



Foundation for Upgrading the Standard of Education, Inc.

*Philippine Council for NGO Certification Accredited
PRC Accredited CPD Provider*

Our VISION

Quality education through voluntary action

Our MISSION

We are a community of committed professionals undertaking integrated and collaborative programs to develop excellent instructional leaders and classroom managers.

The President's Report



As we embrace the challenges of the V.U.C.A. world during this pandemic time, I extend my deepest appreciation and profound gratitude to all the members for their indefatigable commitment to pursue the goals of FUSE in upgrading the standard of education in the country. With determination, we remain focused to our goals and we took a giant step this year to expand our network and forge a tripartite collaborative endeavor with the Filipino Science Hub (Fil-Sci-Hub), together with the participation of the Philippine Normal University. The unrelenting escalation of contamination of COVID-19 did not dampen the spirit of the members; instead, we made use of the available time to create productive outputs as gleaned from the various activities carried out through the year.

Online Teaching: Skate thru Park

As the continuation of the Online Teaching series that began in the last quarter of 2020, “*Online Teaching: Skate Thru Park*” by **Prof. Sotero Malayao, Jr.** kicked off the series for 2021. “*Skate thru Park*” is like teaching Physics in the new normal. When the pandemic produced a “new normal”, the modality of learning changed. The learning environment is like skating in an environment not suitable for skating. Skating is fun if you have the proper skating rink, otherwise, it will be challenging, dangerous, and filled with setbacks.

Online Teaching: FUSE’s Science Made Easy: A Sample Episode for Video-based Teaching

As part of sharing her expertise in teaching science, **Ms. Elvira R. Galvez’** February 23, 2021 presentation titled: “*FUSE’s Science Made Easy: A Simple Episode for Video-based Teaching*” was focused on video-based learning. She pointed out that teachers should link video modules to current, relevant, and relatable events. A video may be linked to the ongoing Covid-19 pandemic. One lesson each day will be devoted to one objective.

Integrating Socio-emotional Learning in the Classroom

Social emotional health and well-being are the main goals in addressing the socio-emotional needs of the students. **Ms. Marlene Gutierrez** demonstrated a socio-emotional learning activity which she encouraged the teachers to try-out with their students, in order to gauge how the students are feeling. Lesson plans should be based on the disposition of the students. This will also allow the teacher to adjust to the students and make learning more effective.

Filipino Science Hub

The Filipino Science Hub is an educational platform founded by its CEO **Dr. Jeffrey Bunquin**, a Filipino scientist based in Houston, Texas USA. He shared the mission and vision of the FilSciHub to FUSE members during the March 30, 2021 General Assembly. The main goals of the organization are to enhance the STEM competency of Filipinos, promote information-based decision-making through research, and bring volunteer Filipino STEM experts and practitioners closer to the educational sector.

See, Think, and Wonder

Once again, **Ms. Marlene Gutierrez** talked on strategies to make learning easy, enjoyable, and fun. The *See, Think, and Wonder* strategies are easy to use. These are mini-strategies that are repeatedly used in the classroom using small sets of questions or a short sequence of steps that can be used across various grade levels and content. Each routine targets a different type of thinking and by bringing their own content, teachers integrate the routines into the fabric of their classroom. Routines help direct student thinking and structure classroom discussion.

Managing Cross-Generational Teams: Adult Development to Build Resilient Teams

Different generational context can produce friction and misunderstandings. Intergenerational friction is one of the top 3 workplaces risks. **Ms. Regina Grace Pasion** discussed what we can do to work better together and these are: 1.) Focus on the things that unite you with colleagues of all generations, rather than dwelling on the differences; 2.) Each generation is operating on a distinct set of values and each generation has valuable lessons to teach to the next; 3.) Older employees have a wealth of knowledge and tricks of the trade and the young generation can teach older employees new technologies and ways of doing; and. 4.) Everyone has their preferred methods of communication and their default working style that is influenced by their generational context and personal contexts.

Science Journalism Amidst the Pandemic

Infodemic refers to accessible and far-reaching accurate and inaccurate information. It is a complex phenomenon caused by the interaction of mainstream media, specialist media, internet sites, and the informal media. **Ms. Ruby Shaira Panela** opines that if disinformation/misinformation is the disease, knowledge is the cure. This is where science communication, composed of “**AEIOU**” comes in: **Awareness**, including familiarity with new aspects of science; **Enjoyment** or other effective responses; **Interest**; **Opinion**; and **Understanding**. Science Communication is not only raising awareness about research but it involves the appreciation of science and gaining interest, opinions and also understanding scientific processes.

Learning Action Cells

A webinar on Learning Action Cells was given by **Ms. Regina Grace Pasion** on May 4, 2021. Learning Action Cells are groups of teachers who engage in collaborative learning sessions to continuously improve their practice and/or to solve shared challenges encountered in school. The key elements of LAC in education settings are the following: 1.) Ongoing collaborative learning/problem solving within shared domain of professional interest; 2.) It is self-directed learning; and, 3.) Reflective Practice leads to action and self-evaluation, and collective competence development.

Online Teaching: A Journey to the Center of the Earth Science

Mr. Jason Maniacop on May 25, 2021 revisited the original purpose of FUSE training. In 2004, the focus of the training is on the maximization of the use of the Constec Instructional Materials and Teacher Support Materials in the form of VHS tapes. It is important to note that integral to the training of FUSE is the video-based lesson planning and development. Because of Covid 19, learning has shifted to the distance mode of learning. Nowadays, teaching has become a challenge and that is why we (FUSE) would capitalize on what we already have: Strategy, Content Knowledge, and Constec materials. All existing materials were reviewed, with 29 out of 40 FUSE video episodes were actually aligned with the Most Essential Learning Competencies (MELCs). Video-based lessons will allow our teacher participants to utilize and maximize the FUSE videos. Also, these FUSE videos can be used to: 1.) Introduce a new topic; 2.) Reinforce current lessons, and, 3.) Assess the extent to which your students have mastered the materials. In addition, we need to be guided by the 3 F's in using the video-based lessons: *Frame* (pre-viewing, framing, priming, setting up activity), *Focus* (viewing activity), and *Follow-up* (post viewing activity).

Online Teaching: Teaching Chemistry in Elementary Science...the FUSE's Way

Chemistry teaching is a work of art. To be able to teach Chemistry, there should be genuine love for the subject matter. Also, to be able to love chemistry, you should be able to find its relevance in our daily lives. **Ms. Annabelle Monzon** on June 29, 2021, shared the CHEMTEACH – the FUSE way, the last of the Online Teaching series. ChemTeach 1 – Winning students’ interest. FUSE has already distributed Chemistry teaching materials like videos and TSMs both in the grade school and high school levels. This is a complete package, with an overview of the episodes down to the concepts, objectives, integration, activities, and even the “extra challenge.” ChemTeach 2 – Developing Science Skills. Chemistry is a science and science can be viewed as a process which involves process skills and manipulative skills. The FUSE way is to explicitly teach through investigative activities and reflective discussions that will allow students to do science and think like a scientist to improve or reinforce their understanding about content, and, to develop and demonstrate scientific attitudes and values. ChemTeach 3 – Addressing Misconceptions. The FUSE way of teaching science process skills allows students to do science and think like a scientist. It is done in logical and integrated manners to reinforce understanding and develop the attitudes. In summary, there should be chemistry between the teacher and the subject matter. If we allow students to communicate, they will become effective communicators. If we allow them to do Science and think like a scientist, we are producing learners who are critical, creative, responsible, inventive, informed, and effective.

Why Reading Matters (and the Why's and How's of Developing a Reading Culture)

Why is reading important? During the July 27, 2021 General Assembly, **Dr. Luis Gatmaitan**, a medical doctor and writer, shared that reading is the heart of education. In education, reading comes first. The knowledge of almost every subject flow from reading. Reading by itself is not enough, we need to comprehend. In the 2018 Program International Student Assessment’s (PISA) Study findings by the Organization of Economic Cooperation and Development (OECD), the Philippines ranked the lowest in reading comprehension. As defined by PISA, reading literacy is “the understanding, using, evaluating, reflecting on and engaging with texts in order to achieve one’s goal, to develop one’s knowledge and potential and to participate in society.” In short, reading literacy is how children apply what they learned through reading in their life choices. The development of a reading culture is an essential tool for nation building. The term ‘reading’ referred to here is the activity that is borne out of an attitude of the heart that is willing to learn. When we have this attitude, we become hungry for growth and growth comes primarily by study and study is mainly reading. Nation-building simply means people building. We can only build ourselves

and those in our circle of influence by developing a reading culture. Research shows that students who are readers are significantly happier, less stressed, more emphatic, and ultimately far more prepared to succeed in life. Only an educated nation can be a powerful nation.

Developments in Values Education and Good Manners and Right Conduct

Because of the growing and changing job demands, the following are the categories of the top skills in demand for 2025. *Problem Solving Skills, Skills on Self-Management, Skills on working with people, and Technology Use and Development.* These skills are actually related with values. Another thing that we have to look into is the result of the 2018 PISA where the Philippines fared very poorly. DepEd initiated a review of the PISA framework against the K-12 curriculum and what matched to the Collaborative Problem-Solving competency of PISA is Values Education.

The challenge is how to incorporate values in the curriculum. This question was posed by **Dr. Wilma Reyes** during her August 31, 2021 talk. What are the things that lead us to the changes in the education system as well as in our curriculum? Do you agree that the curriculum must be humanistic? Being human and humane is actually embraced in the humane side of being a person, not only focusing on the Foundational Literacies and Essential Competencies, but building the Character Qualities of the students on how to approach and survive the changing environment. This means emphasizing Character/Values Education as the heart of the curriculum. Nelson Mandela said it best: *“Education is the most powerful weapon we can use to change the world.”*

Revisiting Beginning Reading Instruction

As Cummins said, “Once students have established a literate base in one language, they should be able to transfer knowledge and skills gained in that language to reading in a second language as long as they are adequately exposed to the second language and motivated to acquire it.” Reading is getting meaning from and giving meaning to the printed symbols, and, one’s reading skill is developed by word recognition, vocabulary development, fluency, and reading comprehension. It is the belief of **Dr. Felicitas Pado**, during the September 28, 2021 talk that “All children are capable of learning to read. This may be a slow process at the beginning, but all of them will be capable of reading if teaching is done correctly.”

HYFLEX LEARNING: Technology Integration Across Educational Modalities

According to **Dr. Ferdinand Pitagan** in his October 26, 2021 talk, Hyflex learning combines both the elements of online and classroom-based learning. It gives students

the freedom to study when, where, how, why, etc. It is up to the students to decide when, where, how, and the most comfortable pace and place. Hyflex learning is the heightened learning-centeredness. It provides modes and enables the students to choose methods of participation. Hyflex learning is an instructional approach that combines face-to-face and online learning.

Formative Assessment: Principles, Research, and Reality

Formative Assessment (FA) happens when “evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded than the decisions they would have taken in the absence of the evidence that was elicited.” And, as defined by Griffin, “It is the process of providing information to teachers that will inform their instruction and improve student learning outcomes.” With these, **Mr. Louie Cagasan, Jr.** highlighted in his November 23, 2021 talk that the focus here is the use of the student data in terms of instruction, improvement of teaching, and learning outcomes.

FUSE-PNU-FilSciHub

A Memorandum of Agreement was signed between FUSE and PNU and Filipino Science Hub on October 22, 2021. The signing was made and done in behalf of FUSE, PNU, and the FilSciHub by Fr. Onofre Inocencio, Jr., Dr. Bert Tuga, and Dr. Jeffrey Bunquin, respectively. The 3 institutions joined forces to elevate the quality and strengthen the STEM education in the country, paving the way for the STEM Teaching Webinar Series to be conceptualized. This teacher-training is aimed to empower the teachers and give the teachers as much tools as they can use in their profession. The Pedagogical Training Courses will be provided by FUSE and PNU; while, the Innovative STEM Teaching courses will be handled by the FilSciHub scientists.

LTGC Vaccination and Booster Program

The Lucio Tan Group of Companies, in response to DOH’s call for Mass Vaccination, rolled out its own vaccination program in August 2021. FUSE members and volunteers joined and availed of the program.

After almost two years of Volatility, Uncertainty, Complexity and Ambiguity (V.U.C.A.) reality that we experienced, we seemed to have been uprooted. We are swayed and are moved by the winds of change without surety of what is going to happen next. Yet, after having undergone the unwelcomed experiences, we realized that we can stand our ground. Each day offers us an opportunity to experience something new in our lives, even if it is unexpected. I join Bill Clinton’s claim in his autobiography when he wrote: “I was born in a place called HOPE.” It is only with the tenacity of our hope that enables us to grapple with every event that comes our way. Rumi (2004) very succinctly expressed this sentiment in his poem using the metaphor of a guest house.

“This being human is a guest house.
Every morning a new arrival.

A joy, a depression, a meanness,
some momentary awareness comes
as an unexpected visitor.

Welcome and entertain them all!
Even if they’re a crowd of sorrows
who violently sweep your house
empty of its furniture.
Still, treat each other honorably
He may be clearing you out
for some new delight

The dark thought, the shame, the malice,
meet them at the door laughing,
and invite them in

Be grateful for whatever comes
because each has been sent
as a guide from beyond.”

-Jalaluddin Rumi, *‘The Guest House’*

We look forward to what year 2022 unfolds before us, perseveringly taking small steps ahead and paying heed to Lao Tzu’s admonition that “as long as we have hope, we have direction, the energy to move, and the map to follow,” we will be led to see a bright and warm sunshine tomorrow.

Fr. Onofre G. Inocencio, Jr., SDB
President

TRAINING

2021 proved to be a busy year for FUSE. On to the 2nd year of the pandemic, FUSE continues to live up to its mission of undertaking integrated and collaborative programs to develop excellent instructional leaders and classroom managers. It has partnered with the Philippine Normal University and the Filipino Science Hub to elevate and strengthen the quality of education, particularly in Science, Technology, English, and Mathematics (STEM). PNU and the FilSciHub arranged lectures on Pedagogical Training Courses and Innovative STEM Teaching courses.

Webinars were also conducted to give our stakeholders enough tools to help ease the burdensome of holding hybrid online classes. General assemblies also became a venue for organizing talks, lectures, and webinars. With having no end in sight to this pandemic and with everyone in transition from classroom's face-to-face to new normal in learning, FUSE will exhaust all means to serve its stakeholders, the teachers.

TRAINER DEVELOPMENT

Since the pandemic started a year ago, FUSE took the necessary steps to help the trainers and the teachers cope with the change. Through its roster of volunteer trainers, and using its video resources in English, Math, and Science, the trainers reviewed the Most Essential Learning Competencies (MELCs) of the Department of Education. Episodes were identified, and the videos were spliced to manageable viewing time. These curated spliced videos were uploaded to FUSE'S YouTube channel for easy access.

In order to help familiarize volunteer trainers with the curated spliced videos, an Online Teaching Series was conceptualized and launched during the last quarter of 2020. Here, the curated spliced videos were the subjects of the lecture or training. The “Online Teaching” series began in 2020 with Dr. Emmanuel Garcia’s “Trick or Treat” on his Chemistry presentation. He took the lead and sparked enthusiasm among members to work on adopting the rich resource materials FUSE has. This was followed by the English group’s “Online Teaching: Boon or Bane.” Here, Dr. Marilu Madrunio and Dr. Alejandro Bernardo took turns to share with the participants the progress of the work accomplished by the English group in splicing the English videos. The Mathematics group led by Dr. Justina Evangelista, Dr. Carmelita Ragasa, and Dr. Melvin Vidar, shared to the members their online teaching strategies in “Mathematics Made Easy: Repackaging the Teaching of Mathematics and Statistics in the Digital Age”. For 2021, the month of January was all about “Physics’ Online Teaching: Skate thru Park”. This was followed in February about Elementary Science with the title: FUSE’s Science Made Easy: A Sample Episode for Video-based Teaching”, In May, the theme: “A Journey to the Center of Earth Science was conducted with “Teaching Chemistry in Elementary Science...the FUSE Way” capping the online teaching series in June.

