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"Education must continue even in times of crisis, whether it may be a calamity, disaster, emergency, quarantine, or even war."

- Secretary Leonor Briones

TOWARDS A WORKING DEPED COMMONS PART I: A ROADMAP

I. Introduction

The Department of Education (DepEd) is at a crucial junction in its history. Long used to delivering its services through face-to-face interactions in the classroom, the COVID-19 public health emergency has forced it to consider and deploy multiple learning delivery modalities including online distance learning in a very short period of time.

Online distance learning is relatively new to the Department and the mechanisms needed for its full operationalization are in its initial stages. One crucial mechanism in this challenging endeavor is the **DepEd Commons - an online platform to support the continuous delivery of basic education to Filipino learners**. It is originally, a "response" to the 2012 Paris OER Declaration, specifically meant to:

- a. foster awareness and use of Open Educational Resources (OERs);
- b. facilitate enabling environments for use of Information and Communications Technology (ICT);
- c. promote the understanding and use of open licensing frameworks;
- d. facilitate finding, retrieving, and sharing of OERs; and
- e. encourage the open licensing of educational materials produced with public funds, among others.

However, DepEd Commons is now rapidly evolving as a portal that will sup additional modalities of the teaching-learning process.





Office of the Undersecretary for Administration (OUA)

[Administrative Service (AS), Information and Communications Technology Service (ICTS), Disaster Risk Reduction and Management Service (BLSS), Bureau of Learner Support Services (BLSS), Baguio Teachers' Camp (BTC), Central Security & Safety Office (CSSO)]

It is for this reason that DepEd, through the Office of the Undersecretary for Administration (OUA) and the Information and Communications Technology Service (ICTS), under the Public Schools of the Future's Digital Rise Program, is pleased to introduce the DepEd Commons Roadmap. This roadmap is purposely designed to support and make explicit, the value and significance of the DepEd Commons, the use and development of OERs, and the work begun and still needs to be done in building a sustainable and working DepEd Commons.

II. DepEd Commons: Rising to the Challenges of the Times

The primary goal of the **Public Schools of the Future Digital Rise Program** is to make teaching and learning accessible anytime and anywhere, in whatever situation or environment.

To respond to the demands of the times and to prepare and equip learners with the needed digital literacy skills, DepEd envisioned an online learning platform tailor-made to the requirements of a good e-learning modality. This concept of an online solution that is direct, precise, on-point, and adaptive to emerging technologies would eventually pave the way for the use of OERs and their availability at **DepEd Commons.**

Recent developments have made DepEd Commons a most urgent endeavor.

On December 3, 2019, the results of the 2018 Programme for International Students Assessment (PISA) revealed that the Philippines ranked below average in Mathematics, Science and Reading, with an overall ranking just one notch above the last in the list. The reading component was designed in the context of a digital environment, thus the lack of familiarity of learners with such an environment may have been a factor in the performance of learners who took the assessment.

Building on the analysis of previous National Achievement Test (NAT) results and impelled further by the PISA findings, DepEd rallied the nation towards *Sulong Edukalidad*, a renewed thrust to close access gaps while pivoting focus towards the quality dimension of education delivery. It highlights reforms in four key areas – K to 12 Review and updating; Improvement of learning facilities; Teachers and school heads' upskilling and reskilling through a transformed professional development program; and Engagement of all stakeholders for support and collaboration.

Sulong Edukalidad in English is "Together, we move forward for quality education," and its goals are coined KITE.

The significance of the Digital Rise Program became more explicit as the importance of digital literacy was reiterated in the discussions on quality education. These discussions validated the important contribution of the Digital Rise Program through the DepEd Commons in the upskilling and reskilling of teachers and school heads, and in the improvement of learning facilities.

The global outbreak of COVID-19 that propelled the country into lockdown as a means to enforce necessary physical distancing just a few weeks before School Year 2019-2020 ended, suddenly pushed to the fore not only the importance, but the urgent need to accelerate DepEd's capacity to undertake distance learning in its variations (e.g., online, TV-based, radio-based, modular) as an additional learning delivery modality.

While still in its early phases of development, DepEd Commons rose to the challenge by mustering available resources and in less than a month, it has reached more than four million users, mostly learners from public and private schools, including those under the Alternative Learning System (ALS).

The Department is set to launch its Learning Continuity Plan (LCP) in preparation for School Year 2020-2021 and continues to be guided by the goals of *Sulong Edukalidad*. To be responsive to the challenging conditions of the COVID-19 pandemic, *Sulong Edukalidad* strategies will be geared towards ensuring learning continuity and accessibility for all learners while seeing through this crisis.

DepEd Commons will be in full support of the operationalization of the LCP, a key component of which is the multiple learning delivery modalities to be implemented by schools customized to their contexts. The DepEd Commons can be used in the proposed learning delivery modalities which include face-to-face, distance learning and blended learning. It can also be of support to homeschooling as an alternative delivery mode for families opting for this. It will make available the Self-Learning Modules (SLMs) which will be produced in print and digital formats, whether offline or online. The SLMs in the DepEd Commons will be digital, interactive, inclusive e-books and video lessons. Also, part of the LCP is the change in assessment procedures which will now be conducted through portfolio and/or e-portfolio assessments. The DepEd Commons can also provide the platform for all these.

III. The Beginnings of the DepEd Commons Project

As early as 2002, OERs were introduced in the world as potent tools to enhance quality and access to education. OERs are free and/or available educational materials that come with permission for anyone to use, modify, or share. By their nature, OERs reduce costs by the repeated use of learning materials resulting in huge savings to families of students, and improving their performance and completion rates in school.

