



PHILIPPINE SCIENCE HIGH SCHOOL
ILOCOS REGION CAMPUS

2015-2021

THE SIX-YEAR ACCOMPLISHMENT REPORT

BY RONNALEE N. ORTEZA, PhD



2015-2020 THE SIX-YEAR ACCOMPLISHMENT REPORT

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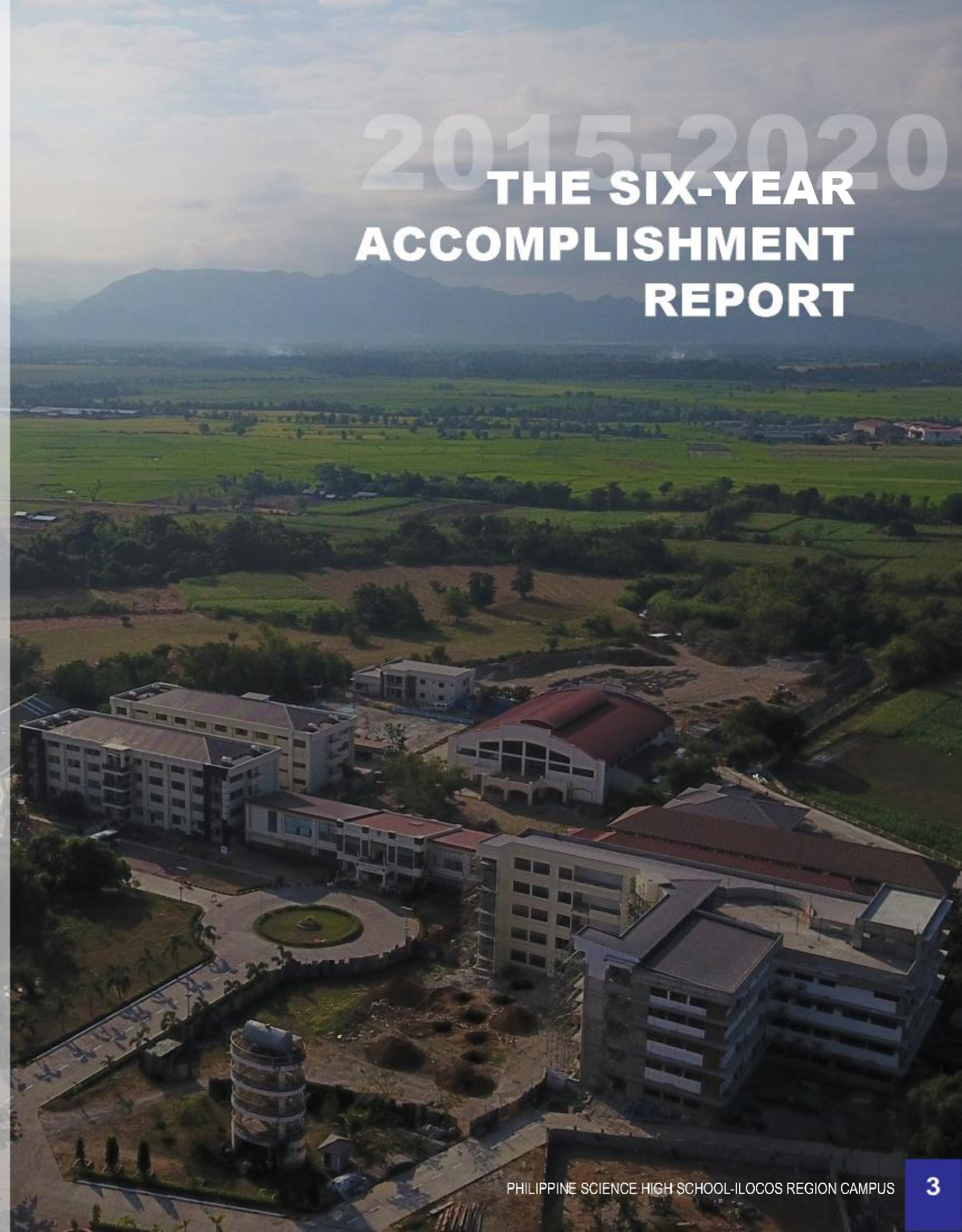
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Six years ago, the Philippine Science High School-Ilocos Region Campus (PSHS-IRC) or Pisay Ilocos reached a milestone with the installation of its new Campus Director, Dr. Ronnalee N. Orteza. With this change in leadership, while PSHS-IRC did not forget to honor (by continuing) many of the time-tested traditions established by Dr. Orteza's predecessor, the Campus however seized many opportunities for reorganization, development of new operational policies and programs, innovations, and transformation, both on the surface and in the institution's core and culture. It has constantly sought to transform and to be transformative. It has ventured on uncharted territories, going above and beyond its mandate of promoting and providing science and mathematics education not only in Region 1 but also to the farthest its impact could reach.