Not contented with the Online Teaching series, FUSE invited speakers to help our trainers be more effective in helping our teachers cope with the rigors of teaching online. Invited speakers discussed on **“Integrating Social-Emotional Learning in the Classroom”**, teaching different strategies in **“See, Think, and Wonder”**, **“Managing Cross Generational Teams: Adult Development to Build Resilient Teams”** to better help understand one another. **“Science Journalism amid the Infodemic”** emphasized the importance of verifying the facts and **“Learning Action Cells”**, aimed at collaborative learning and problem-solving session shared in school.

TEACHER TRAINING

FUSE partnered with the Philippine Normal University (PNU) and the Filipino Science Hub (FHS) for a series of teacher-training courses. The training is divided into 2 parts: Pedagogical Courses and Innovative STEM Teaching Strategies. Under the Pedagogical courses, the team from PNU gave lectures on: “Underpinning of STEM Teaching”, “How to Create Modules”, “How to Deliver Virtual Lectures”, and “STEM Teaching Assessment Strategies. Team FilSciHub took the helm in delivering lectures on “Innovative STEM Teaching Strategies: Importance of Effective STEM Teaching”, “Practical and Innovative STEM Teaching”, “Design of Lab Experiments and Virtual Labs”, and “Fundamentals of Research Teaching”.

COURSE	ATTENDANCE
Importance of Effective STEM Teaching	327
Practical and Innovative STEM Teaching	294
Design of Lab Experiments and Virtual Hubs	327
Underpinnings of STEM Teaching	590
How to Create Modules	891
How to Deliver Virtual Lectures	618
STEM Teaching Assessment Strategies	378
Fundamentals of Research Teaching	229
TOTAL	3654

12:38

Our Class Schedule

FUSE-PNU-FilSciHub Teacher Training Courses

Pedagogical Courses	Innovative STEM Teaching Strategies
Underpinnings of STEM Teaching Prof. Brando C. Palomar Philippine Normal University Aug. 24, 2021, 10 AM - Manila	Importance of Effective STEM Teaching Team FilSciHub May 22, 2021, 10 AM - Manila
How to Create Modules Prof. Shila Sia Philippine Normal University Aug. 30, 2021, 10 AM - Manila	Practical & Innovative STEM Teaching Prof. Dindi Voils & Prof. Michele Lansigan June 26, 2021, 10 AM - Manila
How to Deliver Virtual Lectures Prof. Crist John Mejia Pastor Philippine Normal University Sept. 24, 2021, 10 AM - Manila	Design of Lab Experiments & Virtual Labs Prof. Joanne Aguilá, Marty Mateo & Dr. Chester Dabalos July 31, 2021, 10 AM - Manila
STEM Teaching Assessment Strategies Prof. Alfons Jayson O. Pelgona Philippine Normal University Sept. 30, 2021, 10 AM - Manila	Fundamentals of Research teaching Joy Pee Ona & Dr. Analette Carrasco Oct. 2021, 10 AM - Manila



Featuring:

Mr. Jaypee Ona
FSH-Finland

Dr. Analette Carrasco
FSH-USA

October 30 10 AM (MANILA)

FUSE-PNU-FilSciHub

STEM Teachers Training Webinar Series

FUNDAMENTALS OF SCIENTIFIC RESEARCH

A Zoom & YouTube Live Event

FUSE-PNU-FilSciHub
STEM Teacher Training

UNDERPINNINGS OF STEM TEACHING

BRANDO C. PALOMAR
 Officer in Charge - Office of the Associate Dean,
 Faculty of Science, Technology & Society
 Philippine Normal University
 August 24, 2021, 10:00 AM, Manila

FILIPINO SCIENCE HUB
 A US-based registered nonprofit organization that promotes the culture of STEM education and research.

Global community of ~75,000 students and educators in the Philippines and other countries.

MEET THE LEADERSHIP TEAM



TRAINING COMMITTEE REPORT

Dr. Marilu R. Madrunio,
Chairperson

Having adjusted to the emergency shift to online meetings and webinars, FUSE actively engaged in online activities for its general assemblies, webinars and trainings this year. There were seven (7) general assemblies (GAs) scheduled for the year, as follows:

Table 1.0

GENERAL ASSEMBLY		
26 January 2021	Online Teaching: Skate thru Park	Sotero O. Malayao, Jr.
23 February 2021	Online Teaching: Science made Easy: A Sample Episode for Video-based Teaching	Elvira R. Galvez
25 May 2021	Online Teaching: Journey to the Center of Earth Science	Jason R. Maniacop
27 July 2021	Why Reading Matters (and the Why's and How's of Developing a Reading Culture)	Luis P. Gatmaitan
31 August 2021	Developments in Values Education and Good Manner and Right Conduct	Wilma S. Reyes
28 September 2021	Revisiting the Teaching of Beginning Reading	Felicitas Pado
26 October 2021	Hyflex Learning: Technology Integration Across Educational Modalities	Ferdinand B. Pitagan
23 November 2021	Formative Assessment: Principles, Research, and Reality	Louie P. Cagasan. Jr.

Seven (7) webinars were also organized by FUSE from March to June. The topics were in consonance with the ones included by the trainers in their trainings. These were the following:

Table 1.1

WEBINARS		
March 23	Integrating Socio-emotional Learning in the Classroom	Marlene Gutierrez
March 30	Filipino Science Hub	Jeffrey Bunquin
April 13	See. Think, and Wonder	Marlene Gutierrez
April 20	Managing Cross Generational Teams: Adult Development to Build Resilient Teams	Regina Grace Pasion
April 27	Science Journalism Amid the Infodemic	Ruby Shaira Panela
May 4	Creating Learning Action Cells in your Schools	Regina Grace Pasion

June 29	Online Teaching: Teaching Chemistry in Elementary Science	Annabelle Monzon
---------	---	------------------

Alongside the general assemblies and the webinars, online trainings commenced this year. In partnership with the Philippine Normal University (PNU) and the Filipino Science Hub (FSH), through a Memorandum of Agreement, online teacher trainings were conducted from May to October of this year. These trainings were meant to upskill the Science trainers eventually preparing them for the work to be done next year. The trainings are as follows:

Table 1.3

TRAININGS		
FUSE-PNU-FSH STEM Teacher Training Webinar Series		
May 22	Importance of Effective STEM Teaching	FILSCIHUB
June 26	Practical and Innovative STEM Teaching	FILSCIHUB
July	Designing Laboratory Experiments & Virtual Labs	Dindi Voils Michelle Lansigan
August 24	Underpinnings of STEM Teaching	Brando C. Palomar
August 30	How to Create Modules	Shila Rose DC Sia
September 24	How to Deliver Virtual Lectures	Christ John M. Pastor
September 30	STEM Teaching: Assessment Strategies	Alfons Jayson O. Pelgone
October 30	Fundamentals of Scientific Research	Analette Carrasco Jaypee Ona

Overall, it was a busy year for FUSE. While everyone was getting updated with the use of technology in their training sessions, other subject areas continued to finalize their Teacher Support Materials (TSMs). In the case of Math, their modules were finally completed and printed out. These materials covered the different training areas for Math: Algebra, Geometry, Trigonometry and Statistics.

Membership

Sixteen (16) new members were added to the roster of trainers as they fulfilled the minimum requirements: three (3) consecutive attendance in the monthly General Assembly and endorsement by one member of FUSE. Further, (9) members became automatic members after serving as speakers of FUSE.

Application for CPD units

Finally, a resolution was made that will enjoin FUSE to apply for a renewal of its accreditation as a Continuing Professional Development (CPD) provider in Teacher Education Programs. Said move will facilitate the teacher trainings to be organized by FUSE in Summer of 2022.

The fundamental and unchanging mission of FUSE is to upgrade the standard of education in the country. The last two years of the pandemic can be characterized as being none-normal except perhaps for the struggles that the Foundation experienced, which is normal even in ordinary circumstances.

In meeting the challenges posed by the unprecedented experience of the pandemic, FUSE crafted a coordinated response. First, using the capacities and expertise that the regular trainers have, the General Assembly featured speakers that helped the audience navigate the resource materials of the Foundation that have been earlier adapted and curated following the Most Essential Learning Competencies (MELC) identified by the Department of Education. The General Assembly also had invited speakers who tackled reading, values education, technology integration in teaching, and formative assessment (*Please see attachment: Table 1.0*). Utilizing the platform that has become ubiquitous in this extra challenging period of education, webinars on integrating Social- Emotional Learning (SEL), Managing Cross Generational Teams, and Creating Learning Action Cells (LACs) among others, were mounted to help teachers in the current shift to online teaching.

A big part of the coordinated efforts this year is the FUSE-FilSciHub-PNU collaboration for a project consisting of a series of webinars for STEM teachers. For this major project, a MOA was inked between FUSE, FilSciHub, and PNU. The Filipino Science Hub (FilSciHub) is an online platform that promotes science and technology culture among teachers in the Philippines, a subject area that corresponds to one of the focus academic disciplines of FUSE. Phase One of the project consists of a webinar series in pedagogical courses (4 modules) that Philippine Normal University (PNU) educators handled and content topics (4 modules) expertly presented by Filipino scientists who are based abroad (*See attachment for details: Table 2.0 and 2.1*). Phase Two of the project will be composed of modules for the internship program to be delivered through FilSciHub YouTube account that can be accessed asynchronously by chosen participants. The expected output is action research, identified as the mechanism for the evaluation of the FUSE-FilSciHub-PNU project. FUSE will contact the promising beneficiaries of this training who will serve as mentors for the second batch of trainees.

This laudable major project is **standards-referenced** in its inputs, i.e., standards are the source of the content and skills given to the participants. It is likewise **standards-based**, i.e., the project will ensure that what the participants were taught and what they will actually achieve correspond to the expected standard, to be evidenced by their action research (output).

All the aforementioned activities are in support of the FUSE mission. The major project in particular, clearly manifests the subtle and nuanced distinction between standards-referenced and standards-based in education. With this, FUSE is poised to dive into the next move forward.

Table 2.0 PEDAGOGICAL COURSES:

Title	Speaker	Date
Underpinning of STEM Teaching	Prof. Brando Palomar	August 24, 2021
How to Create Modules	Prof. Shila Rose Sia	August 30, 2021
How to Deliver Virtual Lectures	Prof. Christ John Pastor	September 24, 2021
STEM Teaching Assessment Strategy	Prof. Alfons Jayson Pelgone	September 30, 2021

Table 2.1 INNOVATIVE STEM TEACHING STRATEGIES:

Title	Speaker	Date
Importance of Effective STEM Teaching	Team FilSciHub	May 22, 2021
Practical and Innovative STEM Teaching	Prof. Dindi Voils Prof. Michelle Lansigan	June 26, 2021
Design of Lab Experiments and Virtual Labs	Prof. Joanne Aguila Prof. Marty Mateo Dr. Chester Dabalos	July 31, 2021
Fundamentals of Research Teaching	Prof. Jay Pee Ona Dr. Analette Carrasco	October 30, 2021

Summary

Phase 1 of the FUSE-FilSciHub-PNU STEM teacher training program was successfully implemented. Eight training courses were delivered virtually, with a total of 3,660 participating teachers from different regions of the Philippines. PNU delivered four pedagogical training courses; while, the Filipino Science Hub delivered modern and innovate strategies in teaching STEM. Phase 2 of the program, which involves mentorship of teachers, application of learnings in class, and assessment of training program effectiveness will be implemented in 2022.

Background

The notion of the VUCA (volatile, uncertain, complex, and ambiguous) World has been widely accepted, and the COVID-19 pandemic which impacted the teaching and learning landscape is a clear proof of this concept. It is also during this time that teachers have been faced with unprecedented challenges in curriculum, assessment, instruction, and inclusion of technologies to support distance and flexible learning.

To support our teachers, the Filipino Science Hub (FilSciHub), Philippine Normal University (PNU), and the Foundation for Upgrading the Standard of Education Inc. (FUSE) came together to develop the STEM Teaching Fellowship Program. This project aims to mentor early-career educators in terms of pedagogy and practical and innovative STEM teaching suited for distance learning. The training program will focus on four subject areas namely, Chemistry, Physics, Biology, and Mathematics. At the end of the program, the participants (STEM teaching fellows) are expected to apply their pedagogical and practical STEM teaching skills in creating and delivering high quality online or printed instructional materials.

This program adheres to the DepEd Memorandum CI Nos. 00162 s. 2020, which provides the suggested strategies in implementing Distance Learning Delivery Modalities (DLDM) for School Year 2020-2021.

Program Description

The STEM Teaching Fellowship Program will focus on upgrading the quality of STEM teaching in terms of Content and Delivery under the Distance Learning mode. An essential feature of this program is the involvement of full-fledged scientists and STEM practitioners giving insights on the practical and innovative ways to teach STEM-related topics. This will provide a realistic and contextualized approach to STEM teaching that will be at par with international standards. The other main feature of this program is the pedagogical aspect which will be handled by reputable leaders in education training who will mentor STEM Teaching fellows on the structure and essential elements of a STEM instructional material as well as strategies for learning assessment.

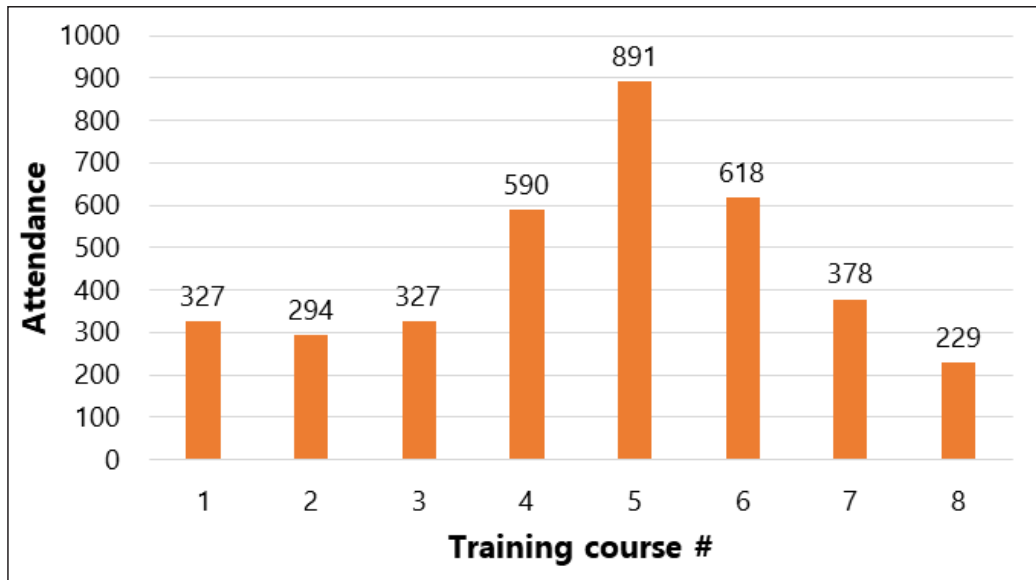
Terminal Objective:

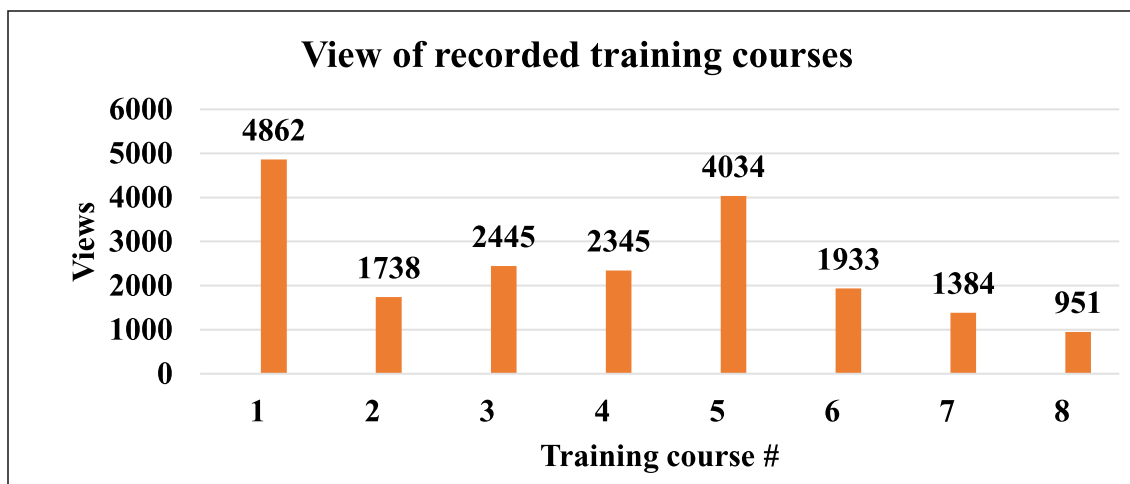
At the end of the course, the participants should be able to apply their pedagogical and practical STEM teaching skills in creating and delivering high quality STEM instructional materials that are well-suited for Distance Learning Modality.