Considering the geography and island distances in the Philippines, there is an apparent gap in learners' and teachers' access and opportunity to quality education. Adopting the use of OERs will help solve the challenges faced by the public school system, most especially the Last Mile Schools that will have access to materials and the skills to create or reuse content.

A. Conceptualization

It started with the upskilling and training of selected public school teachers on the positive and effective use of existing educational technologies. The goal was to empower teachers to make a meaningful impact on the delivery of instruction.

The trainings focused on creating, developing, and enhancing teachers' capabilities and soft skills on the use of OERs. The initial OER practitioners and trainors were later named the **OER National Core Leaders** under the ICTS. In turn, they helped cascade training workshops in the spirit of sharing the advocacy of free learning.

In the second quarter of 2019, the idea of making all teacher-made quality-assured OERs available online was put forward as part of the Department's response to UNESCO's 2012 Paris OER Declaration. This is now what we call **DepEd Commons.**

The term was inspired by Creative Commons, a non-profit organization that offers a range of creative works for others to build upon and share. It releases copyright licenses known as Creative Commons licenses, free of charge to the public. These licenses convey to users the creators' waiver of some copyrights that would allow users and other creators free use and even modifications of their works. The capacity building program is aligned with this concept thus providing free training for teachers targeting special ICT skills which are highly technical in nature.

In an online hearing at the House of Representatives on 14 May 2020 during Enhanced Community Quarantine (ECQ), Education Secretary Leonor Magtolis Briones said the term **Commons is derived from the old traditional term for common lands**, which are also known as commons. Commons in the olden days means **cultural and natural resources are accessible to all members of society**. These **resources are held in common, not owned privately**, and so is DepEd Commons.

The DepEd Commons acronym started as DEC, from Dep Ed Commons, with DEC representing a deck of cards, a deck of information, a deck of knowledge. However, it was decided to retain DepEd Commons, without the acronym.

DepEd Commons was conceived to deliver a strategic approach to connect the unconnected by using OERs. The continuous improvement on the framework and the upskilling of teachers by blending traditional teaching practices with the use of latest technology brought this to life. Numerous trainings were conducted, even in the remote and geographically challenged areas to strengthen the ICT skills of public school teachers.

Aside from being an online delivery platform, the DepEd Commons is also intended to be an offline delivery modality, especially if the OER contents are downloaded. This will allow assistive teaching and learning modalities even

without internet connectivity. Testing and internal developments were initiated to maximize existing technologies and come up with solutions to make common teaching practices transformative in nature. DepEd Commons also aims to support learners in difficult circumstances or with special needs, thus customizing its functionalities for inclusive education.

To support the program, the **Educational Technology Unit (ETU)** was created under ICTS as a new office that will handle emerging technologies and blend curriculum and instruction with ICT. The ETU was tasked to initiate the automation and enhancement of existing digitized materials of DepEd, and to transform these to more interactive and engaging learning tools. It was also tasked to actively engage with the Curriculum and Instruction Strand of DepEd to open its doors to ICT. It then started working with the Bureau of Learning Deliveries (BLD).

B. DepEd Commons, a Response to the Pandemic

The ICTS-ETU was still at the stage of training teachers in the use and development of OERs when the COVID-19 pandemic broke out in early March 2020. Only 95,156 teachers have been trained at that time or roughly 11% of the total teaching force of 847,467. Although the program was ready, it was not yet set up for large scale implementation when the COVID-19 situation presented itself. The situation is forcing a major shift in the teaching-learning process, with face-to-face instruction being very limited given the risks, yet education must continue, and learning must still take place. Without delay, Undersecretary Alain Pascua immediately directed ICTS-ETU to process and start building the DepEd Commons interface, requirements, and functionalities.

At the DepEd Management Committee (Mancom, composed of the Secretary, Undersecretaries, Assistant Secretaries, Regional Directors, and Central Office Bureau and Service Directors) meeting at SEAMEO Innotech on 11 March 2020 (2nd day of suspended classes due to COVID-19), the OUA-ICTS offered the use of online learning materials (OERs) to cover the last quarter lessons of SY 2019-2020, including online examinations as an option for the transmutation of grades. While they welcomed the offer, the Mancom was not that keen on the proposal, preferring the transmutation formula rather than providing the option of online reviews and online exams, which to them are still untested methods. Nevertheless, the OUA-ICTS decided to upload all available OERs to the DepEd Commons and immediately planned to make DepEd Commons live to anyone willing and interested to make use of the online resource.

The silent launch was done on 15 March 2020, two days after Undersecretary Pascua mentioned the DepEd Commons as a soon-to-be-launched online platform in Malacañang during the Laging Handa press briefing with Cabinet Secretary Karlo Nograles and Trade and Industry Secretary Ramon Lopezage After some testing, DepEd Commons was finally announced to be live on 1700.

March 2020. OERs for the 4th Quarter were made, gathered, and uploaded to the DepEd Commons. The ICTS-ETU, employing the "learning while playing" strategy, converted the OERs into gamified versions to increase interest. Because the teachers themselves made the OERs, they knew exactly what materials their students will be interested in. By applying available technology, they transformed otherwise "boring" educational materials into interesting ones that students would want to explore when studying at home. Gamifying the lessons became the magic that would mesmerize learners into playing and learning at the same time.

All other divisions of ICTS like the Solutions Development (SDD), Technology Infrastructure (TID), and User Support (USD) worked relentlessly to ensure the stability of the system even if visited by simultaneous users, and to avoid internet traffic.

C. Expanding Coverage and Reach

The initial target was Metro Manila teachers and learners only as it was just the national capital region (NCR) under Community Quarantine at that time. When users from other regions started to register and access DepEd Commons, targets were expanded to cover the whole country.

