



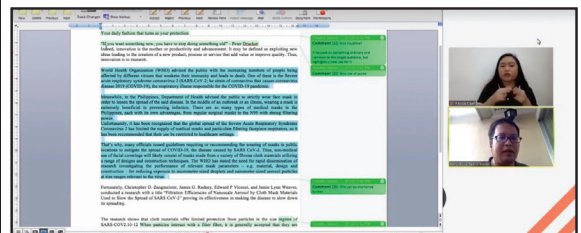
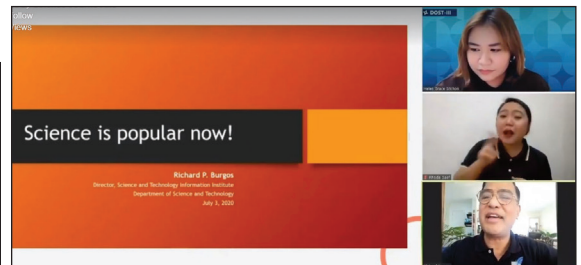
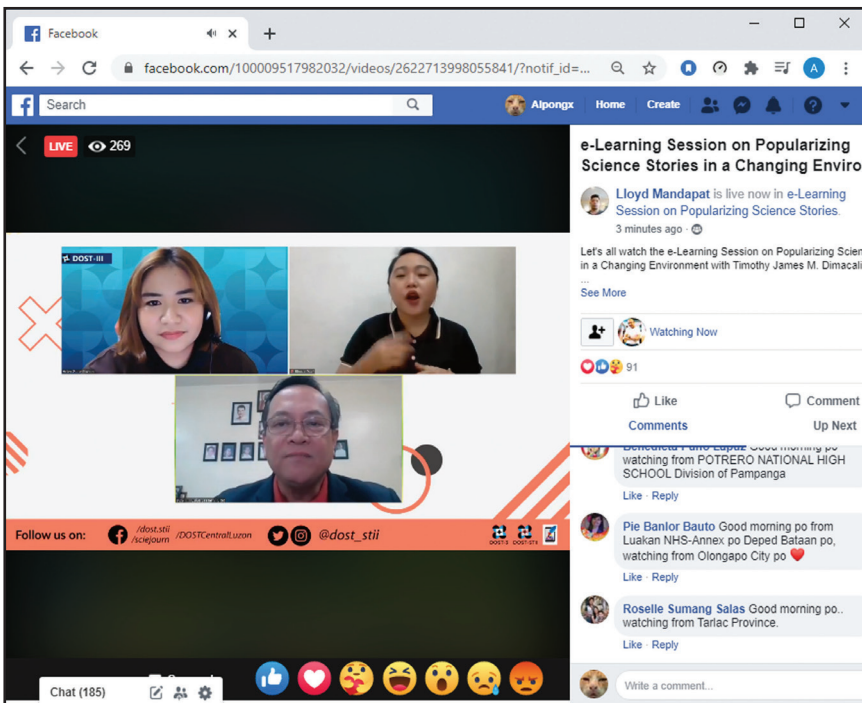
14 years of bringing
S&T good news

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CENTRAL LUZON TEACHERS GET TRAINED ON Popularizing Science Stories by DOST

By Allan Mauro V. Marfal, DOST-STII



These are the screenshots from the lecture of Timothy James M. Dimacali during the e-Learning on Popularizing Science Stories on 03 July 2020 via Facebook Closed Group as he shares his knowledge on how those scientific researches, papers, and journals that can be transformed into easy-to-read stories suitable for newspapers, magazines, online news sites, and social media. (Screenshots from Zoom webinar)

Countless hours have been spent by our great scientists, engineers, and medical experts just to protect us from the possible harm caused by Coronavirus Disease or COVID-19. Several innovative S&T solutions have been initiated and developed, giving the public a better understanding of how it would work and help would play a major role in allowing us to win against this pandemic.

Unfortunately, we are also confronted by another enemy, the widespread disinformation and misinformation about this pandemic, causing people to be anxious, to panic, and to make wrong decisions that affect their lives negatively. In addressing this issue, our science journalists and their related stories and content can step in and play a proactive role of providing the needed clarification and explanation at this critical time so that our audience would understand the crisis better and respond appropriately.