Enabling Objectives:

The participants shall:

1. Use a variety of innovative and practical pedagogical approaches in their STEM classrooms;
2. Demonstrate collaborative skills with fellow educators in designing high-quality STEM educational materials;
3. Apply pedagogical theories, observations and best practices learned from seasoned educators and scientists into their own teaching;
4. Create high-quality STEM educational materials;
5. Defend the prepared STEM educational materials before an evaluating panel; and,
6. Design a robust STEM curriculum that engages students in meaningful learning activities.





(Recorded training course views)

All training courses were streamed live on Filipino Science Hub’s Official YouTube Channel. Below is the list of the recorded training courses and their corresponding URLs:

	Topic / Duration
1	Importance of Effective STEM Teaching: https://www.youtube.com/watch?v=KOSUK5BS8fU&t=1452s
2	Practical and Innovative STEM Teaching: https://www.youtube.com/watch?v=qoVzRsAsxyc&t=1579s
3	Design of Lab Experiments and Virtual Labs: https://www.youtube.com/watch?v=0FXLQV7_pE0&t=3654s
4	Underpinnings of STEM Teaching: https://www.youtube.com/watch?v=RblMKZhk66U&t=3908s
5	How to create modules: https://www.youtube.com/watch?v=DmKVoDyxZxA&t=3520s
6	How deliver virtual lectures: https://www.youtube.com/watch?v=aK4N567LYP4
7	Assessment strategies: https://www.youtube.com/watch?v=f-LYizsjfh4&t=889s
8	Research Teaching at the Primary and High School Levels: https://www.youtube.com/watch?v=VLf9CDmqFgc

SECRETARIAT REPORTS...

With the COVID-19 Pandemic now into its 2nd year, the FUSE Secretariat continues to bring projects that help upgrade the quality of its trainers and that of teachers across the country.

Webinars and Trainings

The Secretariat organized seven (7) webinars for its members and roster of volunteer trainers for the year 2021. Also, FUSE had partnered with FilSchiHub and the PNU for a series of teacher-trainings on STEM Teaching that spanned for 6 months, commencing in May and ending in October 2021.

PRC Accreditation and CPD Provider

FUSE had likewise applied for renewal of its PRC Accreditation and as a CPD provider. The re-accreditation and the application as a CPD provider are still pending approval. The CPD points earned by teachers from trainings will help in renewing their licenses.

LTG Company-wide vaccination and booster program

FUSE also joined the company-wide LTG vaccination and booster program which was open to all employees, members, trainers, and volunteers.

TSMs

It is with great joy that the FUSE'S TSM project has finally reached its printing stage. After decades of not having Teacher Support Materials of its own, the Math Team, headed by Dr. Justina Evangelista and Dr. Nympha Joaquin, had finally come up with its own Mathematics' Teacher Support Material. The English Supplemental Edition is also in its printing stage. Except for some minor changes in its cover design, the Science TSM is also on its way to being printed. These TSMs are expected to be released within the First Quarter of 2022.

Membership

The FUSE Secretariat is happy to announce that FUSE has 25 new members as of December 2021. Despite the pandemic, FUSE remains at the forefront of recruiting more members and volunteers committed to strengthening teaching effectiveness, especially in Science, Mathematics and English, through various training programs.

INSTITUTIONAL DEVELOPMENT

A. New Members

After having fulfilled the minimum requirements of 3 consecutive attendance to the general assembly and being endorsed by a member in good standing, 16 new members were added to the list of FUSE members. Added to the list are 9 speakers who became automatic members after having served as speakers in the general assembly and webinars. To the new members...Welcome to FUSE!

Table 3.0 New Members

Regular Members:
Anne Torres
Brando Palomar
Ellamae Villanueva
Eva Callueng
Lorna Acuavera
Ma. Josefa Quinones
Maria Amelia Damian
Patti Margaret Catabay
Rachel Lee
Rex Robert Llaneta
Reynalf Alfred Sy
Shilanie Dacumos
Shila Rose Sia
Alfons Jayson Pelgone
Christ John Pastor
Audrey Morallo
Speakers:
Felicitas Pado
Ferdinand Pitagan
Jeffrey Bunquin
Louie Cagasan, Jr
Luis Gatmaitan
Marlene Gutierrez
Regina Grace Pasion
Ruby Shaira Panela
Wilma Reyes
Felicitas Pado

B. Monthly General Assemblies

The monthly general assemblies hosted by FUSE aims to update the trainers and members on issues relevant in and outside of the academe. Featured speakers from various professions are invited to talk and share their expertise. These gatherings also intend to attract other professionals to join the organization and contribute to nation-building.

This year, the assemblies were still done on a virtual stage. Topics for this year were aimed at helping the teachers and trainers to be more effective and navigate the online teaching.

Table 4.0 General Assemblies

Month	Topic	Guest Speaker
January 26	Online Teaching: Skate Thru Park	Sotero O. Malayao, Jr
February 23	Online Teaching: Science Made Easy: A Sample Episode for Video-based Teaching	Elvira R. Galvez
May 25	Online Teaching: Journey to the Center of Earth Science	Jason R. Maniacop
July 27	Why Reading Matters (and the Why's and How's of Developing a Reading Culture)	Luis P. Gatmaitan
August 31	Developments in Values Education and Good Manners and Right Conduct	Wilma S. Reyes
September 28	Revisiting the Teaching of Beginning Reading	Felicitas E. Pado
October 26	Hyflex Learning: Technology Integration Across Educational Modalities	Ferdinand B. Pitagan
November 23	Formative Assessment: Principles, Research, and Reality	Louie P. Cagasan, Jr

GENERAL ASSEMBLY SPEAKERS

Online Teaching: Skate thru Park

SOTERO O. MALAYAO, JR

January 26, 2021



Online Teaching: FUSE's Science Made Easy A Sample Episode for Video-based Teaching

ELVIRA R. GALVEZ

February 23, 2021



Online Teaching: A Journey to the Center of Earth Science

JASON R. MANIACOP

May 25, 2021



Why Reading Matters and the Why's and How's of Developing a Reading Culture

LUIS P. GATMAITAN

July 27, 2021



Developments in Values Education And Good Manners and Right Conduct

WILMA S. REYES

August 31, 2021



Revisiting the Teaching of Beginning Reading

FELICITAS E. PADO

September 28, 2021



**Hyflex Learning: Technology Integration
Across Educational Modalities**

FERDINAND B. PITAGAN

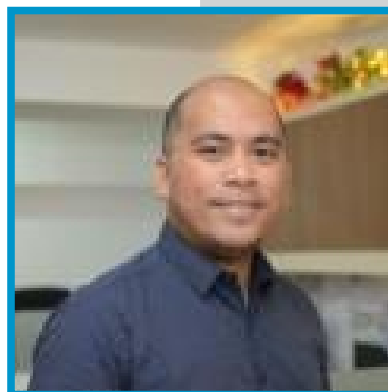
October 26, 2021



**Formative Assessment: Principles,
Research, and Reality**

LOUIE P. CAGASAN, JR

November 23, 2021



INSTITUTIONAL DEVELOPMENT

C. WEBINARS

To further strengthen the content and strategy know-how of the teachers and trainers, FUSE has invited guest speakers to discuss topics that will help them be more effective in the online setting especially in this time of pandemic.

Month	Topic	Guest Speaker
March 23	Integrating Social-Emotional Learning in the Classroom	Marlene Gutierrez
March 30	Filipino Science Hub	Jeffrey C Bunquin
April 13	See, Think, and Wonder	Marlene Gutierrez
April 20	Managing Cross Generational Teams: Adult Development to Build Resilient Teams	Regina Grace Pasion
April 27	Science Journalism Amid the Infodemic	Ruby Shaira Panela
May 4	Creating Learning Action Cells in your Schools	Regina Grace Pasion
June 29	Online Teaching: Teaching Chemistry in Elementary Science	Annabelle Monzon

Webinars Pubmat



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Science Journalism Amidst the Infodemic

Speaker: Ms. Shaira Panela

**9:00 am
via Zoom**



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Filipino Science Hub (FilSci Hub)

Speaker: Dr. Jeffrey Bunquin

**9:00 am
via Zoom**



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Annual Election Meeting of F.U.S.E Members

**Using See, Think, and
Wonder and the other
Visible Thinking Strategies
in Sciences**

**Speaker: Ms. Marlene
Guterrez**

**9:00 am
via Zoom**



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Organizational Meeting of the Board of Trustees of F.U.S.E Foundation Inc.

**Teacher Training Proposal
for May 2021**

Speaker: Dr. Marilu Madrunio

**9:00 am
via Zoom**



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Managing Cross- Generational Teams: Understanding Adult Development to Build Resilient Teams

**Speaker: Ms. Regina Grace
Pasion**

**9:00 am
via Zoom**



FOUNDATION FOR UPGRADING
THE STANDARD OF EDUCATION

Integrating Socio- Emotional Learning in the Classroom

**Speaker: Ms. Marlene
Guterrez**

**9:00 am
via Zoom**

WEBINARS SPEAKERS

**Integrating Social-Emotional
Learning in the Classroom
See, Think, and Wonder**
Marlene Gutierrez



**Managing Cross Generational
Teams: Adult Development
to Build Resilient Teams**
Creating Learning Action Cells in your Schools
Regina Grace Pasion



Science Journalism Amid the Infodemic
Ruby Shaira Panela



Filipino Science Hub

Jeffrey C Bunquin



**Online Teaching: Teaching Chemistry in
Elementary Science...the FUSE Way**

Annabelle J Monzon



MEMORANDUM OF AGREEMENT:

Filipino Science Hub (FilSciHub) is an online platform founded by a Filipino scientist, CEO Dr. Jeffrey Bunquin, in 2012. It is a non-profit organization based in Houston, Texas, USA. Its mission is to promote STEM education and the culture of research among students and teachers in the Philippines and abroad. The FSH team is composed of volunteer Filipino scientists and seasoned STEM educators from different parts of the world. Its vision is to see a technology and innovation-driven Philippines and these are carried out by their 2 major programs: FilSciHub Ed Program and the FilSciHub Research University.

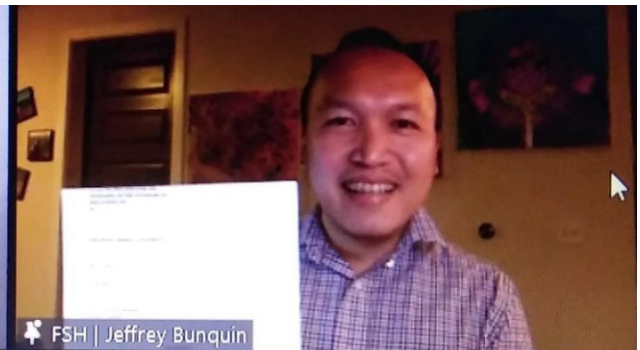
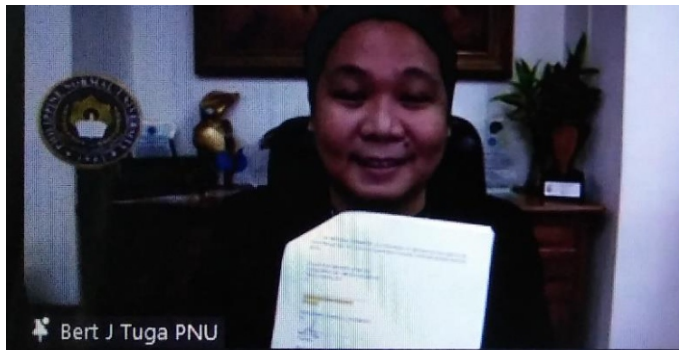
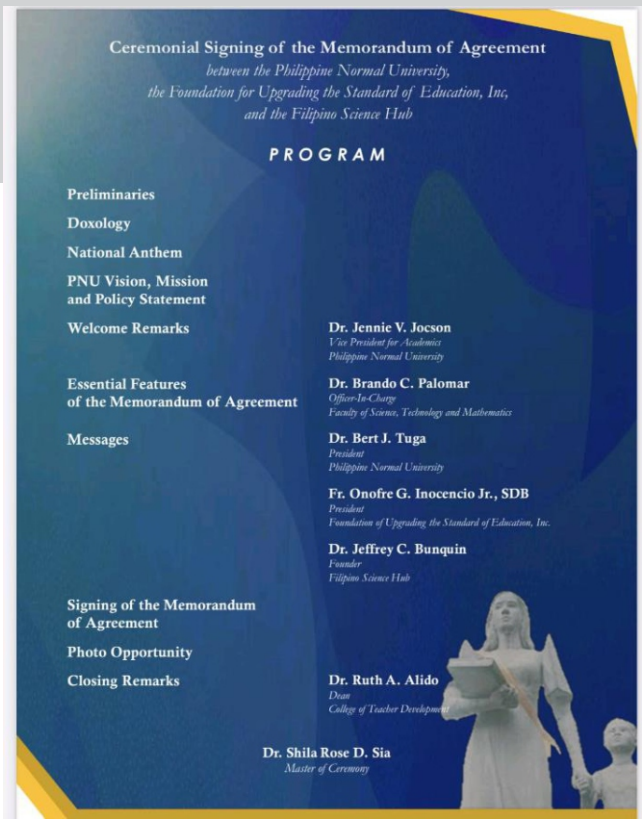
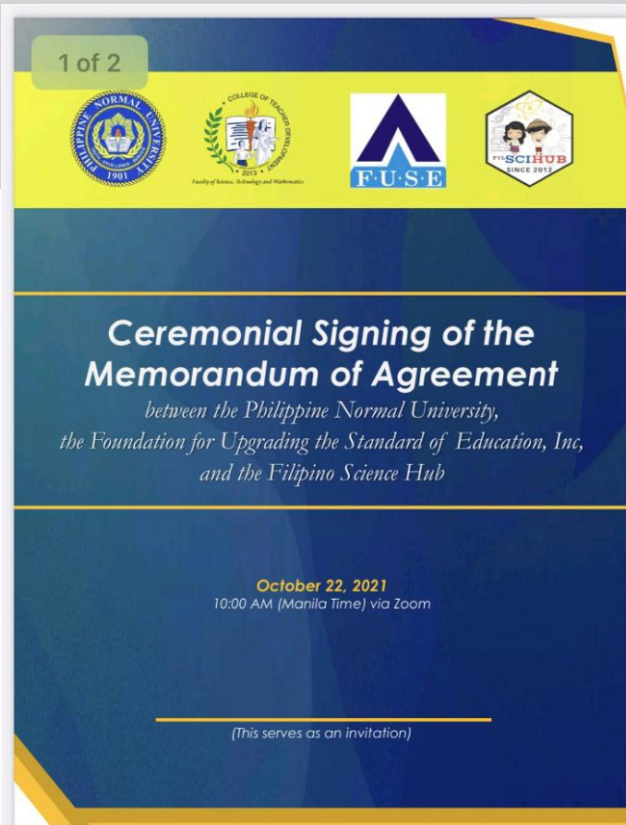
The **Philippine Normal University (PNU)** is a public co-educational teacher education and research university in the Philippines. It was established in 1901 through Act No. 74 of the Philippine Commission "*for the education of natives of the Islands in the science of teaching*". Pursuant to Republic Act No. 9647, it is the country's *National Center for Teacher Education*.