Within a week from the soft launch, the number of users ballooned to 417,244. Good reviews and positive feedback were received from teachers, learners, and even parents, saying that the online modality helped them easily understand 4th Quarter lessons. By the second week, the number of registered users leapt to 2,191,111.

Then came the clamor from **Alternative Learning System (ALS)** stakeholders requesting that DepEd Commons be made accessible to ALS teachers and students. Fittingly, some adjustments in DepEd Commons were made to allow access and materials for ALS were uploaded; previous PDF flat ALS modules were converted to interactive offline e-books to render them more engaging, current, and appealing.

The accelerating interest created by DepEd Commons reached the **private school sector** who also wanted access to the online learning resources. The clamor was positively addressed, and by the third week from soft launch, the number of DepEd Commons users reached a total of 3,641,958 learners and teachers coming from public and private schools.

Queries from **Special Education (SPED)** teachers and learners also started to come in, requesting inclusion and access to DepEd Commons. DepEd—In partnership with stakeholders and the private sector—is now developing Filipino sign language interactive e-book materials to cater to learners with special needs.

D. Free Use Within the DepEd Commons Platform

As the number of users jumped from the hundreds of thousands to the millions, complaints from users began to trickle in, saying they do not have the funds or cellphone loads to access the DepEd Commons platform. In response, Secretary Leonor Magtolis Briones approached the telecommunication companies and asked for their support to allow access to DepEd Commons to be free of charge. She also appealed to the Department of Information and Communications Technology (DICT) and the National Telecommunications Commission (NTC) to support her request to the telecom companies, to help in the delivery of basic education to children and teachers during the quarantine period.

In record response, **Globe Telecom, Inc.** and **Smart Communications, Inc.** immediately conducted zero-rating tests on DepEd Commons. On 20 April 2020, the Department finally announced that access to DepEd Commons was made free for Globe and TouchMobile (TM) subscribers. On 22 April 2020, Smart and PLDT followed suit making access to DepEd Commons free for Smart, Sun, and TalkNText (TNT) subscribers. Access to DepEd Commons is now free and possible even if users have no cellphone load or internet data credits.

While access to DepEd Commons is free, once a user goes out of the platform, regular cellphone charges would apply. Currently, not all content in DepEd Commons are within the platform; some are still external links that would take one outside the platform, an action that will incur load charges. OUA-ICTS is now finding ways of migrating all these contents from their current external sources to within the DepEd Commons platform to make their access totally free.

From the time DepEd Commons was made live on 15 March 2020 up to 16 May 2020, a span of just nine weeks, 7,215,925 unique users have already registered and accessed DepEd Commons (See Figure 1).

E. Responding to Teachers' Need for Supplemental Instructional Resources

Increased information sharing through the internet especially over the past 15 years, saw the emergence of unofficial and unauthorized supplemental instructional resources websites like *DepEd Tambayan*, *Teacher PH*, and *EGuro*, which attracted the interest of many teachers. These websites, though unofficial and unauthorized, have managed to provide the needed contents matched with the current technologies that teachers currently use. The said sites offered a variety of direct and precise content which was only a click away. The interface they used is very user-friendly, encouraging anyone to use and harvest the resources. This option became prevalent and became the most available option for many teachers. Any teacher could easily contribute to the sites and made these more popular since exchange of these resources helped teachers in conserving their time preparing learning aids and visual materials.

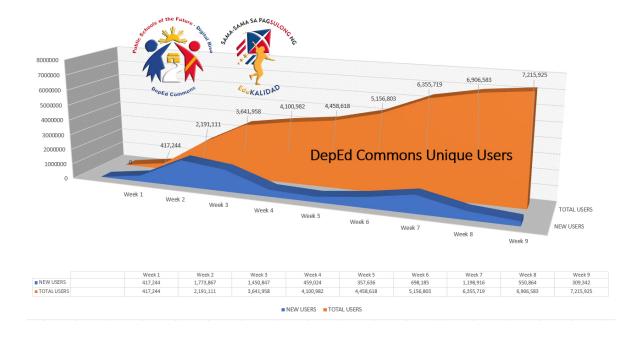


Figure 1: DepEd Commons Unique Users from March 15 to May 16, 2020

Such situation and teacher's need for available effective online resources have warranted the creation of an alternative platform that will rise to the occasion and directly support the needs of teachers, especially in providing instructional supplemental tools that are current and readily accessible. Thus, the birth of DepEd Commons, and such birth garnered great support from the field because of its user interface and direct e-learning approach. The concept of DepEd Commons is in forward technologies like the use of interactive e-books, gamified contents, html5 applicability, mobile version ready, and linkages to other web platforms. The concept of "less is more" was taken into consideration by providing what the teachers actually need.

The functionalities and ownership of the DepEd Commons is felt by teachers since the framework includes the use of OERs crafted through different authoring tools. Teachers felt empowered by this, making the use of technology less threatening. To give added value, the sites *DepEd Tambayan*, *Teacher PH*, and *EGuro* eventually became avid followers of DepEd Commons, as this online platform was able to respond to the needs and demands of teachers. Their administrators, moderators, contributors and users are a big pool for DepEd Commons contributors and collaborators.

IV. The Role of Learning Materials (OERs) in DepEd Commons

The DepEd Commons has three components – **the Platform**, **the Content**, and **the Curators**. Simple analogy compares the platform as the "house" that will keep all "furniture" or the content in one place, in time for the "curator" or the people who will select and use it.