In recognizing the significance of getting science-based information from reliable sources about COVID-19, an e-learning session with high school teachers from Central Luzon have been conducted by the Department of Science and Technology-Science and Technology Information Institute (DOST-STII), in partnership with the DOST Regional Office in Central Luzon, on 03 July 2020 via a Facebook Closed Group.

With the theme #ScienceJournoAko: Popularizing Science Stories in a Changing Environment, this webinar had focused on the importance of crafting accurate and easy to understand science-related stories in countering "fake news" and promoting science, technology, and innovation to a wider audience. More than 500 high school teachers from different provinces in Central Luzon have attended this webinar.

Timothy James M. Dimacali, a Fulbright scholar from Massachusetts Institute of

Technology (MIT) and founding editor of the SciTech section of GMA News Online shared various techniques and extensive knowledge on how to create news and feature stories out of those scientific researches, papers, and journals that can be transformed into easy-to-read stories suitable for newspapers, magazines, online news sites, and social media.

In his message, DOST-STII Director Richard P. Burgos stressed that communicating science in a manner that is easy to understand and for more people to appreciate; it is not enough that we know the facts and figures behind the science.

"I strongly believe that it is equally important for us who are engaged in science communication to be able to create compelling science stories that will have a positive impact on our lives and other people's lives," Dir. Burgos said.

Meanwhile, DOST-Region III Director Dr. Julius Caesar V. Sicat emphasized that DOST has

Smart mobility in the new normal: DOST unveils two congestion-remediation techs

By DOST-PCIEERD

To help Filipinos navigate the new normal, the Department of Science and Technology-Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD) reveals two new sustainable mobility innovations to improve and ensure smooth travel experience through a more agile transport management system in Metro Manila and other regions.

DOST-PCIEERD Executive Director Dr. Enrico Paringit disclosed the Council's support to De La Salle University's (DLSU) TITAN: Vision-based Traffic Information & Analysis and the Optimal Locations and Allocation of Personnel (OLAP) projects that can reduce traffic congestion in the Philippines by using shared network systems with ample data on roads and highways.

Dr. Paringit commended the researchers in their effort in harnessing the power of science,

technology, and innovations to provide efficient and intelligent mobility solutions.

"As leader and partner in innovation, we are committed to bringing to Filipinos solutions and opportunities aimed at modernizing our transport systems and bolster the quality of life in the new normal. We will be relentless in looking for new ways to improve the movement of goods, services, and people especially in this time of the global pandemic," he said.

TITAN is the phase two of the Vision-Based Vehicle Counter for Traffic Monitoring or VEMON project of DLSU which is a web-interfaced platform that can process day-time traffic from roadside surveillance cameras, and generate useful traffic statistics, such as vehicular count, vehicular speed, and Particular Matter 2.5 presence of the vicinity area.

In TITAN, vehicle counts are tweaked based on four scenarios: night-time or dim light scenarios, extreme lighting contrast, non-