In addition to the powers and functions provided for in its charter, the university is mandated to conduct researches, build and develop a database of education policies, and provide technical support to the Department of Education and the Commission on Higher Education, as well as assistance to the Congress of the Philippines, in the design and analysis of programs, projects, and legislative proposals concerning teacher training, teacher education, continuing professional education of teachers and academic supervisors, teacher education curricula, and other issues affecting teacher education.

Foundation for Upgrading the Standard of Education (FUSE) is a community of committed professionals undertaking integrated and collaborative programs to develop excellent instructional leaders and classroom managers. Founded by Dr. Lucio C. Tan together with Sen. Edgardo Angara and Rep. Salvador Escudero on December 1, 1994, FUSE seeks to improve the skills in English, Science and Mathematics teachers. Its programs include regular teacher training workshops; production and distribution of telecourses in English, Elementary Science, Chemistry, Physics and Math; and a host of other educational programs in partnership with government and private learning institutions.

FUSE-PNU-FilSciHub STEM Teaching Webinar Series was conceptualized to elevate the quality of STEM education in the Philippines. This is to empower the teachers and give the teachers as much tools as they can use in their profession. The Pedagogical Training Courses will be provided by FUSE and PNU; while, the Innovative STEM Teaching courses will be handled by the FilSciHub scientists.

The three (3) institutions joined forces having one goal in mind: Elevate the quality and strengthen the STEM education in the country. This partnership was sealed in a **Memorandum of Agreement** signed by all parties on **October 22, 2021**.



PARTNERS AND BENEFACTORS

A. New Partners

Philippine Normal University and **Filipino Science Hub** became the new partners of FUSE in its drive to bring online training to teachers. This partnership was sealed in a Memorandum of Agreement and signed by **Dr. Bert J. Tuga, PNU President, Dr Jeffrey C. Bunquin, CEO and Founder of Filipino Science Hub, and Fr. Onofre G. Inocencio, Jr, FUSE President.**

B. Perpetual Benefactors

B1. Tan Yan Kee Foundation (TYKF)

FUSE Foundation is forever indebted to its founder and benefactor, Dr. Lucio C. Tan. Truly, his steadfast faith in education and belief in our teachers are unparalleled, undiminished and unwavering. To you, Sir, our deepest gratitude! Salute!

B2. ACCRALAW

ACCRALAW has, for 27 years, been in partnership with FUSE in its mission to upgrade the standards of education. Special thanks to its lawyers who continue to be of service to the foundation. To lawyers Joselito Bautista, Korina Ana Manibog, Mara Kristina Recto, and to Nestor Fernando Siazon, our deepest gratitude.

B3. Sycip Gorres Velayo and Co (SGV)

FUSE acknowledges with gratitude the continuing support of Sycip Gorres Velayo and Co (SGV) to the foundation. The commitment to extend financial services to FUSE Foundation is greatly appreciated. To its staff: Shane Dave Tanguin, Vladimir Adrian M. Cruz, Monica A. de Pedro, and Lucio F. Sta. Ines, Jr. thank you for all your help.



“Success does not simply end with wealth. It may appear so because the need to survive is a priority. But, as we achieve measures of success and material comfort, we also begin to remember lessons of sharing and helping out”

Excerpts from (FROM THE CHAIRMAN) “Pursuing a Meaningful Life”, lifted from Silver Reflections, a TYKF coffee table book,

Working through most of his school days, Dr. Lucio Tan understood the difficulties of getting a formal education. He knew that education was the key and the most important tool toward improvement of individuals. Knowing is truly powerful. He labored his way toward attaining his Doctorate in Philosophy, Major in Commerce from the University of Santo Tomas. Through the years of building his empire, he never wavered in his effort to help those in need and provide assistance to institutions that needed his help. Proof of these are the different honorary degrees conferred on Dr. Tan by the different academic institutions all over the country and overseas. Dr. Lucio Tan also received international recognition for his philanthropic works, advocacies, and worthwhile projects. Special days in honor of Dr. Lucio Tan were proclaimed by the governor of Guam on November 2, 2002 and by the mayor of San Francisco, California on May 11, 2007 and every year thereafter. Dr. Lucio Tan is also a recipient of numerous awards, notably the Order of Lakandula with the rank of Bayani (Hero), one of the highest honors conferred by the President of the Philippines upon a Filipino or foreign national, in June 2010. He is also the Chairman Emeritus of the Federation of Filipino-Chinese Chambers of Commerce and Industry and the Chairman and President of the Tan Yan Kee Foundation, Inc. He

co-founded FUSE in 1994 with Congressman Salvador H. Escudero and Senator Edgardo J. Angara, both deceased.

In recognition of Dr. Tan's contribution to the academe, he was conferred the following Doctor Honoris Causa:

- Doctor of Applied Agriculture, Central Luzon State University, Munoz, Nueva Ecija
- Doctor of Humane Letters, University of Guam
- Doctor of Technology Management, Western Visayas College of Science and Technology, La Paz, Iloilo
- Doctor of Science in International Business and Entrepreneurship, Cavite State University, Cavite
- Doctor of Humanities, Western Mindanao State University, Zamboanga City
- Doctor of Business Management, St. Paul University Philippines, Tuguegarao, Cagayan
- Doctor of Institutional Development and Management, Isabela State University, Cauayan, Isabela
- Doctor of Humanities, University of Mindanao, Davao City
- Doctor of Business and Industrial Management Engineering, Central Philippine University, Iloilo City
- Doctor of Humanities in Business & Entrepreneurship, Lyceum-Northwestern University, Dagupan City, Pangasinan
- Doctor of Humanities, San Beda College, Manila
- Doctor of Technology, University of Nueva Caceres, Naga City
- Doctor of Business Administration, Polytechnic University of the Philippines, Manila
- Doctor of Humane Letters, Fairleigh Dickinson University, New Jersey
- Honorary Doctorate Degree, Soka University, Tokyo, Japan

Dr. Lucio C. Tan is a living example of someone coming from humble beginnings who can succeed in life. Dr. Tan is unequalled in his generosity to various social causes. As the late Cardinal Sin summed up Dr. Tan's contributions: *"The scholars, homeless, aged, abandoned, and sick he has helped will attest that Mr. Tan has been, for them, a reflection of God's goodness. They were able to experience the generosity of God through the generosity of Mr. Tan. We were able to see that sheer faith and determination can make wonders and miracles because of Mr. Tan's life. He has shown us that nobody is born a loser. All of us have the capacity to win and succeed if we place our trust in God!"* Indeed, Dr. Tan is a role model worthy of emulation.



ATTY. JOSELITO M. BAUTISTA



ATTY. KORINA ANA T. MANIBOG



ATTY. MARA KRISTINA O. RECTO



ATTY. NESTOR FERNANDO T. SIAZON



SHANE DAVE D. TANGUIN

Engagement Partner



VLADIMIR ADRIAN M. CRUZ

Associate Manager



MONICA A. DE PEDRO

Senior Associate



LUCIO F. STA INES, JR.

Associate



Skate thru Park

Teaching physics in the new normal

Mr. Sotero O. Malayao Jr (Assoc Prof IV)

Dept. of Science and Mathematics Education
MSU-Iligan Institute of Technology

Foundation for Upgrading the Standards of Education

Pearl of the Orient Tower

1240 Roxas Blvd. Ermita, Manila

January 26, 2021

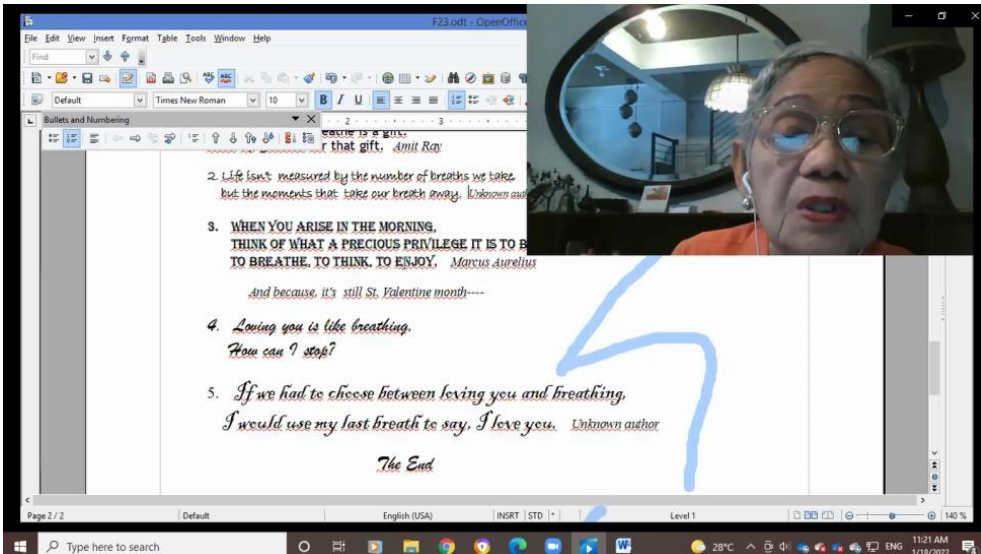
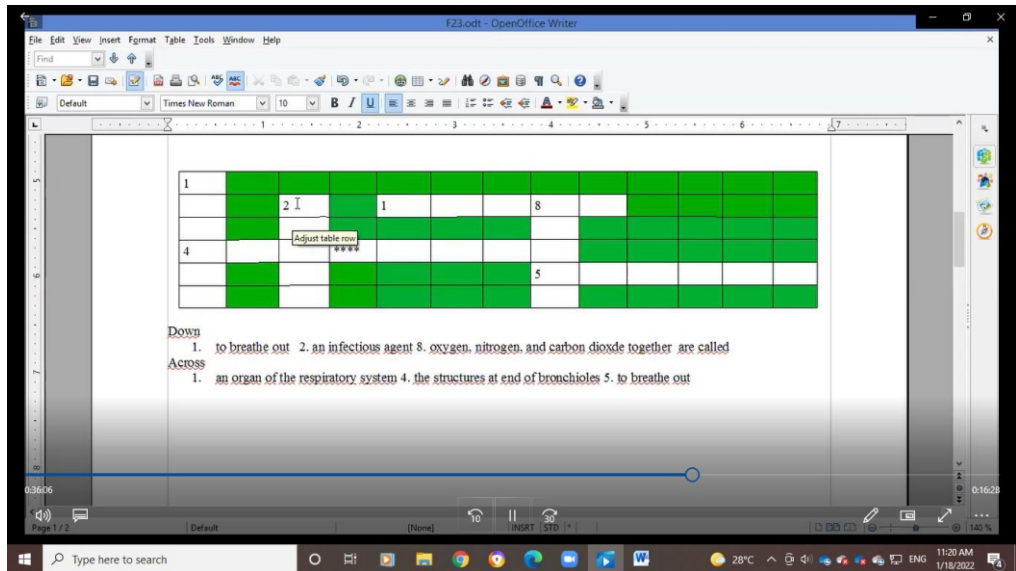
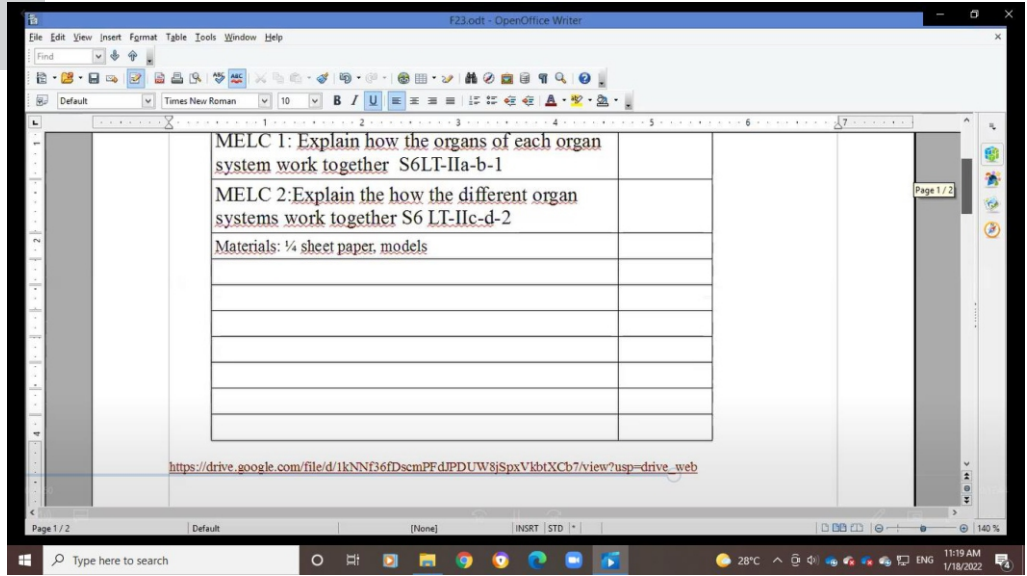
The truth is, there is NO one best way to PRESCRIBE how to teach science in this new normal.

Perhaps, after half of the school year, we can look at the different interventions made across the spectrum of capacity of different teachers and schools.



GENERAL ASSEMBLY

Online Teaching: FUSE's Science Made Easy: A Sample Episode for Video-based Teaching
February 23, 2021





GENERAL ASSEMBLY

Why Reading Matters and the Why's and the How's of Developing a Reading Culture
July 27, 2021

STORIES ARE POWERFUL

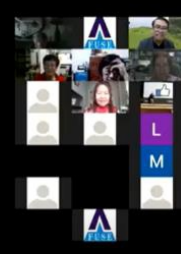

For instance, if a ballet scene is beautifully described in a novel, the 'sight and movement centers' of our brains respond (even for those of us who can't dance).
When a scent, such as sampaguita or ilang-ilang, is described, our 'smell center' lights up.



24:04
25:05 / 2:14:38

WHY READING MATTERS?

With the current onslaught of COVID-19 pandemic, books offer a refuge, a place where we can go, to soothe our minds and help us calm down. Reading saves us from boredom and the loneliness of lockdown and quarantine. Come to think of it, if we are reading, we could easily travel to another land and time without a need for swab test, and the vaccine, and the required quarantine period.



1:45:03 / 2:14:38

READING AS A TOOL FOR NATION-BUILDING

With the advent of internet connectivity, we live now in a global village, and if we must compete, every FILIPINO, irrespective of age or status, must develop or redevelop a reading culture.



45:17 / 2:14:38

CONSIDERATIONS WHEN WRITING FOR CHILDREN



- Language
- Psychology
- Topics/themes (what interests them?)
- Developmental milestones
- Reading ability/ reading comprehension
- Length of the story: word count



34:47
33:51 / 2:14:38

How do you Engage the Children in Conversational Reading?


- You don't always have to agree
 - There are no right answers in conversations
 - Conversations are meant to give a greater understanding of different views and perspectives, not necessarily to reach a resolution
- Try a 'What If?'
 - CR promotes looking at a story from different perspectives.
 - Imagine. What if another character tells the story instead?



1:06:16 / 2:14:38

TIPS ON DEVELOPING A READING CULTURE


3. Engage the first 20 minutes of your class in reading (and storytelling, for younger learners). During this time, encourage independent reading of 'self-selected' books.