The DepEd Commons is always a "work in progress." It is still in beta version, but soon, it will establish its version one, with increasing flexibility to address the improvements the curator will require as time goes by. After all, once someone lives and uses a house, it is continuously improved and other furniture are added to make it better. The Department will continue to invest in improving the use, creation, reuse, remix, and distribution of OER and other courseware components for use by its beneficiaries. It is **modular in nature** so adding components, modules, or service will not affect its major foundation. It will be cost-efficient and reliable at all times.

To say that the learning materials is the most important part of education is not quite accurate. It is the Department's belief that the localizations and customization made by teachers and learners will significantly outweigh the benefits of simply downloading any available learning materials on the internet. That is the essence of OERs. The rewards generated from building the digital competence of teachers will surpass the investments put into building DepEd Commons, because other than building the content, the Department is transforming them to be digitally competent too.

It is therefore the goal of the DepEd Commons to integrate the platform, training designs, and tools to measure efficacy of learning materials into the roadmap of the DepEd Commons. With these in place, the ecosystem will be able to produce highly effective learning materials (becoming more effective each time) that may dramatically amplify the efforts of both teachers and learners.

V. Way Forward: Collaboration in the New Normal

For the coming school year 2020-2021, DepEd Commons is envisioned to be populated with learning materials that will be authored by DepEd teachers themselves containing weekly lessons for each grade level and subject area to ensure that learning will continue even if face-to-face classes are reduced or suspended to mitigate the spread of the COVID-19 virus. Quality assured **Self-Learning Modules (SLM)** for different learning modalities for all learners from kinder to senior high school shall be converted to inclusive and interactive e-books and uploaded to the DepEd Commons. These will be the modules (in print, video lessons, and/or digital formats) that will be used for blended learning, distance learning, homeschooling, and apprenticeship, either on top or in place of the traditional face-to-face learning modality.

The Department intends to further enhance the DepEd Commons to make it into a collaborative platform where OERs are shared, reused, and distributed. In the long run, it will enable teachers to blend online discussions and other activities into their classes, incorporate selective access of proprietary content to the appropriate learners, incorporate analytics that would allow DepEd to betterners respond to the requirements of learners.

As such, the ICTS-ETU, in close coordination with the **Curriculum and Instruction (CI) Strand and Offices**, will collate all available existing materials that can be uploaded to DepEd Commons and also develop materials that can be uploaded before the opening of classes, in accordance with evaluation under the OER Criteria. These materials must address the K-12 curriculum requirements for SY 2020-2021 from the 1st grading to the 4th grading period in whatever modality teaching and learning will be undertaken.

These materials are ready and have been in existence for the last few years and teachers have been using them since. The only thing left to do is to transform these materials into digital interactive versions that are interesting and effective for today's learners.

A. Urgent Tasks: Call for OER Developers, Call for Educational Technology Specialists

From May to August 2020, the plan is to make e-books out of the lessons of K-12 covering the entire SY 2020-2021. But to overcome this gargantuan task, the ICTS-ETU must capacitate teachers on how to make e-books and OERs, and how to transform their existing materials into versions that would catch the interest of learners and then upload these to the DepEd Commons. Once a critical number of teachers have been trained, then the conversion of materials can be done easily and quickly and the DepEd Commons will have hundreds and thousands of available materials.

Before 11 March 2020, the ICTS-ETU had trained about 95,156 teachers through traditional face-to-face interaction. From 11 March to 15 May 2020, another 238,602 teachers were trained through webinars under ECQ. This sums up to 333,758 teachers trained on OERs, or roughly 39% of the total teaching force (a big leap from the previous 11%). Additionally, 14,154 private school teachers benefited from the webinars. These records do not yet reflect participants of cascaded webinars and seminars administered by schools division superintendents and school heads after their webinar training from the Central office.

Aside from introducing OERs, the trainings and webinars also cover development of multimedia learning resources, e-book development, Google Suite, Autodesk 3D model development using TinkerCAD and Fusion360, Photoshop, Canva and Graphic Design, Microsoft Office 365, Teaching and Parenting under the New Normal, and others.

Teachers participating in these trainings and seminars are given Certificates, but only when participants are able to submit concrete outputs within a given time frame, and the submissions are positively evaluated by Educational Technology Specialists.

Certificates of Recognition are given to participants who completed the needed output based on the criteria set by the ETU. Certificates

Attendance are given to all participants in the live webinar session only. There is an online attendance link which is given in the actual webinars. **Certificates of Participation** are given to all participants if the webinar is a demonstration based on a certain software tool and there is no output required. This is a theory and concept-based webinar in support to the upcoming hands-on webinars. So far, 17,890 Certificates have actually been given for Basic OER; 8,908 for Advanced OER; and 16,701 for Google Suite.

From this trained force, volunteer teachers will be called upon to help create and develop OERs for the DepEd Commons under an agreed-upon criteria and quality-assurance framework. Competitions may be undertaken in the selection of qualified teachers who can write and develop learning materials.

These efforts are partnered with the call for available materials from teachers in DepEd and from the private schools to contribute materials for learners, for teachers, for parents, and for school administrators.

B. Vetting and Curation

As part of the curation process to ensure that materials uploaded in the DepEd Commons are quality assured, a vetting and evaluation module will be incorporated within the DepEd Commons, accessible only to authorized personnel who will do the vetting.

1. There will be a **Collaboration Space** accessible to educational technology specialists and teachers who are accredited to reuse, remix, create, and share OERs. In that portal, they will be able to check, comment, and vet one another's learning materials. This is like a holding room where all proposed materials to be made publicly available to the DepEd Commons will be properly evaluated within a given timeframe. All activities will be logged and a time and motion report will be generated as well. This mechanism will allow stakeholders to see how long each process takes, if a 15-page learning material can take months or days to be checked by the assigned evaluator. Both the CI and Legal Strands will be provided access to evaluate and give the necessary comments and recommendations to the current evaluator/s or author/s of the learning material. Alongside the OER Framework and Criteria, the CI Strand and Legal Strand may add their criteria to guide OER developers.

