safety protocols.

As shared in the article of Public Health Update 2020, “Maintaining the engagement of children, particularly young secondary school students is critical As the global coronavirus pandemic opens up an entirely new set of challenges for the education system, we’re seeing just how important it is to build a more adaptable and inclusive approach to learning. The mission of all education systems is the same. It is to overcome the learning crisis we were already living and respond to the pandemic we are all facing.” In the Training Resource Manual entitled “The Power of Family Schools Community Partnership”, Oliver Burnin of National Education Association said that we have to look at kids holistically, outside of the classroom and inside, and engage everyone involved in a child’s life in the learning process. Also, we have to meet their other needs and give children the message that we believe in them and that they can do it. The online article of EdTech written by Micah Castel she stated that there’s also the option of creating and distributing physical take-home packets, paper worksheets and books, as well as partnering with local television stations to broadcast educational programs. Those are key ways to make remote learning more accessible, especially if students can’t go to a library or a nearby public establishment to get internet access and do their work. In the enclosure to DepEd Order No. 012, s. 2020 of The Basic Education Learning Continuity Plan in the Time of COVID-

19, it is stated that “DepEd, through the National Educators Academy of the Philippines (NEAP), affirms its commitment to providing and supporting the professional development of teachers and school leaders. Our teachers and school leaders shall be capacitated to implement and manage the adoption of multi-modal learning delivery models based on their technology resources map, readiness assessment results, and implementation plans. They will be introduced to a range of delivery modalities they can utilize depending on the context of their community and the situation of learners and teachers. Tools and mechanisms will also be provided for them to make informed decisions on appropriate learning delivery mode for their context. Context includes geographical conditions, access to delivery platforms (i.e. online, broadcast technology, and modules), readiness of learners, teachers and household and community partners, and other relevant factors.”

In an online article of Bio State University about “Using a Modular Approach to Course Design”, there is an excerpt from the book Internet Based Learning (Kogan-Page, 1999) describing some of the advantages of using a modular structure.

- There are several advantages to a modular presentation. The most important one is that it allows for better evaluation and more focused revision and improvement. Modifying a module is easier and more cost effective than revising a course or one large module.
- Another advantage to a modular approach is that parts of the course can be used and reused elsewhere in other courses.
- Courses that are already in a modular format are ultimately more flexible and easier to convert for delivery in other formats.

In an online Research Report of Hundred Spotlight, It is stated that there are major opportunities that this pandemic has brought in the education of our students. Here are the following:

- This is an excellent chance for teachers to form much stronger connections with parents. The teacher to parent relationship is said to be especially important for students with disabilities in this emergency (Nadworny, 2020);
- Teachers have the chance to develop creative initiatives that help to overcome the limitations of being physically separated (e.g. play-based collaborative learning).
- There has been a lot of evidence that teachers are actively collaborating with one another and at a local level.
- There are unparalleled opportunities for cooperation, creative solutions, and willingness to learn from others and try new tools (Netolicky, Timmers, & Tuscano, 2020) because educators, parents, and students are sharing similar experiences all at the same time.
- Many education related companies are offering their tools and solutions for free to help support teachers and students.

- Our initial reaction may be to replicate the systems we are familiar with (e.g. school time-tables and routines) but digital learning provides the opportunity to learn in new ways that may rethink how we collectively think about the school system. Often the most innovative solutions come from a strong need to overcome a problem (Resnick, 2017) and constraints can fuel motivation to think of creative solutions.
- Students now have the autonomy and agency to take charge of their learning to explore new ideas and experiences like never before. New interests and passions will emerge for many students and teachers.

Conclusions

Educational system in the Philippines has made curriculum modification and learning strategy adaptation due to COVID-19 pandemic. In the area of curriculum, the Department of Education made revisions of the K-12 Curriculum Guide and come up with the Most Essential Learning Competencies which the department has utilized for the production of modules in the City of Naga Division, Cebu, Philippines. This Printed Module Distance Learning is a response to the call for education among students who preferred the traditional way of learning prior to the Learners Enrollment and Survey Form. Teachers hand over the printed modules to the learners' parents or guardians based on the school class schedule. After several readings of data collected, examined and investigated, it can be concluded that:

- Students need to follow the activities in Weekly Home Learning Plan to finish the tasks in the module;
- Students have their own way of learning that would work for them. Since the accomplishment of tasks is self - paced, students learn to have a sense of responsibility;
- The teacher can assess the learners' needs and make some interventions when necessary with the use of Individual learning Monitoring Plan;
- Resources within the locality are available not always in the form of online resources, but the help from the community and other stakeholders;
- The contents of the module is easier to grasp compared with the printed books because the key points are included as supplements for further comprehension of the lesson;
- Parents and guardians can save money for transportation. The only expense is in the printing of modules which are shouldered by the Local Government Unit – City of Naga, Cebu, Philippines.