0:28:16 / 2:14:38

Why kids/teens are not reading

- The PISA findings showed that "students seem to read less for leisure and to read fewer books of fiction, magazines or newspapers because they want to (as opposed to because they have to).
- "Instead, they read more to fulfil practical needs, and they read more in online formats, such as chats, online news or websites containing practical information."
- In fact, the survey found an increase in students who find reading "a waste of time", and that fewer students read for enjoyment purposes.



0:28:16 / 2:14:38

Example of Video-Based Lesson using 3F

FUSE CONSTEL Videos and DEpEd's Most Essential Learning Competencies (MELC)


Quarter	MELC	Topic	FUSE Episode/Title	Video Time Range
4th	Describe the changes on the Earth's surface as a result of earthquakes and volcanic eruptions	Earthquakes and Volcanic Eruptions	Ep 37. Restless Earth	8:30
		Enumerate what to do before, during and after earthquake and volcanic eruptions	Earthquakes and Volcanic Eruptions	
	Differentiate between rotation and revolution and describe the effects of the Earth's motions	Earth's Motions	Ep 38. Earth, Moon, Sun: The Great Triumvirate	4:38
		Planets of the Solar System	Ep 39. The Solar System	
Construct a model of the solar system showing the relative sizes of the planets and their relative distances from the Sun	Model of Solar System	Ep 39. The Solar System	3:52	

Note: G= Grade Level
Q= Quarter

(G6 Q4 Ep 39)

GENERAL ASSEMBLY

Online Teaching: A Journey to the Center of Earth Science
May 25, 2021



FUSE CONSTEL Videos and DEpEd's Most Essential Learning Competencies (MELC)

Grade Level: Grade 3

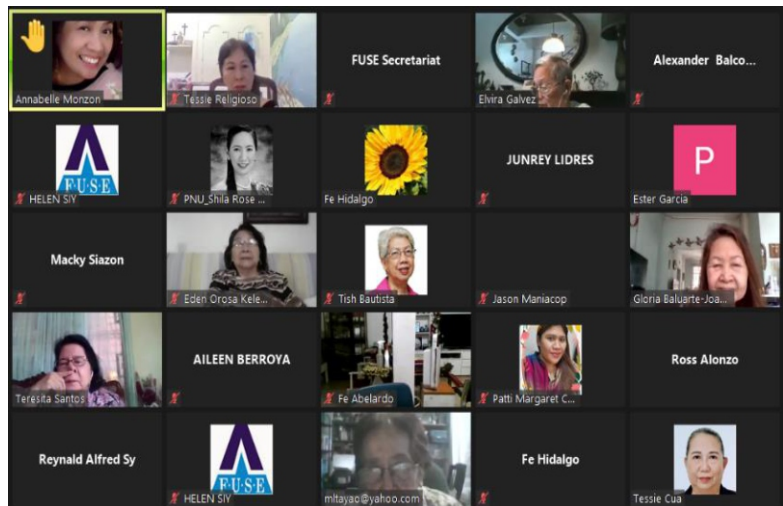
Quarter	MELC	Topic	FUSE Episode/Title	Video Time Range
1st	Classify objects and materials as solid, liquid, and gas based on some observable characteristics; Describe changes in materials based on the effect of temperature: 1. solid to liquid 2. liquid to solid 3. liquid to gas 4. solid to gas	Phases of Matter	Ep 22. Solids, Liquids, and Gases: Phases of Matter	4:26
		Changes in Matter	Ep 23. Changes	2:36
2nd	Describe the functions of the sense organs of the human body Describe animals in their immediate surroundings	Sense Organs of the Human Body	Ep 5. The Human Computer and Control Center	6:03
		External Parts and Functions of Animals	Ep 10. Animal Structure and Function	6:19
	Classify animals according to body parts and use			

Something that we can give during our training.



And these are:

1. Strategy
2. Content-knowledge
3. *CONSTEC materials*

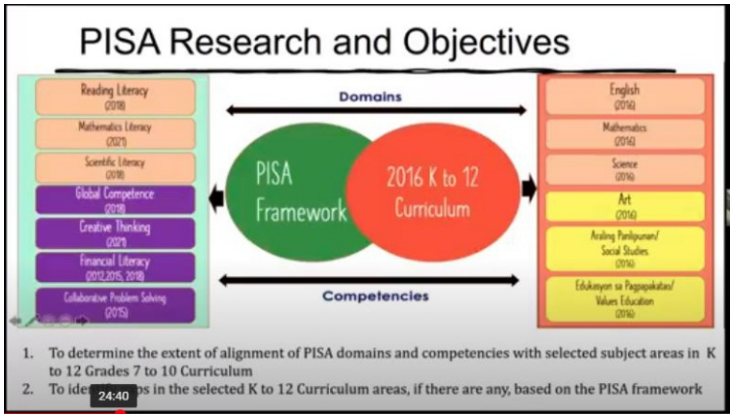


GENERAL ASSEMBLY

Developments in Values Education and Good Manners and Right Conduct
August 31, 2021

OUTLINE OF PRESENTATION

- Drivers of Change
- Changing Landscape of Education
- THE GMRC/VE Act
- Ways Forward



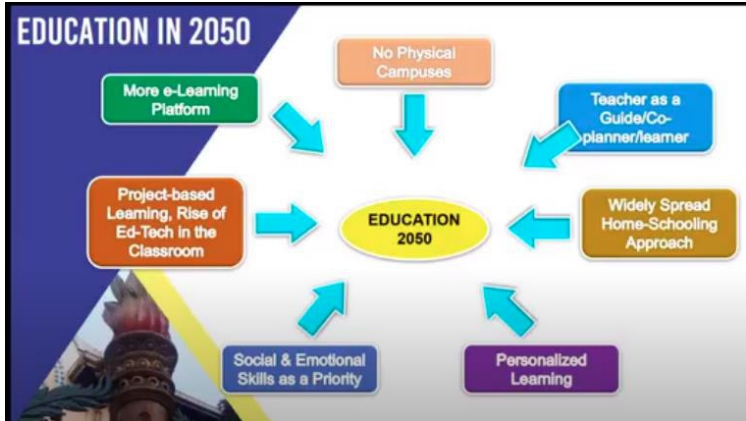
TOP SKILLS OF 2025

Top 10 skills of 2025

- Analytical thinking and innovation
- Active learning and learning strategies
- Complex problem-solving
- Critical thinking and analysis
- Creativity, originality and initiative
- Leadership and social influence
- Technology use, monitoring and control
- Technology design and programming
- Resilience, stress tolerance and flexibility
- Reasoning, problem-solving and ideation

Type of skill:

- Problem-solving
- Self-management
- Working with others
- Technology use and development



SOCIETY 5.0

- **Society 5.0 is a Super Smart Society**

A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.
(World Economic Forum, 2019)

WAYS FORWARD

How to implement the mandate of RA 11476- GMRC/Values Education Act effectively?

- Implement a whole school approach in teaching VE/Value Integration
- Revitalize school-home partnership in teaching values to learners
- Ensure that the goals, outcomes, content/learning space and pedagogies of Values Education/GMRC are explicitly and purposively stated in the curriculum and the community of practice

VUCA WORLD

Are you living in a VUCA world?

NCCA RESEARCH ON VALUES 2020

Filipino Values

- Traditional Values remained the same:
 - Family centered
 - Faith and virtue-based
 - Sympathetic for others (Kapawa)
 - Education oriented
- Values related to society that are important:
 - Good governance
 - Love for country
 - Honesty and integrity
- Personal Values that are important:
 - Value of the Self
 - Life and purpose
 - Resilience
 - Happiness

LEARNING MATERIALS

Teachers perceived that they were using materials that were attuned to developing transversal skills.

Teaching tools, materials and devices were not separate but rather embedded in activities and materials provided for learning.

Learning materials, tools, devices

Critical and innovative thinking, ICT skills and interpersonal skills were among the most extensively integrated transversal skills in the teaching practice.

Global citizenship skills need to be further articulated and developed; materials are of minimal use.

INDUSTRIAL REVOLUTION

Agricultural Economy Mechanization	Industrial Economy Electrification	Knowledge Economy Automation	Innovation Society Digitalization	Super Smart Personalization
IR 1.0	IR 2.0	IR 3.0	IR 4.0	IR 5.0
18 th -19 th Century In Europe & America Steam Engine	1870-1914 Steam, oil, electricity & combustion engine	1980's Personal Computers & Internet	21 st Century Advent of AI, Big Data, Robotics, ICT	Responsive 21 st Century Connection of Innovation to Purpose & Inclusivity

GENERAL ASSEMBLY

Revisiting the Teaching of Beginning Reading
September 28, 2021

1. Oral Language	8. Grammar Awareness
2. Phonological Awareness	9. Writing and Composing
3. Book and Print Knowledge	10. Vocabulary Development
4. Alphabet Knowledge	11. Listening Comprehension
5. Phonics and Word Recognition	12. Reading Comprehension
6. Spelling	13. Positive Attitude towards Language, Literacy and Literature
7. Fluency	14. Study Skills

FELICITAS E. PADO, PhD

GRAMMAR AWARENESS

- The story may be used as a springboard for introducing a grammar lesson.
- The correct use of the structure (instead of the recitation of grammar rules) is emphasized. I

FELICITAS E. PADO, PhD

AIMS OF BEGINNING LITERACY

- Children who can read.
 - Children who will read.
 - in the Mother Tongue
 - in Filipino
 - in English
- ...and introducing them to stories is an effective way of motivating them to learn to read.

A NOTE ON FLUENCY

(reading with accuracy, automaticity and proper phrasing)

- Fluency is a neglected skill.
- Many pupils read in a word by word manner.
- This way of reading affects comprehension.
- Developing fluency: Phrase reading prior to asking the pupils to read a selection.

FELICITAS E. PADO, PhD

GENERAL ASSEMBLY

Hyflex Learning: Technology Integration Across Educational Modalities
October 26, 2021

CURRENT STATE OF PHILIPPINE SCHOOLS MOVING TOWARDS THE NEW NORMAL

2020 **2021** **2022** **2023**

RESPONSE **RECOVERY** **RECONFIGURATION**

<https://instructionalcontinuity.georgetown.edu/pedagogies-and-strategies/hybrid-hyflex-teaching/>

CURRICULUM ADJUSTMENTS

Most Essential Learning Competencies
With Corresponding CG Codes/Suggested LRs

- Where to start? end?
- What to start with? continue with?
- How to start? sustain/continue? end?
- Other pertinent inquiries

Department of Education
Curriculum and Instruction Service

CURRICULUM ADJUSTMENTS

HOTS **LOTS**

- Creating**: Can students create a new product or piece of work? They would be able to assemble components, design, develop, construct or generate.
- Evaluating**: Can the student justify a stand or decision? To evaluate information, a student must establish criteria and defend a judgment, select, reject, value and make.
- Analyzing**: Can the student differentiate between the different parts? This would be able to compare, contrast, predict, discriminate, deconstruct, distinguish, examine, experiment, question or test.
- Applying**: Can the student use the information in a new way? This would be able to choose, demonstrate, examine, explain, identify, locate, organize, report, select, transfer or use.
- Understanding**: Can the student explain ideas or concepts? They would be able to classify, describe, discuss, explain, identify, locate, organize, report, select, transfer or use.
- Remembering**: Can the student recall or remember the information? They would be able to define, duplicate, list, memorize, recall, repeat, reproduce or state.

HYBRID FLEXIBLE LEARNING

- Those without connectivity
- Learners with limited connectivity
- Learners with full connectivity

<https://www.patsia.net/assm-elearning.html>

LEARNING MODALITIES GOALS

Education Future Goals

LIFE-LONG **LIFE-WIDE**

Connecting learning to a purpose Real-world connected learning

LIFE-DEEP **LIFE-WISE**

Learning for mastery Learning beyond self

Human Flourishing
Proactive Citizenship
Work Readiness
Agency

LEARNING MODALITIES

FLEXIBLE LEARNING *Fermin, 2020*

RESIDENTIAL LEARNING	Face-to-face Provisions <i>More</i>	Remote Provisions <i>Less</i>
BLENDED LEARNING	Face-to-face Provisions <i>Less / More</i>	Remote Provisions <i>Less / More</i>
ONLINE LEARNING	Face-to-face Provisions <i>Rare to None</i>	Remote Provisions <i>More</i>

GENERAL ASSEMBLY

Formative Assessment: Principles, Research, and Reality
November 23, 2021

ACTRC Assessment Curriculum & Technology Research Centre

Formative Assessment: Principles, Research and Realities

Louie P. Cagasan Jr.
Assessment, Curriculum & Technology Research Centre
University of the Philippines, Diliman

November 23, 2021

The Assessment, Curriculum and Technology Research Centre is a partnership between the University of Melbourne and the University of the Philippines supported by Australian Government.

Australian Aid

11:54

EDUCATIONAL ASSESSMENT
https://doi.org/10.1080/19427147.2020.1766960

Routledge
Taylor & Francis Group

Developing a Formative Assessment Protocol to Examine Formative Assessment Practices in the Philippines

Louie Cagasan*, Esther Carel*, Pamela Robertson*, and Rebekah Luo*

*University of the Philippines, Quezon City, Philippines; *The Brookings Institution, Washington, USA; *University of Melbourne, Melbourne, Australia

Objective: Explores ways of capturing teachers' formative assessment behaviors in Philippine classrooms through an observation tool.

Framework: To account for the practices observed in the classroom, the observation tool was resituated to focus on Elicit (E) and Use (U) components.

Outcome: The final version of the tool provides a model of increasing competency in formative assessment implementation

What is our current reality?

Immediate or "Just-in-time" Feedback or Synchronous Session

ACTORS X MODALITY	ACTORS		
	Teacher	Parents	Peers
Online	Feasible	Not Applicable	Feasible
Modular	Difficult	Feasible	Difficult
Radio	Difficult	Difficult*	Difficult
TV	Difficult	Difficult*	Difficult

28:35 / 1:13:18

DEPED LAUNCHES THE PROFESSIONAL DEVELOPMENT PROGRAM ON ASSESSMENT AND EMERGING LITERACIES WITH FOCUS ON PISA

The launch kickstarts the Assessment PD, which forms part of the Department's ongoing preparations for its participation in the 2022 cycle of the Programme for International Student Assessment (PISA).

Module 1B - Building Basic Assessment Competencies for Teachers
November 13, 2021 | 9 AM to 10:20 AM

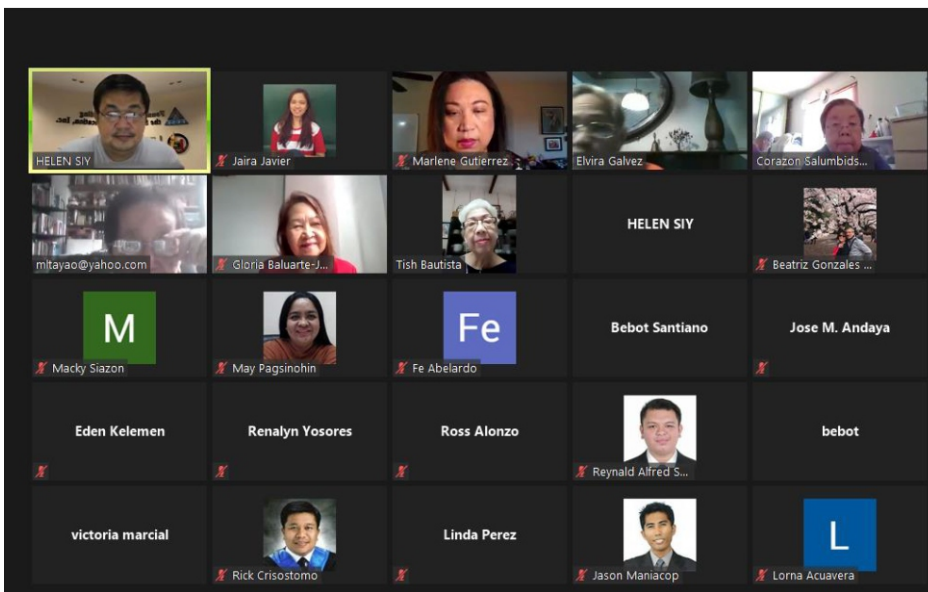
YouTube Live
Live, and be well, already in learning preparation.