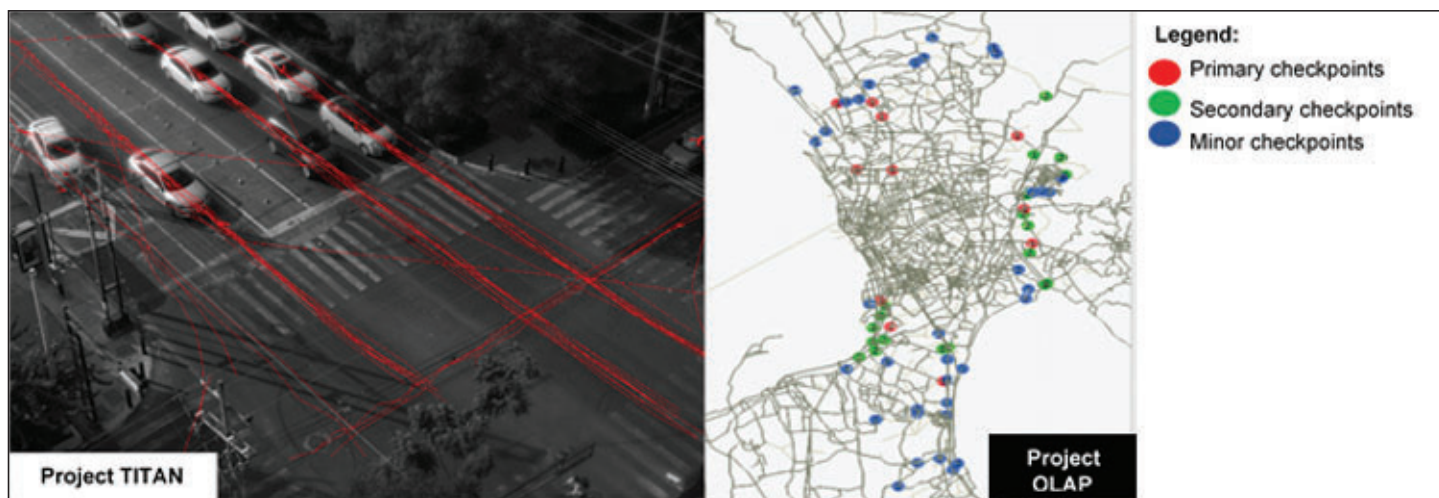
constant sampling rate; and up-stream and down-stream vehicular flows.

TITAN Project Leader Dr. Joel Ilao expressed optimism that their project can help ease up chokepoints in the Metro Manila through smart technologies that provide data for traffic authorities.

"We hope that through TITAN, we can help our transport authorities craft better policies that will ease our way into living in the new normal," Ilao said.

OLAP Program Leader Dr. Alexis Fillone said the project will develop a public transport service route design for Metro Manila and a manual that can be applicable to any region of the country.

"Agile mobility is essential when our country is faced with emergency scenarios. Hence, proper allocation of checkpoints around Metro Manila is one measure to achieve seamless commute of people and goods," Fillone said.



Popularizing science...
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been developing appropriate solutions to the existing problems and limitations of some areas in the country.

"Producing pool of science communicators and journalists would be a great help for the public. In order for them to be guided and have a clear understanding on the practical benefits in their lives of those innovative technologies introduced and made by our local scientists," Dr. Sicat said.

Tips in Popularizing Scientific Paper/Journals

In his lecture, Dimacali had focused on sharing useful techniques for a science writer, particularly in finding a story angle. He explained that figuring out your target audience

greatly simplifies the process of finding a good story angle. However, he added that regardless of your target audience is, the human interest angle almost always works.

Dimacali also said that learning to read a scientific paper in the right way could help us in producing compelling stories that can be relatable to a larger audience.

"When we read scientific papers, there are things that we might focus to clearly understand its main idea or concept. It includes references because it might help guide you on what is previously known or understood about the topic and acknowledgments because it might contain the researchers' inspirations or motivations in publishing the study," Dimacali shared.

Meanwhile, Dimacali also pointed out in

his presentation that scientific analogies are valuable tools to help readers understand complex ideas.

"Though I would like to remind everyone that because of their simple nature, analogies are not perfect, there will always be some details that are omitted for sake of simplicity. For the analogy to work, it has to convey the main idea," said Dimacali.

This was the third time, where DOST-STII spearheaded a webinar focusing on enhancing the skills of aspiring communicators and journalists in creating compelling science-related content. The first two had focused on the importance of science blogging in the time of pandemic and harnessing the power of Twitter and Instagram to create S&T stories.

DOST-FPRDI prioritizes study of tree plantation species

By Rizalina K. Araral, DOST-FPRDI



Large-fruited red mahogany (left) and river red gum (right) are two of the most common ITPS planted in the country. (Photo from DOST-FPRDI)

The country's wood industries have been suffering from a shortage of raw materials for many years now. This has been caused mainly by decades of indiscriminate logging which have systematically reduced the areas of our natural growth forests.

To help beef up the country's wood supply, the Department of Science and Technology's Forest Products Research and Development Institute (DOST-FPRDI) started a research program for studying different kinds of tree plantation species (TPS).