In pursuing its goals for the last six years, PSHS-IRC has always been committed to the overarching ideals of the Philippine Science High School System (PSHSS). Its many little triumphs have all been driven by a deep understanding of the principles anchored on the pursuit of truth, passion for excellence, and commitment to service.

Beyond the many remarkable feats, the last six years, however, has been a period too of many obstacles, of many challenges that humbled and tested the very fabric that holds PSHS-IRC. Yet, the Campus has gone on to tackle each hurdle head on. While trying to fix every curls and curves, it has also taken it as a learning opportunity, embracing all failures and bumps on the road as lessons to learn from. It has not wavered in its commitment nor lost its determination. It has remained bold and unafraid. It has come out victorious and unbowed.

SOAR HIGH PISAY, from the mnemonics of Dr. Orteza's presented strategic plan, has become the battle cry for the last six years. Everyone has rallied behind the blueprint that she presented as a plan for the campus under her term, a compass that became the guide of the entire Campus towards one direction. SOAR stands for **Sustainable operations, Outstanding personnel, Academic excellence, and Relevant linkages**, but it also stands for all the individual and collective support, openness, aspirations, and resoluteness of all the stakeholders of Pisay Ilocos.

Here then is not only a compilation of the campus's accomplishment for the last 6 years vis-a-vis the plans encapsulated in Dr. Orteza's SOAR but also a chronicle of the journey of the campus. It has been a journey that is not without flaws, without tribulation, without obstacles. It has not always been smooth. It has never been a walk in the park. Yet, it has been a journey of embracing weaknesses and constraints and overcoming those...a journey not only of one person but of many who made it a conscious decision to work hand in hand for a common goal—to give a platform to PSHS-IRC scholars to dream and to be the best that they can be, so that they can fulfill the dream of the Filipino people and give the best for the nation.

Pisay Ilocos has dreamed to soar and soar the campus did. In fact, it soared high and even higher.



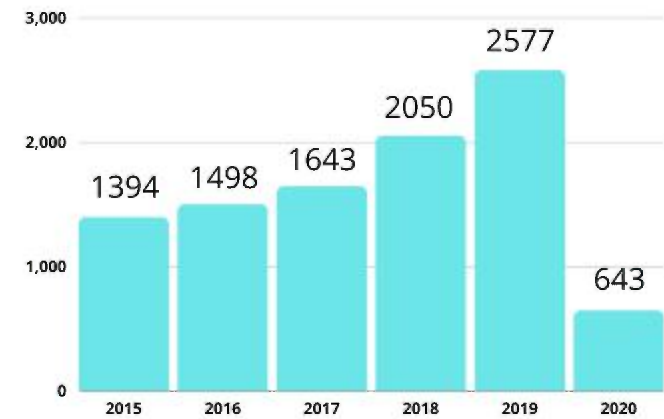


S

SUSTAINABLE OPERATIONS

The operations of any academic institution entail a lot of gargantuan tasks, from financial and human resource management to infrastructure development while focusing on equally important matters like academic excellence, establishing linkages, and collaboration not just with the parents and alumni but also with the community. For PSHS-IRC, its capacity to create sustainable operations was tested for the last six years. However, it proved to be years of great opportunity to learn, unlearn, and relearn practices that led to improved operations.

The years **2015-2019** saw a **steady increase** in the number of applications for the National Competitive Examination; however, in **2020**, it drastically **dropped** due to the constraints presented by the Covid-19 pandemic.



NCE Applications Received



The enrolment from **2015 to 2020** saw a **steady climb** from **343** in **2015** to **543** in **2020**. **2015** had the last batch of students not under the Enhanced Basic Education Program or the K to12 curriculum. In **2020**, PSHS-IRC had its expanded number of Grade 7 scholars supported, from **90** to the target **120** scholars, where **109** were officially enrolled.

Enrollment



Enrollment by Type of School

YEAR	PUBLIC	PRIVATE
2015	42	44
2016	50	36
2017	39	48
2018	49	41
2019	59	31
2020	64	45
TOTAL	303	245



BATCH 2007



BATCH 2019

Since graduating its first batch in 2007, PSHS-IRC has already graduated **705** scholars. With the growing number of graduates comes the need for intensified tracking primarily to determine the number of alumni who have gone on to pursue STEM courses.

From 2015-2020, there have been more and more PSHS-IRC alumni determined to have pursued STEM courses.



Infrastructure development was at its peak in 2018, which explains the almost PhP 263M budget received and managed by the campus. From 2015 to 2020, PSHS-IRC's budget utilization rate averaged at **98.74%** and cash utilization rate at **84.07%**.