37:40 / 1:13:18

Three Key Principles across the Five Sessions:

1. Use student data, don't just collect
2. Focus on learning, rather than grades
3. Determine where are the learners right now

32:00 / 1:13:18



Recording

Integrating Socio-Emotional Learning in the Classroom



Foundation for Upgrading the Standard of Education, Inc.

A Presentation for Foundation for Upgrading the Standard of Education, Inc (FUSE)
Manila, Philippines
March 23, 2021

Marlene M. Gutierrez

- Science Dept Head/AP Chemistry and AP Environmental Science, Terra Nova High School
- Next Generation Science Standards TOSA for Jefferson Union HS District
- Member, Instructional Leadership Corps
- Mentor, Exploratorium Leadership Institute







Recording

Meng de Guia

<http://www.mindfulteachers.org>

MINDFUL TEACHING BY THE NUMBERS

IT ONLY TAKES **5** MINUTES TO HAVE A HEALTHY SNACK. BE SURE TO STOCK UP ON SOME OF YOUR FAVORITES.

3 deep breaths can calm you down. Try it right now. Don't you feel a little better?

There are never more than **24** hours in a day. Don't try to pretend otherwise. It doesn't help.

100% OF TEACHERS FEEL OVERWHELMED FROM TIME TO TIME. SO CUT YOURSELF A LITTLE SLACK, OK?

ZERO: NUMBER OF PEOPLE WHO WILL BENEFIT IF YOU HAVE A NERVOUS BREAKDOWN. TAKING CARE OF YOURSELF IS NOT A SELFISH ACT.

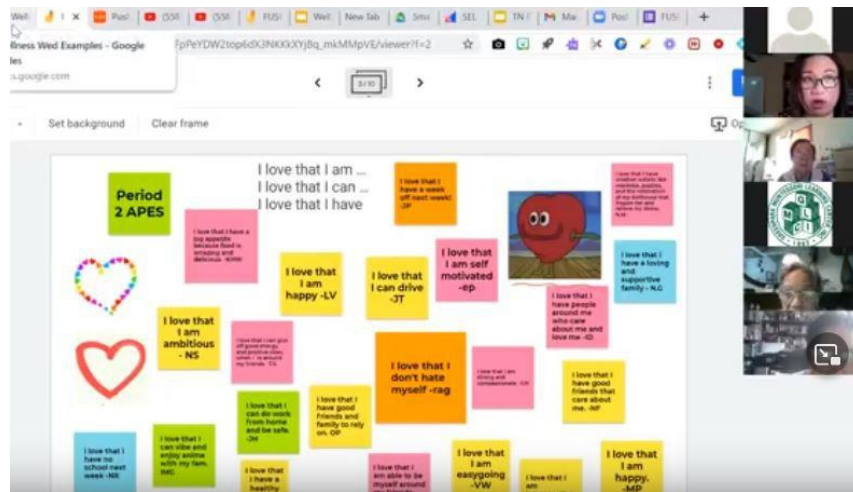
You only need **1** other person to start a support group. Is there someone you can ask for help today?

MindfulTeachers.org

Socio-emotional Health and Wellbeing

To change your name after entering a Zoom meeting, click on the "Participants" button at the top of the Zoom window. Next, hover your mouse over your name in the "Participants" list on the right side of the Zoom window. Click on "Rename". Enter the name you'd like to appear in the Zoom meeting and click on "OK".

Please rename yourself: name, pronoun, grade level/subject, role



What will you try?

Go to [Jamboard](#) again and share (use the blue frames) what SEL activity you have been doing or what you will try to use in the next few days?

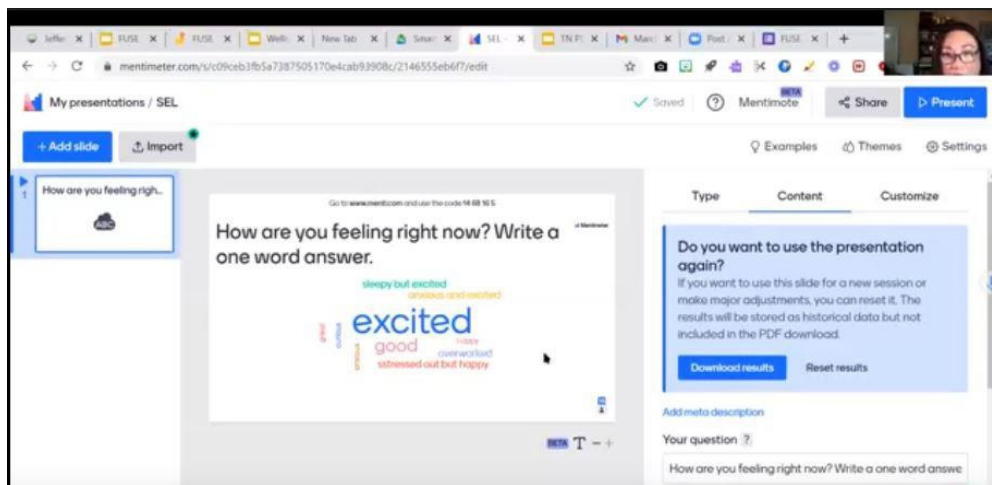
Evaluation:
Please complete the following [Google Form](#).
Thank you.

WHY SEL?

Improvement in students' social and emotional skills, attitudes, relationships, academic performance, and perceptions of classroom and school climate

Long-term improvements in students' skills, attitudes, prosocial behavior, and academic performance

Decline in students' anxiety, behavior problems, and substance use



GOALS

- Share and reflect on SEL resources.
- Identify one strategy you can try tomorrow/this week
- Take action. Begin work towards your strategy.

Agenda

- Renaming
- Feelings Check Mentimeter
- Revisiting goals
- What and Why SEL?
- Simple Resets
- How I Use SEL + Let's Try One
- Rainbow Walk
- Simple Sanity Breaks
- Mindful Teaching by the Number
- Jamboard Share
- Evaluation

Some definitions

SEL is a framework for helping students develop critical skills for how they interact with others, manage their own emotions and behaviors, and develop into confident, productive, and empathetic individuals. (from Changing Perspectives)

Most widely cited SEL definition:

Social and emotional learning is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.

FILIPINO SCIENCE HUB

IMPACT

- 10 months since our first webinar (May 2020-present)
- 24 web events
 - 6 teaching webinars
 - 4 career guidance talks
 - 4 web lectures & tutorials
 - 5 research webinars
 - 5 STEM special topics
- 55 hours of expertise shared
- 12,920 LIVE participants (averaging 600 participants/session)
- 32,202 LIVE training hours
- 173,324 YouTube views
- 2,306,808 watch minutes



The FilSciHub Strategy

Strengthening STEM literacy and sharing practical experiences to inspire Filipino ingenuity.



STEM Fundamentals Education

Empower STEM educators

Stronger STEM & Innovation Culture




FILIPINO SCIENCE HUB

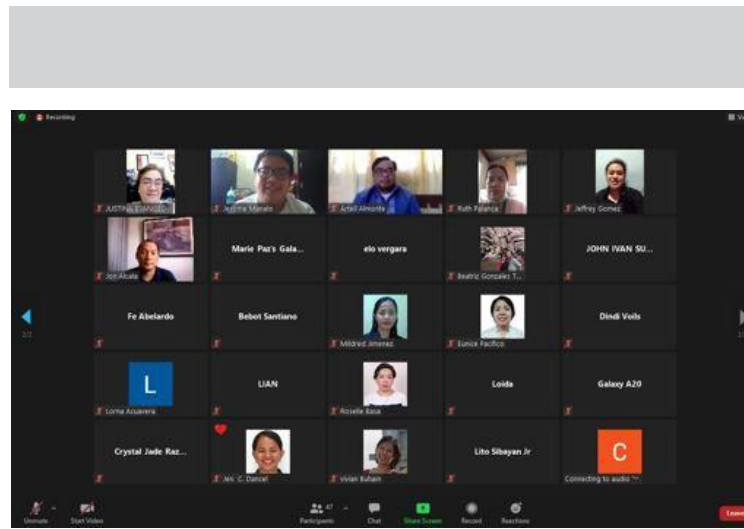
DEMOGRAPHIC

Age and Gender
People who like your Page are in these age and gender groups. These numbers are estimates.

18.5k (57%) Women **8.9k** (32%) Men



Cities	Countries
Quezon City, Philippines	11k
Manila, Philippines	75k
Butangas City, Philippines	754
Cebu City, Philippines	502
Los Baños, Philippines	411
Cebu City, Philippines	313
Davao City, Philippines	305
Iloilo City, Philippines	300
Valenzuela, Philippines	299
Antipolo, Philippines	283



WEBINAR

MARCH 30, 2021

FilSciHub in the Future

Mentorship

Research Training

Educator Training

Virtual Experiments

STEM Learning & Teaching Materials

Current STEM Events

FILIPINO SCIENCE HUB

An online platform that promotes the cultures of STEM education and research.

~65,000 followers across four online platforms

Main Goals

- Enhance the STEM competency of Filipinos
- Promote information-based decision making thru research training
- Bring **volunteer** Filipino STEM experts & practitioners closer to the educational sector

20K monthly visits

9.3 K Subscribers
174K video views

30K Followers
600-700K Monthly Reach

25K Followers
3 Million Views

Disrupted education

Deaths

Global lockdowns

Unemployment

Anxiety

Economic meltdown

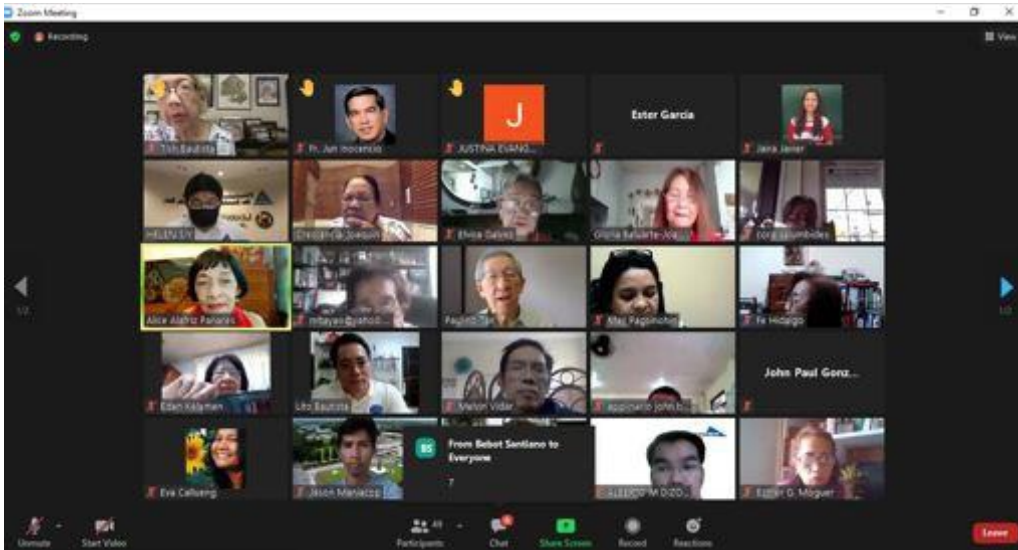
The FilSciHub Story

How a Global Pandemic Propelled a Failed Passion Project to Success

Jeffrey Camacho-Bunquin, Ph.D.
Founder


WEBINAR


APRIL 13, 2021



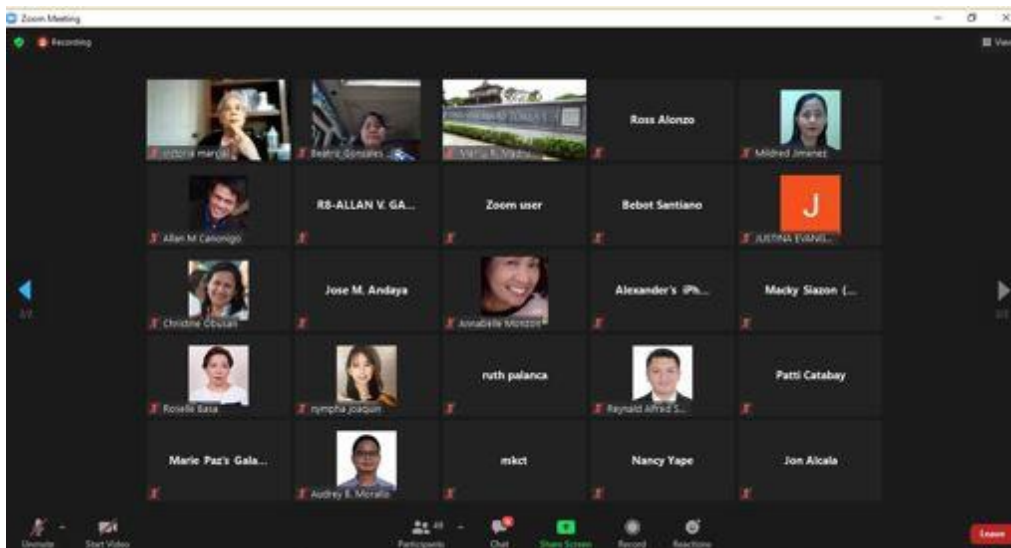

Helping Students Navigate Phenomena
Using Visible Thinking Strategies (Via Zoom)

13 April 2021

 Foundation for Upgrading
the Standard of Education, Inc.
12A Floor Pearl of the Orient Tower Condominium
1240 Roxas Blvd., Ermita Manila, Philippines

 **exploratorium**

Marlene Gutierrez
Instructional Leadership Corps
Exploratorium Leadership Institute
Science Dept Head/NGSS TOSA
Terra Nova High School
Jefferson Union High School District
Pacifica, CA



docs.google.com/presentation/d/1A-GwbzmdvIQE1tdLJ3Qo2c1A2W0lpp2_P8Fu2u7DY/edit#slide=12

FUSE April 13

File Edit View Insert Format Slide Arrange Tools Add-ons Help Last edit was 1 hour ago

Background Layout Theme Transition

See, Think, Wonder

- What do you see?
- What do you think is going on?
- What does it make you wonder about?