Recommendations

After a series of assessment, analysis and review of different research content, this research review paper would like to recommend the following:

- City of Naga Division, in partnership with the Local Government Units should maintain the linkages with the private sectors to provide the lacking numbers of student printed modules and learning other supplementary learning materials;
- Education sector must provide more Psychosocial First Aid in the form of limited face-to-face for the learners

and parents who are mentally challenged with the “new normal” situation;

- Teachers need to conduct a house-to-house visitation for those learners with low performance.
- Parents and teachers must have collaborative efforts in the implementation of Weekly Home Learning Plan in keeping track the student's everyday activities.
- Teachers must give intervention strategies based on the Individual Monitoring Learning Plan which monitors the learner's progress.

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REFERENCES

- The Basic Education Learning Continuity Plan in the Time Of COVID-19 <https://www.teacherph.com/download-deped-basic-education-learning-continuity-plan-in-the-time-of-covid-19/>
- Distance Learning: Major Issues and Challenges, Najib A. Kofahi and Nowduri Srinivas, May 2004 https://itdl.org/Journal/May_04/article02.htm
- Hundred research report #101, April 2020 Spotlight on quality education for all during Covid-19 crisis, , <https://hundred.org/en/collections/quality-education-for-all-during-coronavirus>
- COVID-19 Education and Emergencies <https://www.educationcannotwait.org/covid-19/>
- Hassan Abuhassna and Noraffandy Yahaya (2018). Students' Utilization of Distance Learning through an Interventional
- Online Module Based on Moore Transactional Distance Theory [8] I EURASIA Journal of Mathematics, Science and
- Technology Education, , 14(7), 3043-3052 ISSN:1305-8223 (online) 1305-8215 (print) OPEN ACCESS Research Paper <https://doi.org/10.29333/ejmste/91606>
- Bio State University. Using a Modular Approach to Course Design <https://www.boisestate.edu/ctl-idea/teaching-with-tech/primer/using-a-modular-approach-to-course-design> HYPERLINK "https://www.boisestate.edu/ctl-idea/teaching-with-tech/primer/using-a-modular-approach-to-course-design/"
- Department of education Division Memorandum No. 215, series 2020, Webinar on the Reporting of learner Enrollment Survey Form

- Department of Education Division Memorandum No. 234, series 2020, Dry Run/Simulation of Self-Guided Learning Modules
- Department of Education Division Memorandum No. 245, series 2020, Joint Orientation on Suggested Strategies in Implementing Distance Learning delivery Modalities for School Year 2020-2021, Google Suite and Microsoft Office 365
- Department of education Division Memorandum No. 258, series 2020, Preparation of Self-Learning Modules
- Department of education Division Memorandum No. 254, series 2020, Implementation of the Learning Delivery Modalities Course 2 for Instructional Coaches and Teachers Under the Basic Education Learning Continuity Plan
- Department of Education Division Memorandum No. 253, series 2020, Submission of the Learning Delivery Modalities 1 Course Evaluation Reports
- Department of Education Division Memorandum No. 256, series 2020, Division Centralized Reproduction of Self-Learning Module
- Department of Education Division Memorandum No. 260, series 2020, Inspection of Schools in Preparation for the Opening of Classes on October 5, 2020
- Department of Education Division Memorandum No. 262, series 2020, Development and Enhancement of Contingency Plan For COVID-19
- Department of Education Division Memorandum No. 290, series 2020, Virtual Orientation on Learning Delivery Modality Course 2 for Teachers
- Department of Education Regional Memorandum No. 0403, series 2020, Implementation of the Learning Delivery Modality Course 2 for Instructional Coaches and Teachers Under the Basic Education Learning Continuity Plan
- Department of Education Regional Memorandum No. 0375, series 2020, Suggested Strategies in Implementing Distance Learning Delivery Modalities
- Department of Education Regional Memorandum PPRD No. 20, s. 2020, Contextualized Enrolment Mechanism of Deped SOCCSKSARGEN for the opening of classes for sy 2020-2021
- National Education Association, Priority Schools Campaign, The Power of Family School and Community Partnerships, A Training Manual http://www2.nea.org/mediafiles/pdf/FSCP_Manual_2012.pdf
- Department of Education National Memorandum No. 012, series 2020, Adoption of the Basic education Continuity Plan For School Year 2020-2021 in Light of the COVID-19 Public Health Emergency https://www.deped.gov.ph/wp-content/uploads/2020/06/DO_s2020_012.pdf
- <https://edtechmagazine.com/k12/article/2020/04/continuing-remote-learning-students-without-internet>
- Policy Brief: Education During Covid 19 and Beyond, August 2020 https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid19_and_education_august_2020.pdf
- Francis Donkor (March – 2010). The Comparative Instructional Effectiveness of Print-Based and Video-Based Instructional Materials for Teaching Practical Skills at a Distance International Review of Research in Open and Distance Learning Volume 11, Number 1. ISSN: 1492-3831 <https://files.eric.ed.gov/fulltext/EJ881580.pdf>
- Public Health Update, August 6, 2020 Opportunities And Challenges In Education Due To Covid-9, <https://publichealthupdate.com/opportunities-and-challenges-in-education-due-to-covid-19/>