Evaluation and vetting may be undertaken within a given timeframe, say within 2 weeks. Under normal circumstances, if the materials have not been vetted or evaluated within 2 weeks, the same materials will be uploaded automatically to the DepEd Commons. Why is there a time limit for vetting? It is known, based on feedback, that vetting and evaluation of materials usually take months or even years. This timeframe is to force evaluators to complete the assessment on as many materials in the shortest time possible, given the current

situation. But this time, the entire months of May, June, and July may be set aside for vetting and curation, as opening of classes for SY2020-2021 will still be on August 24, 2020.

Materials uploaded in the holding room will not display the name/s of the author/s so that vetting and evaluation will be focused on the content and not on the writer or author. This will remove any bias or subjectivity that might arise if the evaluator knows the author of the material.

A dashboard in the Collaboration Space will show data and statistics on the number of materials submitted for vetting, the divisions and regions these materials come from, the status of submitted materials (i.e., date submitted, date vetted, etc.), and other related information. The dashboard will trigger the concerned region and division officials of materials coming from their jurisdictions, aiding them in the process as it sets vetting accountability down the line and makes vetting faster.

A recommendation for the CI Strand is to mobilize all Learning Resources Evaluators accredited by the Bureau of Learning Resources (BLR), Education Program Supervisors (EPSes), and Project Development Officers (PDOs) at the regional and division offices (after some orientation and training) so they may be provided access to do the evaluation of the learning materials. These experts would already number to 500, assuming that every region and division would assign and mobilize a minimum of two (2) personnel from their respective offices.

This number can be expanded further if Master Teachers are called upon to assist in the evaluation. DepEd has about 57,700 Master Teachers (as of September 2019). With this force, vetting and evaluation can all be done within just a few weeks!

2. A **coding system** will be set in place as a mechanism for vetting and curating materials. A material that is vetted and evaluated will have a **red star** when uploaded in the DepEd Commons. A material with red star and a number would indicate that it has completed the vetting and evaluation process by CI/experts. The red star gives integrity and credibility to the material.

In the same manner that the materials are vetted by CI, they can also be vetted in the same holding room by the Legal Strand, as well as the Bureau of Learning Resources (BLR) on copyright matters. Once done, materials vetted by the Legal Affairs and BLR can have a **blue star** indicating that the materials have passed legal review.

The DepEd Commons Collaboration Space will help teachers produce quality, credible, and ethical learning materials that do not violate copyrights.

Learning materials that do not pass the evaluation criteria will be sent back to the teacher who developed them with the corresponding comments and suggestions. After incorporating the comments, the modified material will go through the evaluation process again.

3. The Department will also institute a **five-star ranking system** for any material uploaded to the DepEd Commons. Parents, learners, and teachers may rank the materials they use from one star to five star, with 1 being the lowest and 5 the highest. They can also write comments on their appreciation of the materials and even propose and give suggestions that may guide authors and writers.

As the number of learners, parents, and teachers use the same materials and give star ratings, the star rating is updated real time with the average star rank and the number of people rating it. In this way the material is being rated by the users (the learner and the parents) and fellow teachers (peers). The number of times it is used or downloaded will also be shown.

Each material in the DepEd Commons will have a **red star** if vetted by CI, a **blue star** if vetted by the Legal Strand, and a number of **yellow stars** indicating the rating of their users and peers. This rating system would already ensure the competence, compliance, effectiveness, and relevance of the uploaded materials. These will serve as guides for users if the platform becomes swamped with so many available materials.

- 4. All materials will be tagged according to a tagging parameter that will be defined to make an efficient Search feature and provide a user-friendly platform. This is greatly needed to help users navigate with the least number of clicks and eliminate time wasted because of difficulty in finding the right materials. Focus will be taken to consider content, form, type or kind, author, relevance, age of the material, rank, evaluation, and other user preferences.
- 5. DepEd Commons will come up with a Best Page where materials that have become outstanding because of repeated use, positive reviews, etc. will be featured real time. In the Best Page, the Top 10-20 Best Materials will be featured. These materials will be those that have been ranked with 4 or 5 stars, vetted with red and/or blue stars, downloaded or used the most, with good reviews, and all others.

The Best Page will be a guide for users, authors, and vetters on how the materials have been evaluated by experts, users, and peers. This will help everyone determine which materials (in content and form) are the most effective and liked by everybody based on actual usage.

C. Recognition and Incentives

The vetting and ranking system will be used as basis for giving due recognition and incentives to teacher-authors and vetters. The Department will be interfacing with the CI and Governance and Operations Strands, specifically the Bureau of Human Resources and Organizational Development (BHROD), in crafting a recognition and incentive framework for contributions made to the DepEd Commons for both the vetters and authors.

The incentives may take the form of earned points. These points may be used by the writer or vetter for promotions, for prioritization as recipients of equipment and technology, for capacity-building and training opportunities at the national and international levels, and the like.

It must be noted that DepEd Commons is also designed to encourage teachers to make, develop, and improve materials for uploading and for use of all users nationwide. In doing so, providing them with appropriate recognition and incentives will inspire them further to surpass their own submissions and limits.

VI. Building a Partnership Alliance

The production and availability of learning resources is one big part of providing instructional support to teachers and learners. In every institution, the supplemental learning tools is an uncompromisable avenue to make teaching and learning effective. In 2011, DepEd first started the use of technology in delivering quality-assured resources with the introduction of the **Learning Resources Portal** or **LR Portal**. It houses the **Learning Resources Management and Development System (LRDMS)** which is composed of numerous resources harvested from the different Regional and Division offices that include manuals, handouts and exercises, presentation tools, audio and video formatted lessons, illustrations, and graphics. The format used in the system is a bulk repository of resources comprising different categorical functionalities.