- Routine for exploring works of art and other interesting things
- Encourages students to make careful observations and thoughtful interpretations
- Stimulates curiosity
- Sets the tone for inquiry

Click to add speaker notes

MyWenmoQRCode.png

docs.google.com/presentation/s/1A-GwbzmdvIQE1tdLJ3Qo2c1A2W0lpp2_P8Fu2u7DY/edit#slide=25

FUSE April 13

File Edit View Insert Format Slide Arrange Tools Add-ons Help Last edit was 1 hour ago

Background Layout Theme Transition

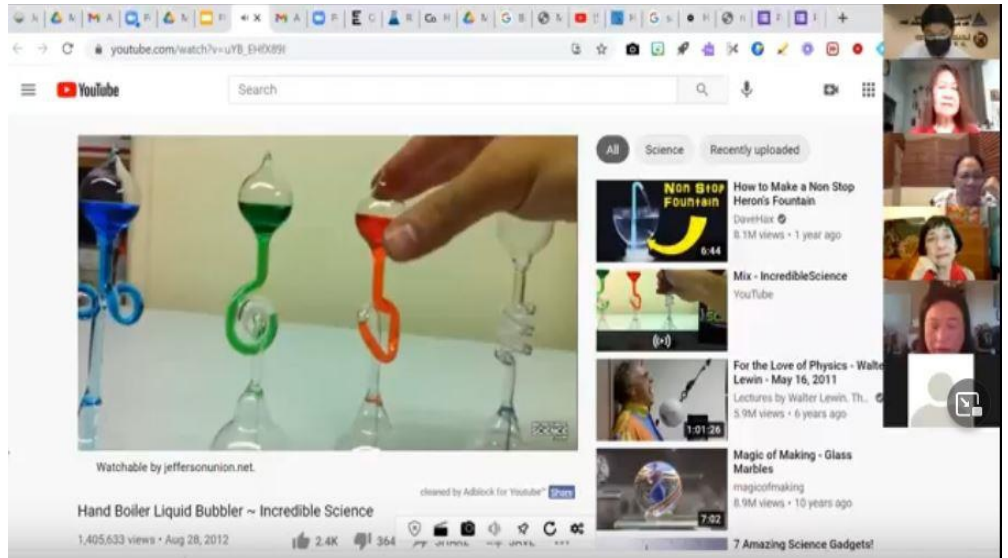
A New Vision for Science Education

(National Research Council 2012 accessed through the NSTA website)

Less of	More of
<ul style="list-style-type: none"> • Rote memorization of facts and terminology • Disconnected ideas • Teachers providing information • Teachers posing questions with only one right answer • Students reading textbooks and answering questions at the end of chapter 	<ul style="list-style-type: none"> • Facts and terminology learned as needed while developing explanations based on evidence • Systems thinking and modeling • Students investigating, solving problems, engaging in discussions • Students discussing open-ended questions • Students reading multiple sources

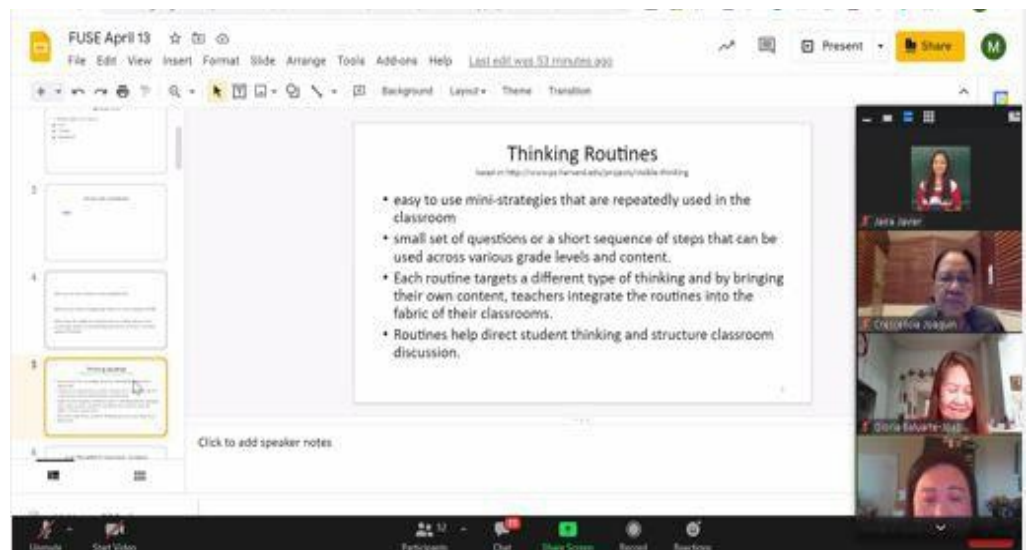
Click to add speaker notes

MyWenmoQRCode.png



Your turn:
Think Pair Share –

Think about a lesson where you could use “I Used to Think, Now I Know” to keep track of any change in thinking of students about a phenomenon or science concept.



MANAGING CROSS-GENERATIONAL TEAMS BUILDING COMMUNICATIONS

Understanding Human Development to Build Better Team Dynamics

4:32 / 1:28:38

What can we do to work better together?

- Emphasize shared goals.**
Focus on the things that unite you with colleagues of all generations, rather than dwelling on the differences. By doing so, both older and younger people can see themselves as part of the same team working toward the same outcome.
- Learn from Each Other**
Each generation is operating on a distinct set of values and each generation has valuable lessons to teach the next. Older employees have a wealth of knowledge and tricks of the trade that younger workers need. And younger employees can teach older employees new technologies and ways of doing.
- Understand work and communications style**
Everyone has their preferred methods of communication and their default working style that is influenced by their generational context and personal contexts.

33:38 / 1:28:38



Development Does Not Stop in Adulthood

While Childhood to Adolescence was indeed a period of growth and rapid development, Adulthood and Old Age is still a period of development in terms of Resilience and Regulation of Loss.
(Bates, 1996)

Mute (m)

9:45 / 1:28:38

So what? What does that got to do with work? And me?

There will be conflicts, But there will also be opportunities

- Different adult development periods have different priorities, goals, and aspirations*
- Different Generational Contexts can produce friction and misunderstandings. Intergenerational friction is one of the top 3 workplace risks (Gratton et al., 2011)*
- When it comes to inspiring and incentivizing employees who are much older or much younger than you, it helps to think like an anthropologist. (HBR, 2014)*
- Generational diversity has great potential. People from different generations can grow and learn from one another as they are exposed to one another's ideas and experiences. The new perspectives they gain can spark new ideas and prompt new ways of working.*

29:23 / 1:28:38



WHAT YOUR QUADRANT SAY ABOUT YOU

QUADRANT 1: PANTHERS	QUADRANT 2: OWLS	QUADRANT 3: DOLPHINS	QUADRANT 4: PEACOCKS
<i>Work Style: Intensely driven, multiple tasks at once</i>	<i>Work Style: Thorough. Prefers one thing at a time.</i>	<i>Work Style: Willing to be helpful to others, easy-going</i>	<i>Work Style: Lots of people interaction, freedom</i>
<i>Communication Style: Direct to the point</i>	<i>Communication Style: Specific and concise</i>	<i>Communications Style: Casual and lofty (ideas)</i>	<i>Communications Style: Animated and excitable</i>
<i>Motivation at work: Results</i>	<i>Motivation at Work: Activity at Work</i>	<i>Motivation at Work: Approval</i>	<i>Motivation at Work: Applause</i>
<i>Thrives on: Pressure and Change</i>	<i>Thrives on: Accurate Information</i>	<i>Thrives on: Support, Togetherness</i>	<i>Thrives on: Stimulation and Fun</i>
<i>Dislikes: Wasting Time</i>	<i>Dislikes: Being Wrong</i>	<i>Dislikes: Confrontation</i>	<i>Dislikes: Reinventing the wheel</i>

28:48

ADULT DEVELOPMENT (Levinson, 1986)

Pre-Adulthood (0-21)	Early Adulthood (18-40)	Middle Adulthood (40-65)	Late Adulthood (65 and beyond)
<p>Refers to this era as the "formative years"</p> <ul style="list-style-type: none"> person undergoes unique experiences that assists in both development and the preparation for adulthood. 	<p>Typically, a period of many new experiences, relationships and aspirations are being pursued:</p> <ul style="list-style-type: none"> Set and obtain goals for their future. Make critical life decisions (work, love, family) Marked by a period of great rewards but also great cost Said to be the most energy but most stressful 	<p>Established as the generational determined by significant events such as retirement, disease states, and various physical changes</p> <ul style="list-style-type: none"> stable period of time is intended to be fulfilling, since it can be spent rejuvenating and enhancing oneself and one's life Physical decline sets in by the end of the period 	<p>This developmental period is characterized by giving up one's formal authority or power, specifically in the workplace</p> <ul style="list-style-type: none"> believed that the main task is to reflect on one's life, including their times of success and failure, and appreciate the rest of their life experiences

GENERATIONAL FACTORS

McCrimdell Report, 2015)

Chart 1: An overview of the working generations

Characteristics	Maturists (Gen: 1945-52)	Baby Boomers (1946-1964)	Generation X (1965-1980)	Generation Y (1981-1999)	Generation Z (Born after 1999)
Formative experiences	Second World War Baby boom Frontier spirit Rock 'n' Roll Nuclear families Delayed gender roles - particularly for women	Cold War "New Wave" boom "Swinging Sixties" Asexual/sexual liberation "Youth culture" Abolition of class Early computer use	End of Cold War Fall of Berlin Wall Reagan / Clinton Technocrats Live Aid Introduction of the PC Early mobile internet Latch-key kids High levels of divorce	9/11 terrorist attacks Flourishing Social media Invention of music Reality TV Constant Email Cable/satellite Collaborative	Economic downturn Globalisation Globalisation Mobile phone Young adults Post-9/11 trauma Cloud computing Web 2.0
Percentage in U.K. workforce	3%	33%	35%	29%	Currently employed in either part-time jobs or new apprenticeships
Aspiration	Home ownership	Job security	Work-life balance	Freedom and flexibility	Security and stability
Attitude toward technology	Largely disengaged	Early information technology (IT) adapters	Digital immigrants	Digital Natives	"Technoholics" - entirely dependent on IT, several groups of derivatives
Attitude toward career	Jobs are for life	Organisational - careers are defined by employers	Early "portfolio" careers - loyal to profession, not necessarily to employer	Digital entrepreneurs - work "with" organisations not "for"	Career misadventures - all most tenacity between organisations and "social" businesses
Signature product	Automobile	Television	Personal Computer	Tablet/Smart Phone	Google Glass, graphene, nano-computing, 3-D printing, driverless cars
Communication media	Formal letter	Telephone	E-mail and text message	SMS Text or social media	Hand held (or integrated into clothing) communication devices
Communication preference	Face-to-face	Face-to-face, video, text, telephone or e-mail if required	SMS Text messaging or e-mail	Online and mobile (text messaging)	Facetime
Preference when making financial decisions	Face-to-face meetings	Face-to-face ideally, but increasingly will use online	Online - would prefer face-to-face if time permitted	Face-to-face	Solutions will be digitally conceived

GENERATIONAL FACTORS

FACT TANK Report, 2015)

	The Silent Generation	Baby Boomer Generation	Generation X	Generation Y or Millennials	Generation Z
Born	1922-1945	1946-1964	1965-1980	1981-2000	1995-2015
Stereotypes	•Old-fashioned •Practical •Rule followers	•Ambitious •Optimistic •Wealthy	•Self-centered •Risk takers •Cynical	•Job hoppers •Tech-dependent •Work to live	•Constantly connected •Distracted •Apathetic •Multitaskers
Work ethic	•Discipline •Hard work •Loyalty	•Questions authority •Self-centered •Crusading causes	•Task-oriented •Autonomous •Work-life balance	•Multitasking •"What's next?" •Eagerness	•Flexibility •Self-reliant •Personal freedom
Communication preferences	•Written •Formal	•One-on-one •Telephone	•Direct •Email •Text messaging	•Text messaging •Social media	•Digital natives •Hand-held devices
Feedback preferences	•No news is good news •Take pride in a job well done	•Not keen on feedback	•Direct	•Require lots •Instantaneous	•Bite-sized •Immediate •Real-time

Final Notes for Managers (and Colleagues)

- **Effective managers** and collaborative colleagues need to **study the demographics** of their current workforce and the projected demographics of your future workforce to determine what they want out of their jobs as these things are different generation to generation. (Knight in HBR, 2014)
- **Collaborative relationships are important.** It helps to know where individuals are coming from --- from a developmental, generational, and personal perspective.

From Ruth Alido to Everyone
ang galing, galing! good thing I attended

Press [Esc] to exit full screen

SCIENCE JOURNALISM AMID THE INFODEMIC

Shaira Panela
2021

FUSE

A grid of 15 video feeds showing various participants in a webinar. Some feeds show individuals, while others are blank or show a FUSE logo. A video player interface is visible at the bottom with a progress bar at 1:28:40 / 1:44:06.

IMPORTANCE OF CRITICAL THINKING

1. Critical thinking is the foundation of science and a liberal democratic society.
2. A good critical thinker knows how to separate facts from opinions, how to examine an issue from all sides, how to make rational inferences and how to withhold personal judgment or biases.
3. Rational critical thinkers are generally the voices of reason in times of mass hysteria or panic. The critical thinker usually has the comprehensive skills to consider all possible options and solve a problem.
4. Critical thinking skills help you to better understand the experiences and views of others, enhancing your ability to work with different people

33:05 / 1:44:06

SCIENCE COMMUNICATION (BURNS, ET AL, 2003)

as the use of appropriate skills, media, activities, and dialogue to produce one or more of the following personal responses to science:

1. **Awareness**, including familiarity with new aspects of science
2. **Enjoyment** or other affective responses, e.g. appreciating science as entertainment or art
3. **Interest**, as evidenced by voluntary involvement with science or its communication
4. **Opinions**, the forming, reforming, or confirming of science-related attitudes
5. **Understanding** of science, its content, processes, and social factors.

19:06 / 1:44:06

THINGS TO REMEMBER

who	Who said the information?
what	What did they say?
where	Where did they say it?
when	When did they say it?
why	Why did they say it?
how	How did they say it?

35:32 / 1:44:06

You are viewing Shaira Pamela's screen

May Pagsinohin mltayao@yahoo... AILEEN BERROYA Ruth Alido

GUIDELINES FOR FACT-CHECKING

1. Read past the headline
2. Pay attention to the domain and URL
3. Read the About Us section
4. Look at the quotes in the story
5. Look at who said them
6. Check the comments

Zoom Meeting: 43 participants

You are viewing Shaira Pamela's screen

May Pagsinohin mltayao@yahoo... AILEEN BERROYA Ruth Alido

CHALLENGES IN THE FIELD

- Science journalism is a young emerging field in journalism in the country, but that's not to say that science wasn't covered before
- Newsrooms in mainstream media do not have dedicated science journalists
- Journalists in the Philippines are assigned to specific government agencies, not topics
- Science competes with other topics like politics, economics, entertainment, etc for space in the media
- Social media and messaging apps are changing the way we consume information

Zoom Meeting: 41 participants

You are viewing Shaira Pamela's screen

May Pagsinohin mltayao@yahoo... AILEEN BERROYA Ruth Alido

ROLE OF SCIENCE JOURNALISM

- A science journalist's first responsibility is to the consumers of information (audience)
- To inform and educate the public as both scientists and the public expect
- Holding the scientists accountable for the work they do is important

Zoom Meeting: 41 participants

Alice Alafritz Pan... Jason Maniacop Gloria de Guzman May Pagsinohin

INFODEMIC

- "complex phenomenon caused by the interaction of mainstream media, specialist media and internet sites; and 'informal' media" "all transmitting some combination of fact, rumor, interpretation and propaganda"
- the interaction patterns of each social media combined with the peculiarity of the audience of each platform play a pivotal role in information and misinformation spreading

Zoom Meeting: 41 participants

Creating Learning Action Cells (LACs) in your Schools

Foundation for Upgrading the Standard of Education (FUSE)
via Zoom
May 4, 2021



Objectives

1. Appreciate the Learning Action Cell (LAC) as a professional learning tool that emphasizes reflection and collaboration;
2. Understand how LACs can be important and how they can support teachers in their practice;
3. Strategies to start or strengthen our LAC practice as a school.



Key Elements of LAC in education settings

- Ongoing collaborative learning / problem solving within a shared domain of professional interest
- Self-Directed Learning
- Reflective practice leading to action and self-evaluation
- Collective competence development



How can Leaders start fostering reflection and collaboration within our LACs?

• Great teams have great teamwork.

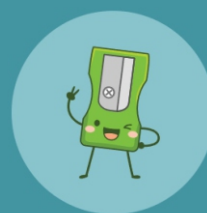
• Great teamwork are built on **TRUST**.

• Trust is built on *perception of competence and perception of shared interests.*




Take the First Steps in establishing LACs in your school!

- Just start!
- Listen to your co-workers/co-teachers needs and concerns
- Find time to conduct these sessions
- Agree on ground rules
- Establish shared goals individually and as a team
- Have fun and learn from each other 😊



About the speaker


- Human and Social Development Advocate
- Worked with DepEd during the K-12 Implementation on Teacher Development and Education Policies
- Psychology-trained in Human Development
- Currently working in Public Policy and Advocacy



7:24 / 1:27:01

Teachers in schools practice different forms of LACs.