According to the Institute's Dr. Dwight A. Eusebio, "TPS are fast-growing trees that are either native or introduced to a particular place, and grown in tree farms at least half a hectare in size." Tree farms or plantations became popular in the Philippines starting in the 1980s, and especially in the last 10 years after the government finally imposed a logging moratorium on all natural growth forests.

TPS are grown mainly as substitutes to traditional species, and the ones commonly found in local tree farms include yemane (*Gmelina arborea* Roxb.); malapapaya [*Polyscias nodosa* (Blume) Seeman]; mangium (*Acacia mangium* Willd.); river red gum (*Eucalyptus camaldulensis* Dehnh); falcata [*Falcataria moluccana* (Miq.) Barneby & J.W. Grimes]; large-fruited red mahogany (*Eucalyptus pellita* F.v. Muell); large-leaf mahogany (*Sweitenia macrophylla* King) and bagras (*Eucalyptus deglupta* Blume).

"DOST-FPRDI studies TPS not only because they make good construction and housing materials, but also because they have a host of other industrial uses," says Eusebio.

They can be used for pulp and paper, veneer and plywood, composite boards (particleboard, fiberboard, etc.), power and telecommunication poles, and packaging materials (pallets, fruit boxes, crates, etc.).

They can also be tapped for builders woodworks (doors, windows, door and window jambs, moldings, balusters, stairs and railings, shingles and shakes, parquets, etc.), fancy woodwork, wooden shoes, pencil slats, ice cream spoons, chopsticks, matchsticks, toothpicks, and many more.

"The uses of wood, of course, are dependent on its inherent qualities. For example - Is the wood light or heavy? Durable or not? Easy or difficult to dry, machine or finish? These are some things we need to know to determine its applications," explains Eusebio

"Thus, for three decades now, DOST-FPRDI researchers from diverse fields have been looking into the properties of 15 TPS (mostly eucalypts and acacias) - their anatomical, chemical, physical and mechanical, sawmilling, machining, finishing, drying characteristics, natural durability and treatability," he added.

All the information generated has consequently been published in handbooks and bulletins. "In the coming years, we are committed to conduct research and development studies on other TPS that have

not yet been tapped by our client-industries," adds Eusebio.

According to the Forest Management Bureau (FMB), the wood sector needs about six million cubic meters of raw materials a year. This is way beyond the one million cubic meters produced, 75% of which is supplied by tree plantations.