Financial Performance

	2015	2016	2017	2018	2019	2020
Budget Received and Managed (in PhP)	60,767,998.62	177,849,687.35	187,417,245.52	262,559,901.00	150,964,876.14	131,021,277.37
Budget Utilization Rate (Allotment/Obligations)	99.28%	95.11%	99.73%	99.54%	99.44%	99.32%
Cash Utilization	100%	46.36%	80.07%	78.19%	99.81%	99.96%

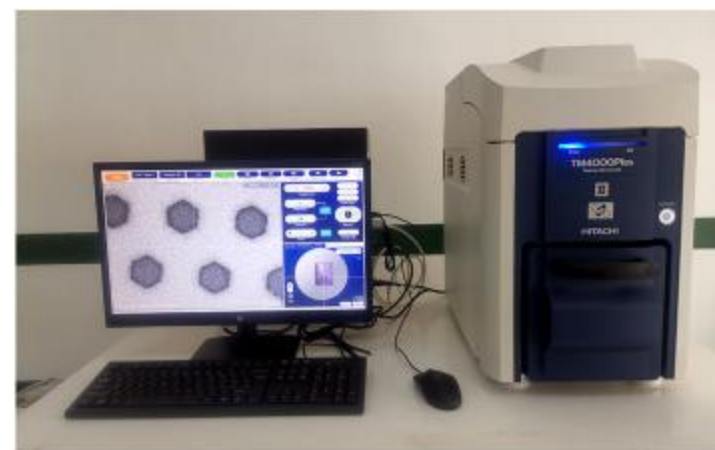


On top of the 5-hectare land donated by the Local Government of San Ildefonso for the establishment of PSHS-IRC in 2002, another 2913 square meters supplemental lot was donated once again by the local government of San Ildefonso in 2015. Coincidentally, the expansion of the campus in terms of infrastructure development was on full blast. From **2015-2020**, **31** infrastructure projects were implemented or started, amounting to **PhP 347,539,317.17**.

Project Title	GAA Year	Obligation (PhP)
Completion of Multi-Purpose Gymnasium	2014	1,409,225.08
Completion of Road Networks Including Parking Area and Drainage	2014	804,824.54
Rehabilitation of Community Center I	2015	2,000,000.00
Rehabilitation of Community Center II	2015	1,999,999.00
Construction of Laboratory and Technology Building	2016	79,997,531.20
Improvement of Academic Building II	2016	2,500,000.00
Improvement of Academic Building III	2016	2,500,000.00
Installation of Centralized Firefighting Facility with Cistern	2016	8,000,000.00
Road Networks including Parking Area and Drainage - Phase 4	2016	4,000,000.00
Completion of Laboratory and Technology Building, Phase 2	2017	20,000,000.00
Construction of Faculty and Staff House - Phase I	2017	9,988,446.00
Construction of School Canteen - Phase I	2017	9,999,999.35
ICT Equipment (MITHI)	2017	6,412,795.20
Improvement of Dormitory Building for Boys	2017	9,992,507.70
Improvement of Dormitory Building for Girls	2017	9,998,449.99
Road Networks including Parking Area and Drainage - Phase 5	2017	8,944,369.11
Completion of Centralized Firefighting Facility with Cistern	2018	4,000,000.00
Completion of Faculty and Staff House	2018	2,000,000.00
Completion of Laboratory and Technology Building, Phase 3	2018	60,000,000.00
Completion of School Canteen	2018	2,000,000.00
Construction of Grandstand with Football, Soccer Field and Oval	2018	50,000,000.00
Construction of Open Court/Flag Ceremony area	2018	4,500,000.00
Improvement of Multi-Purpose Gymnasium	2018	10,000,000.00
Rehabilitation of Perimeter Fence	2018	6,000,000.00
Waste Management Facility	2018	10,000,000.00
Implementation of K-12 Program (MITHI-ICT Infrastructure)	2019	2,991,152.00
Improvement of Sports Complex	2019	6,500,000.00
Renovation of Guard House and Waiting Area	2019	1,500,000.00
Upgrading of Electrical System	2019	7,500,000.00
Completion of the Sports Complex	2020	2,000,000.00
TOTAL		347,539,299.17