There are many names for LACs, but they essentially mean the same.




LACs = PLCs = COPs = TQCs = TCCs

• Learning Action Cells • Professional Learning Communities • Communities of Practice • Teacher Quality Circles • Teacher Collegiality Circles

9:57 / 10:54 / 1:27:01




- LACs are **a way to support** teachers especially in the implementation of the **new curriculum and pedagogy, and the new normal**
- LACs aim to **provide a supportive environment so that teachers can reflect on their practice and work together to continuously improve teaching.**



21:51 / 1:27:01


What do we talk about in LACs?



- Topics and themes to support our teaching and learning practice, and other professional development needs
- Shared challenges in teaching
- Teaching strategies and best practices
- Skills and knowledge learned in recent trainings

26:36 / 1:27:01

It all begins with Leadership...





- Leadership dictate the “take home value” of the LAC and the sessions.
- Leadership → Shared Leadership
- Leadership defines:
 - Facilitation of sessions
 - Establishing common goals
 - Management of relationships among members
 - Accountability of the group to goals
 - Nurturing reflection and collaboration

36:20 / 1:27:01





WEBINAR

June 29, 2021


Foundation for Upgrading the Standard of Education, Inc.
 Philippine Council for NGO Certification Accredited (PCNC)

LEARNING CENTER for TEACHERS

Teaching Chemistry in Elem. Science... the FUSE WAY


FUSE GA Virtual
 June 29, 2021
Ms. Annabelle J. Monzon
 FUSE Chemistry Trainer





CHEMTEACH 3... the FUSE WAY

in the New Normal

On Teaching Strategies and Learning Instructions:



- Consider:
 - A. Dep Ed's Enhanced K-12 Science Curriculum, MELC in Chem in ElemSci
 - B. FUSE Brand (*Re-learned (already known), Unlearned (misconceptions corrected) and Learned (new)*)
 - C. Contextualization and Indigenization
 - D. Nature of pupils (Grade 3-6): Learning capabilities, styles and interests
 - E. Schools' Mission-Vision

Subscribe to FUSE U tube channel / Use of FUSE- CONSTEC Videos and other learning materials/TSM

CHEMTEACH ... the FUSE WAY

How do we teach Chemistry? ...in grade school ?



CHEMTEACH 1... the FUSE WAY

- Win the students to like Chemistry.
- Interest is the key factor .

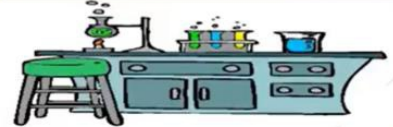
How

- Find the **connection, usefulness** of Chemistry in our daily life.
- How Chemistry **touches our lives**.
- that Chemistry **leads us to the understanding of other Sciences**.

FUSE Chem in Action
FUSE Science made Easy

IV. PROCEDURES	5E Model	7E Model
A. Reviewing previous lesson or presenting the new lesson		ELICIT
B. Establishing a purpose for the lesson	ENGAGE	ENGAGE
C. Presenting examples/problems of the new lesson		
D. Discussing new concepts and practicing new skills #1	EXPLORE	EXPLORE
E. Discussing new concepts and practicing new skills #2	EXPLAIN	EXPLAIN
F. Developing mastery (leads to Formative Assessment 1)	ELABORATE	ELABORATE
G. Finding practical application of concepts and skills in daily living	EVALUATE	EVALUATE
H. Making generalizations and abstracting about the lesson	ELABORATE	EXTEND
I. Evaluating learning		
J. Adding additional "Aha!" application or reinforcement		



DepEd ENHANCED K+12 New Enhanced Curriculum

Grade level based on K-12	Content	Most Essential Learning Competencies MELC	Resource: FUSE CONSTEC ISM Episode, E. ISM Volume/ Book2: Elem Science Materials	Resource: FUSE CONSTEC VIDEO
Grade 5 First Quarter	Matter:	Use the properties of materials whether they are useful or harmful; Investigate changes that happen in materials under the following conditions: 1. presence or lack of oxygen 2. application of heat Design a product out of local, recyclable solid and/or liquid materials in making useful products.	E.24 Materials at Home pp 99-111 E.23 Changes pp 87-98	E.24 Materials at Home pp 99-111 E.23 Changes

CHEMTEACH 2.. the FUSE WAY

- is to explicitly teach through **investigative activities** and reflective discussions that will allow the students **to do Science and think like a Scientist** to improve or reinforce their **understanding about content** to develop and demonstrate **scientific attitudes and values**.
- Science process skills should be taught in logical and integrated manner.

34:32

05 / 2:15:56

Steps to the STARTER ACTIVITY... Science process skills

- Write down your observations. (individual) **observing**
- Group your observations according to similarities (compile by group)...**classifying**
- Repeat the starter experiment and check your observations. **experimenting, observing**
- Select observations for explanations. **Inferring, formulating hypothesis**
- Explain the reasons for and causes of the selected observations with your own ideas and in your own words...**formulating hypothesis, communicating**

37 / 2:15:56

Scientific Inquiry !

Open Inquiry	No predetermined question: Students propose and pursue their own questions.
Guided Inquiry	No predetermined method: students must determine how to investigate the problem.
Structured Inquiry	No predetermined answer: conclusions based solely on student investigation.
Limited Inquiry	"Traditional" labs: students follow the directions and make sure their results match those given in the text.

08 / 2:15:56

http://www.materialsworldmodules.org/pedagogy/inquiry_continuum

Science as a Process

```

    graph TD
      A[Science as a Process] -- Involves --> B[Process Skills]
      A -- Involves --> C[Manipulative Skills]
      B -- Includes --> D[Basic]
      B -- Includes --> E[Integrated]
      C -- Like --> F[Handling Materials, apparatus]
  
```

2:42 / 2:15:56

Science as a Product

```

    graph TD
      A[Science as a Product] -- is a --> B[systematized body of knowledge]
      B -- like --> C[Facts]
      B -- like --> D[Concepts]
      B -- like --> E[Theory]
  
```

30:41

55 / 2:15:56

The partnership of FUSE and FLAPI that began in 2020 has resulted in the distribution of books all over Luzon. In 2020, the provinces of Isabela, Sorsogon, Cavite, Albay, and the City of Caloocan were the recipients of these book donations. However, because of the pandemic, these books did not reach its school recipients. In was in January and May 2021 that the province of Isabela, through 4th District Congresswoman Sheena Alyssa P. Tan’s efforts with her Dagdag Kaalaman Project titled: “AKLAT PARA SA KINABOOKASAN” managed to distribute the books to various schools in the City of Santiago and the different towns of the province.

List of books beneficiaries:

NO.	SCHOOL/BARANGAY/ORG	CITY/ MUNICIPALITY	RECEIVED BY	RECEIVED DATE	QUANTITY
1	DINAPIGUE NATIONAL HIGH SCHOOL	DINAPIGUE, ISABELA	MICHAEL C. ANCHETA	1/14/2021	300 PCS
2	JONES RURAL SCHOOL-MALANNIT ANNEX	JONES, ISABELA	JULIE V. ROQAULA	1/27/2021	333 PCS
3	DICAMAY NATIONAL HIGH SCHOOL	JONES, ISABELA	JAYSON A. CAPAMANCION	1/27/2021	334 PCS
4	SAN SEBASTIAN INTEGRATED SCHOOL	JONES, ISABELA	DENNIS B. VALDEZ	1/27/2021	334 PCS
5	SINILI INTEGRATED SCHOOL	SANTIAGO CITY ISABELA	JOHNNY C. LALAS	1/27/2021	334 PCS
6	SAN JOSE INTEGRATED SCHOOL	SANTIAGO CITY ISABELA	CALROS S. BERGONIA JR.	1/27/2021	334 PCS
7	SALVADOR INTEGRATED SCHOOL	SANTIAGO CITY ISABELA	NEONITA F. UMANG	1/27/2021	334 PCS
8	BALINTOCATOC INTEGRATED SCHOOL	SANTIAGO CITY ISABELA	MELOZAR F. DIZON	1/27/2021	334 PCS
9	BUCAL SUR INTEGRATED SCHOOL	DINAPIGUE, ISABELA			300 PCS
10	GENERAL MALVAR	SANTIAGO CITY ISABELA	RODERICK B. PAJOSE	5/19/2021	70 PCS









Foundation for Upgrading
the Standard of Education, Inc.

BOARD OF TRUSTEES



LUCIO C. TAN
Chairman



PAULINO Y. TAN
Vice - Chairman



ONOFRE G. INOCENCIO, JR
President



FE A. HIDALGO
Vice - President



JUSTINA M. EVANGELISTA
Treasurer



ROSARIO I. ALONZO



MARIA LOURDES S. BAUTISTA



EMMANUEL V. GARCIA



MARILU R. MADRUNIO



DIONISIA A. ROLA



EVELINA M. VICENCIO

BOARD OF TRUSTEES

Chairman
LUCIO C. TAN

Vice-Chairman
PAULINO Y. TAN

President
FR. ONOFRE G. INOCENCIO, JR., SDB

Vice-President
FE A. HIDALGO

Treasurer
JUSTINA M. EVANGELISTA

Trustees
Rosario I. Alonzo
Ma. Lourdes S. Bautista
Emmanuel V. Garcia
Marilu R. Madrunio
Dionisia A. Rola
Evelina M. Vicencio

CORPORATE SECRETARY

Atty. Joselito M. Bautista

CHIEF OPERATING OFFICER

Helen T. Siy

EXECUTIVE COMMITTEE

Chairman
FR. ONOFRE G. INOCENCIO, JR., SDB

Vice-Chairman
FE A. HIDALGO

Members
Ma. Lourdes S. Bautista
Justina M. Evangelista
Fe Chen Urdaneta

ADVISORY BOARD

Ester A. Garcia
Dionisia A. Rola
Paulino Y. Tan

STANDING COMMITTEE

TRAINING
Marilu R. Madrunio – Chairman
Emmanuel V. Garcia – Co-Chair
Annabelle J. Monzon

RESEARCH, EVALUATION and MONITORING
Rosario I. Alonzo – Chairman
Junrey G. Lidres

PUBLICATION
Rosario I. Alonzo – Chairman
Alejandro s. Bernardo – Co-Chair
Mildred P. Jimenez

MEMBERSHIP
Fe A. Hidalgo – Chairman
Fr. Onofre G. Inocencio, Jr, SDB
Justina M. Evangelista

SECRETARIAT

Loreto T. Amalla, Jr.
Marie Paz V. Carada
Jaira Mae G. Javier
Benzon C. San Jose
Josefina B. Santiano
Helen T. Siy

CORPORATE SECRETARY

Atty. Joselito M. Bautista

INFORMATION and COMMUNICATION TECHNOLOGY

Emmanuel V. Garcia

LEGAL COUNSEL ACCRA LAWYERS

Joselito M. Bautista
Korina Ana T. Manibog
Mara Kristina O. Recto
Nestor Fernando T. Siazon

EXTERNAL AUDITORS

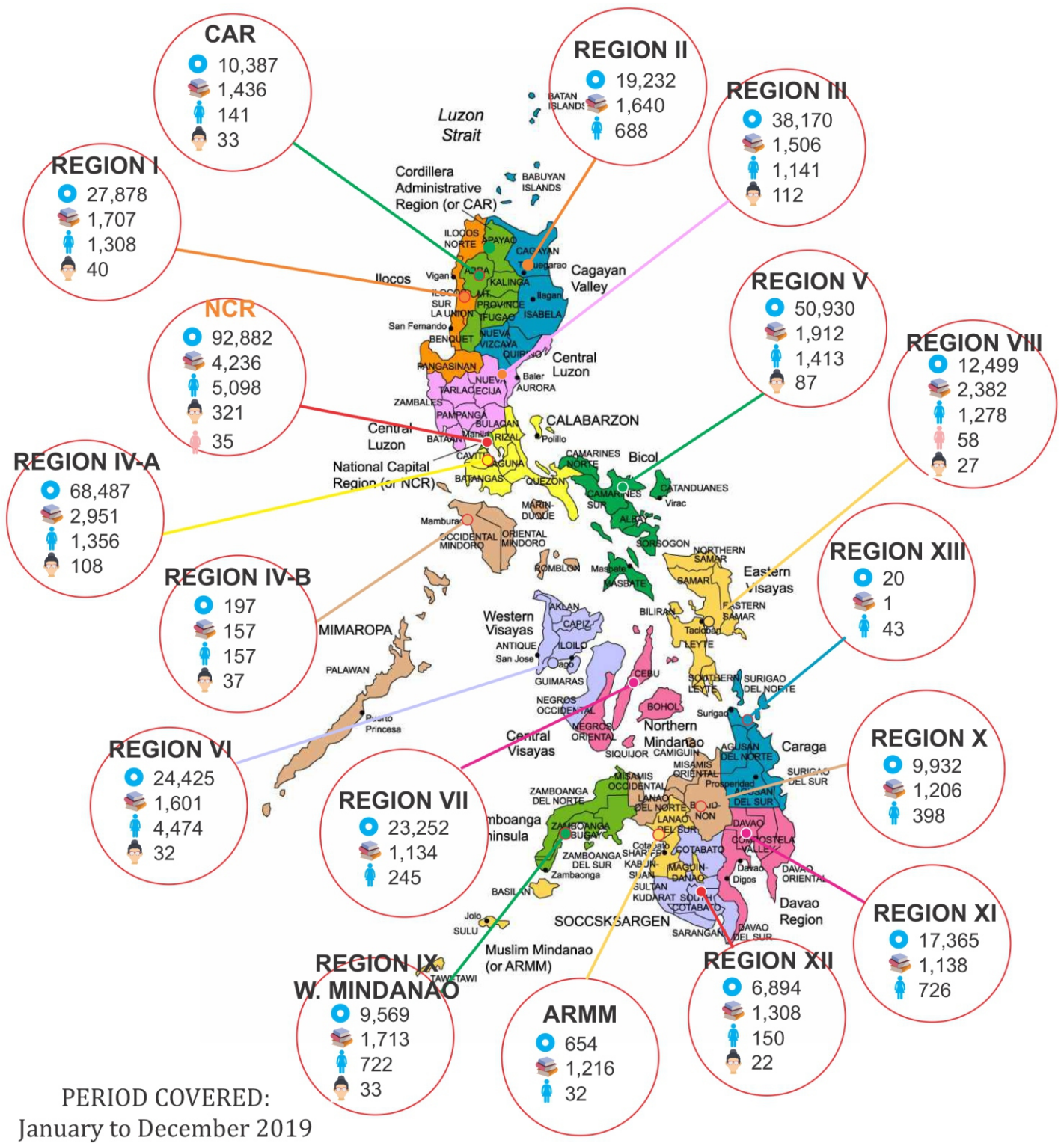
SYCIP GORRES VELAYO & CO.

Shane Dave D. Tanguin
Vladimir Adrian M. Cruz
Monica A. de Pedro
Lucio F. Sta. Ines

INTERNAL AUDITOR

Regina G. Andoy

FUSE Across the Nation



FUSION JOURNAL
27,244



CONSTEC DVDs
412,773



TEACHERS TRAINED
19,370



TRAINERS TRAINED
93



PRINCIPALS TRAINED
852



FACILITIES



FUSE Hymn

Lyrics by Isagani Cruz

Teachers, you're our country's hope
You will save our land
FUSE is here to help you cope
Lend a helping hand.

FUSE provides you teaching tools
Points you to the path
To improve in all our schools
English, Science, and Math.

Let the teachers go and teach
We are here for you
All together we will reach
Students old and new.

Let's upgrade the standard of our education
Let us all move hand in hand, educate our nation
Let's upgrade the standard of our education
Let us all move hand in hand, educate our nation
Let us all move forward, educate our nation.