ABOUT US

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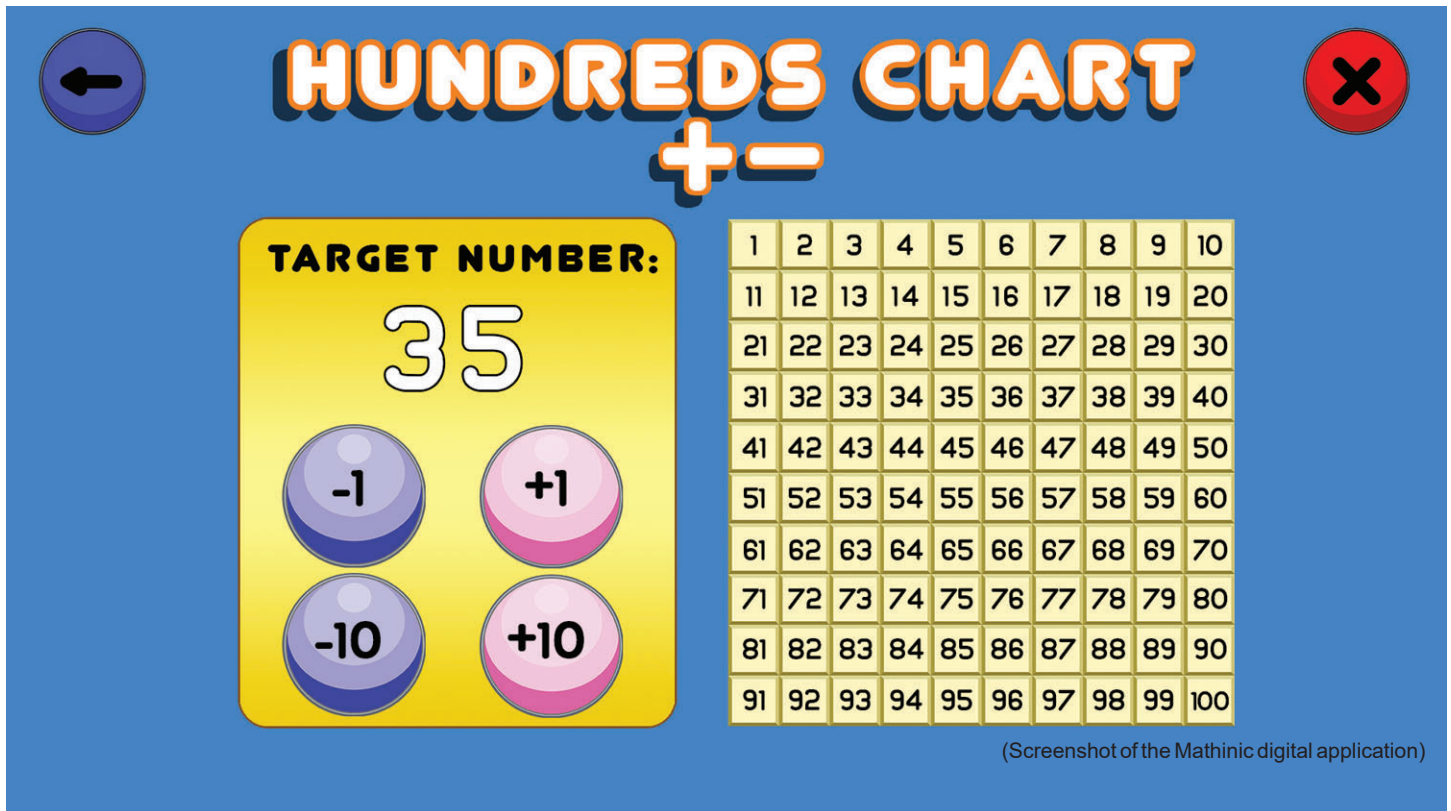
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Ateneo’s Mathinic makes mathematics tick for new normal

By DOST-PCIEERD

As teachers scramble for ways to find a viable and effective way of teaching mathematics in the new normal, the Ateneo de Manila University (AdMU), funded by the Department of Science and Technology – Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD), developed an online platform that makes math more interesting, compelling, and engaging for students.

Developed by the team led by Loyola Schools Associate Dean for Research and Creative Work Dr. Ma. Louise Antonette N. De Las Penas, the “Technology Innovations for Mathematical Reasoning, Statistical Thinking and Reasoning” or Mathinic project seeks to create a digital mathematics learning environment to transform young Filipinos into proficient problem solvers using digital mobile applications and instructional materials, large-scale database of assessment results, and a database for statistical learning or Census-at-School.

“Our focus is to intuitively spark a zest among Filipinos, of varying age, to become math wizards by developing a digital classroom with sound pedagogical principles, user-friendly, aligned with the Department of Education (DepEd) curriculum, has minimum system requirements for mobiles or computers, and is cost-effective,” De Las Penas said.

The research seeks to create twenty (20) interactive applications that focus on number magnitude (for Grades 1 to 6) with accompanying user manuals, twenty (20) interactive applications in mathematics for Grades 7 to 10 with accompanying teaching guides, database for storing census results, making mathematics e-learning to be more interesting and meaningful among Filipino children.

At present, the project has finalized the test structures for addition and subtraction, conducted needs and gaps assessment in two (2) grade schools and two (2) high schools in San Mateo, met with school representatives,

identified least-learned topics for grade and year levels, conducted the initial meeting with Mayor and Vice Mayor of San Mateo and representatives from DepEd-San Mateo to discuss and endorse the use of technologies. The project will soon finalize its test items on multiplication, division, and fractions.

The apps can provide number sense experiences to children and support teachers who wish to integrate research-based practices in the classroom. The database for statistical learning will be the first in the Philippines giving students access to authentic data.

DOST-PCIEERD Executive Director Dr. Enrico C. Paringit recognized the value of the apps especially for teachers who are now looking for tools to aid in the blended learning method of teaching in the new normal.

“As a leader and partner in supporting innovations, we hope that we support more technologies that can help us navigate in the new normal,” says Dr. Paringit.