As the OUA-ICTS ETU embarks on making e-books from May to August 2020 to cover lessons for SY2020-2021, it will also collate all available materials that DepEd now has in its possession, like contents in the LR portal, Starbooks, Khan Academy materials, and others. These materials will be uploaded to the DepEd Commons either under every grade level where appropriate or under a Library Page arranged in accordance with a certain category framework.

The **LR Portal** of the Department currently has 6,199 learning resources for learners; 1,587 resources for teachers; and 56 resources for professional development. The Department of Science and Technology (DOST) **Star Books** contain 13,454 materials on topics ranging from science, agriculture, livelihood, and information technology. The Commission of Higher Education (CHED) **Teach Together** Project contains 1,566 materials for senior high school subjects ranging from math, disaster readiness, and science.

Khan Academy has an open source software which contains over 7,000 videos and 20,000 interactive exercises on math, science, history and economics.

If the materials have been vetted by various experts, like the LR Portal materials by CI and the Starbooks by DOST, etc., these will also have the star labels mentioned earlier.

Materials already vetted by other government agencies like CHED, TESDA, DOST, and others will have **green stars**. For their part, the CI and Legal strands may vet these materials separately and give red and blue stars too.

On the other hand, materials vetted by experts commissioned by the private sector, like those from Khan Academy will have **orange stars**. Still, the CI and Legal strands may also vet these materials.

It is important to note that these colored stars would immediately reflect the integrity and credibility of the materials at DepEd Commons. With the appearance of these stars beside the materials' titles/brief description, users will be guided accordingly.

A. Call for Other Available Free Materials

The OUA-ICTS will be calling for the submission of available free materials from all possible sources in the country and even internationally. These materials can be provided to DepEd Commons for free from the private sector, from corporations, from international organizations, from possible partners, and from education stakeholders. These materials may serve as reference materials and as supplementary materials to help teachers, parents, and learners. The vetting, star labelling, and ranking will also apply to these materials.

The focus of this undertaking is not just to solicit available free materials but also on how to host these materials at DepEd Commons, not as external links, to make them available for free access via the platform. Because external links will incur data charges, these materials must be hosted within the platform itself.

This will lead to the formation of a **DepEd Commons Partnership Alliance**. All willing contributors from the government, private and business sectors, and civil society will be under a partnership alliance for DepEd Commons for Filipino teachers, learners, and even parents. Scientists and artists, professors and academicians, experts from different fields, and all other nationally and internationally known leaders and resource persons will be tapped and asked to contribute to the DepEd Commons.

With the deluge of available free materials, DepEd will put premium on those that promote and embody the core values of the Department – **Maka-Divos**

Makabansa, Makatao, at Makakalikasan - while maintaining and offering a free online library of available supplementary and reference materials.

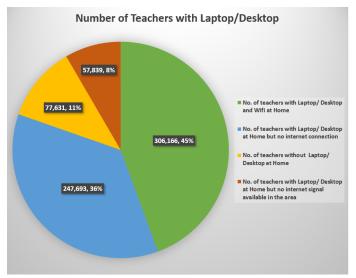
Paid materials and services being offered to DepEd for the DepEd Commons will be entertained once all free and available materials have been evaluated and made available online, and the gaps have been identified. The paid materials and services from the business and private sectors can then be studied for possible procurement by the Department to fill in the gaps, supplement and/or reinforce existing materials.

B. DepEd Commons' Accessibility

To date, 1,042,575 computer devices are distributed across 44,155 public schools, or about 93% of the total number of public schools. Ninety-nine thousand five hundred forty-eight (99,548) of these devices are laptops; 308,150 are tablet PCs; and the rest are desktops (standalones and thin clients.) For FY2020, DepEd will be purchasing 36,676 multimedia packages (laptops, televisions, lapel microphones, and speakers). This is in addition to the 54,350 laptops, 2,350 televisions, and 167,500 tablet PCs procured last year that are scheduled to be delivered this year.

By end of FY2020, 475,650 tablet PCs and 634,877 desktops/thin clients will be available for use by 21.4 million students, or about 94% of the 22,746,855 public school students, while 190,574 laptops will be available for use by teachers (22% of the total DepEd teaching force.) OUA-ICTS is contemplating the home-use of these laptops and tablet PCs should face-to-face class interactions become impossible.

The direction is to provide a laptop for each teacher. About P27 billion is needed to make that dream a reality. The Survey on Teachers Readiness for Distance Education undertaken by DepEd's Planning Service between 16-30 April 2020 involving 689,329 teacher respondents reveal that only 77,631 or 11% of them do not have desktop or laptop computer at home (See Figure 2.) Applying that percentage to the total number of teachers nationwide, it can be estimated that 93,221 of the 847,467 teachers have no computer device. That estimate can already be addressed by the number of laptops the Department has at the moment. However, the Department needs to recognize that teachers who use their own devices bought these out of their own resources. It is still the responsibility of the state to provide government issued laptops.



45% or Most of the teacher respondents have laptop/desktop with wifi at home while **36%** has no internet connection.

8% of the teachers with laptop/desktop answered that internet signal is not available in their area.

However, more than 77,000 or 11% of the teachers nationwide do not have laptop/desktop at home

Figure 2: Survey on Teachers Readiness for Distance Education as of April 30, 2020 on having laptop or desktop at home

As per DepEd's 2018 BEIS database, of the 47,013 public schools nationwide, only about 48% have internet connectivity, or roughly 22,647 schools. The population, however, of these schools is about 16,750,902, or roughly 74% of the total public school enrollment of 22.7 million. While more schools are not connected, more students, however, are enjoying the benefits of connectivity.



Figure 3: Hootsuite Media's State of Philippine Mobile, Internet and Social Media Use

We are also comforted by the facts at hand. According to Hootsuite Media, Inc., a social media management platform, **159% of the entire Philippine population of 108.8 million have mobile connections** with 86% of these having broadband connection. **Internet users are at 73 million** or 670 penetration (See Figure 3.)

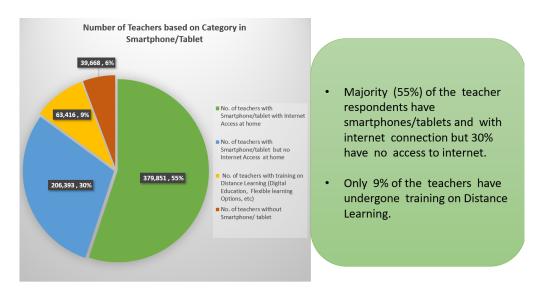


Figure 4: Survey on Teachers Readiness for Distance Education as of April 30, 2020 on having smartphones or tablets

DepEd's recent survey also reveal that only 39,668 teachers from among the 689,329 surveyed or 6% have no smartphones or tablets, while **379,851 or 55% have smartphones and tablets with internet connections** (See Figure 4 and Figure 5 for comparison.)

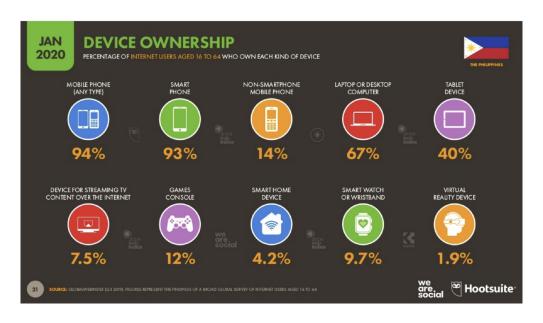


Figure 5: Hootsuite Media's Percentage of Internet users Who Own Each Kind of Device

This present situation of schools', teachers', and society's equipment and connectivity strengthen the need to make DepEd Commons work and be the Department's online platform. The COVID-19 crisis has clearly illustrated the need for a working online platform where basic education can be delivered via various devices, through the internet, to the homes of teachers, learners, and parents. The high risk severity grading of metropolis, cities, and urban centers to COVID-19 all the more necessitates the accessibility to DepEd Commons.

as face-to-face class interaction becomes impossible. Fortunately, these areas have high digital equipment and internet connection penetration enabling education to continue unhampered via online learning.

With this situation, the DepEd Commons' free accessibility via cellular connections under free data arrangement will form the core concept of its accessibility. All efforts must be directed to ensure that this free accessibility will remain even after the COVID-19 pandemic.

Contents of the DepEd Commons should also be made available for offline users, especially those who do not have cellular devices and connections. They can be cached in caching devices, preloaded or downloaded for desktops, laptops, and tablets now existing in schools nationwide. School personnel and teachers may transform these contents into hard copies for distribution to learners not having gadgets and connections.

The DepEd Commons should also play a big role even when television and radio broadcasts are tapped to deliver education nationwide from the urban cities to the Last Mile Schools and communities. Television and radio broadcasts will address the remaining percentage of learners who might not have cellular devices and connectivity. The combination of traditional means like printouts, the online platform, and television/radio broadcasts would enable 100% of Filipino learners to be reached nationwide. This will facilitate the unhampered delivery of education even under crisis and emergency situations.

C. Connectivity Project

The sustainability of these innovations under the Digital Rise Program shall include the entire learning ecosystem most specially in the geographically isolated areas in the country. The Last Mile Schools must benefit from these equal accesses to technology and bridge the digital gap to provide an inclusive Basic Education for all. Connecting the remaining unconnected schools will empower the community to blend with current offerings, technology, information, and awareness – this is one of the primary objectives of the Digital Rise Program, to connect all schools and offices and establish the Public Education Network (PEN). Aside from television and radio broadcasting, the connectivity project will ensure that learners will be adept to ICT, media, and digital literacy components as part of the drive in achieving equal opportunity. DepEd shall use all available technologies in order to realize the PEN.

D. Capacity-Building Component

The capacity-building skills of teachers is very important to sustain and maintain the quality standards set by the Department. With new technologies from the field making teaching-learning delivery more effective, the **National Educators Academy of the Philippines (NEAP)** plays a crucial role in

ensuring that public school teachers are adept with the latest innovations and techniques in blending ICT in the actual modality and delivery of classroom instruction. The involvement of NEAP in the preparation, conduct, and follow-through of activities on facilitators' skills development in educational technology is essential to cascade and replicate these practices to the public school teachers. The online platform is a response to assist NEAP in monitoring the progress of teachers in every aspect of skills enhancement. NEAP will be in charge of the creation of viable courses with the assistance of ICTS in conducting an online framework and delivery system to sustain learning even when face-to-face interaction is not possible. The NEAP facilitators will train teachers on the proper guidelines, walk-through, and manipulation on how to select applicable courses or lessons that will also be made available in the DepEd Commons.

The partnership of NEAP and ICTS-ETU in providing trainings will greatly contribute to the development of OERs and other materials and services for the DepEd Commons.

Part of the capacity-building program is the **Digitalization of Instructional Learning Materials** to support the technological needs of curriculum and instruction. This includes a series of workshops in converting rich-content instructional supplementary materials to digitized format readily accessible offline. Maximizing the capability of the DepEd Computerization Program (DCP) packages will support the learning environment even without internet connectivity. This is a big step towards connecting the disconnected and a major effort in bridging the digital divide especially for learners, teachers, and schools in remote areas.

E. Educators, Champions, and Transformers

The Department will define and undertake a **certification process of teachers** as users, trainers, and creators of OERs for DepEd Commons. There will be DepEd Digital Rise Certified Educators, Champions, and Transformers who will use, train personnel, and create OERs. Their Certification should create an avalanche of teachers using and creating OERS as well as training others to do so. The challenge is to equal the branding of Microsoft, Google, and other companies in certifying their teachers. DepEd will have its own brand and label, and this will boost the morale of teachers.

■ **DepEd Digital Rise Certified Educator** – This certification is granted to teachers, administrators, school heads, and educational technology enthusiasts who have been trained in the use of OERs and completed 3 stages of the OER training program: Basic, Advanced, and Proficiency. They have served as lead trainors or facilitators in school, division, and/or regional trainings on OER, and have trained at least 300 teachers.

- **DepEd Digital Rise Certified Champion** This certification is awarded to a Certified Educators who have conducted a classroom-based research on the effective use and practices of OER in the teaching-learning process; conducted orientations about OER; trained at least 300 teachers in the use of OER; and completed the last 2 stages of the OER training program: Novice and Transformational.
- DepEd Digital Rise Certified Transformer This certification is awarded to a Certified Champions who have created an OER instructional tool or material which is considered a nationwide richsource content; served as a lead trainer in a school, division, or regional training on OER; and presented or invited as a resource speaker to talk about the DepEd Digital Rise Program in a national and/or international conference.

F. Institutionalizing the Educational Technology organization

The Educational Technology Unit (ETU) under ICTS must be institutionalized as a full-blown regular division – the **Educational Technology Division (ETD)**. The same office must be created and institutionalized at the regional and division offices in order for field offices to be active participants in digitizing basic education. **Educational Technology Specialists (ETS)** from among those trained, those implementing and practicing, and those serving as trainors on OERs may be designated and detailed to said offices pending the creation of regular items for these new offices. Each school will be encouraged to designate their own ETS in order cascade the undertaking at the school and classroom level.

VII. Integrating Multiple Applications and Systems to the DepEd Commons

DepEd Commons is secure, privacy compliant, and scalable by design. Hence, the platform has the capability for other systems to be seamlessly integrated so that users can easily perform tasks that are translated by other systems for increased developmental and operational efficiency.

A. LMS - Learning Management System

While the DepEd Commons will contain all necessary learning materials for teachers and learners, the Learning Management System (LMS) supports the online distance learning modalities of classroom instruction to enable teachers to blend and prepare custom-made or readily designed courses to support the teaching-learning process. Materials in the DepEd Commons with be linked to courses in the LMS.

B. CMS - Classroom Management System

To protect learners and teachers from cyber threats, phishing, pornography, and other forms of cyber-attacks, DepEd will ensure that learning continuity will not be hampered when using the internet and other technological tools. The Classroom Management System (CMS) is a powerful software that can blend with the DepEd Commons and other online web tools to run in online, offline, or free access modalities within the school and can ensure the ecosystem of learning within the bounds of a classroom or school to be self-directed, secured, and run remotely.

CMS will blacklist websites that shows pornography, violence, gambling, online role-playing games (RPG) gaming and the like that may cause disruption to learning; secure online and offline examination conducted in LMS; perform and conduct automated examinations and survey for areas with no internet connectivity; monitor the progress screens of learners connected to the system; and deliver, send, retrieve, and collect materials from learners connected devices in the system.

C. LIS - Learner Information System

Currently, the Learner Information System (LIS) is an application that maintains the database for the unique Learner Reference Number (LRN) which also records the basic profile of each learner, such as school and grade level. The LIS will be enhanced to cover additional information such as permanent records, academic performance, health status, athletics record, and socio-economic background. Learners, parents, and teachers may now have access to a learner's information anytime and wherever. Being able to integrate DepEd Commons to LIS 2020 will enable the Department to produce reports and insights on statistics and learning outcomes.

VIII. Towards a Working DepEd Commons

The DepEd Commons is a work in progress, guided by a working framework and this roadmap. The ideas presented here are meant to fast track its development in order to respond to the times.

As in any reform effort, we must start somewhere and work our way towards the ideal.

The reality, however, is that DepEd Commons is not accessible to all teachers and learners. There are many schools that still do not have sufficient number of digital devices and do not have access to fast and reliable internet connection.

But we cannot wait for conditions to be ideal. Nor do we need to build the infrastructure first and worry about applications and content later. Infrastructure development and applications and content development spur the growth of each

other. It is only by addressing these issues simultaneously will we realize the ideal sooner than later.

There is also a need to emphasize the importance of intrapersonal transformation that will enable us to create the "transformed world" as aspired for in Agenda 2030. We also present this document for further scrutiny and improvement to benefit everyone. Perhaps paradoxically, in striving for a roadmap that will help craft the framework with sustainable goals, we can conclude that this can be only be achieved through personal transformation via a shift in consciousness at the individual level, to be effective contributors to the DepEd Commons ecosystem.

With the recent developments catapulting us faster forward, DepEd Commons shall contribute to boosting *Sulong Edukalidad* as it guides the whole Department in providing accessible and liberating education for the Filipino youth, confident and with hope in facing the hidden terrains of uncertainty of the 21st century.

ALAIN DEL B. PASCUA Undersecretary

* With substantial contributions from ICTS, DRRMS, PS, BLD, IPSEO, PAS, and some Regional and Division Offices