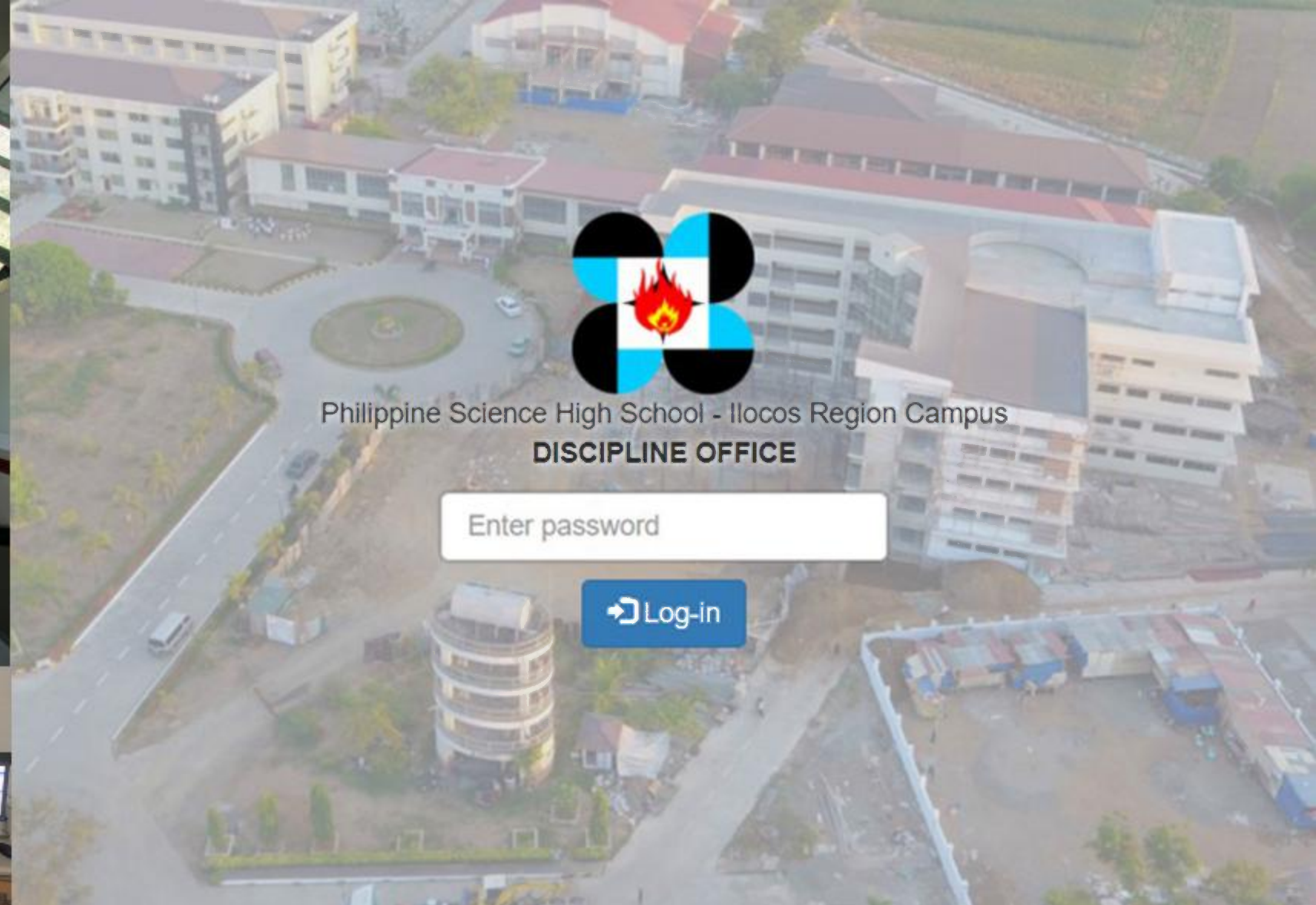


Along with infrastructure development, the last 6 years also saw the procurement of various equipment for instruction, laboratory facilities, and different offices. A total of **PhP 79,579,878.32** was spent for the procurement of these equipment.

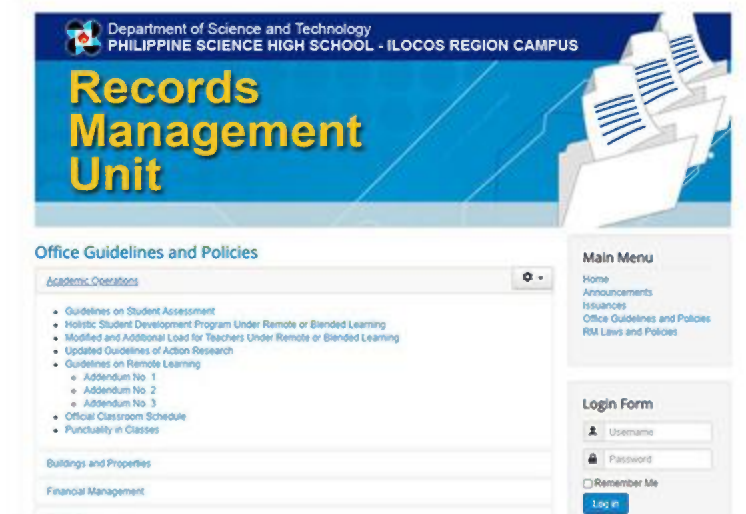
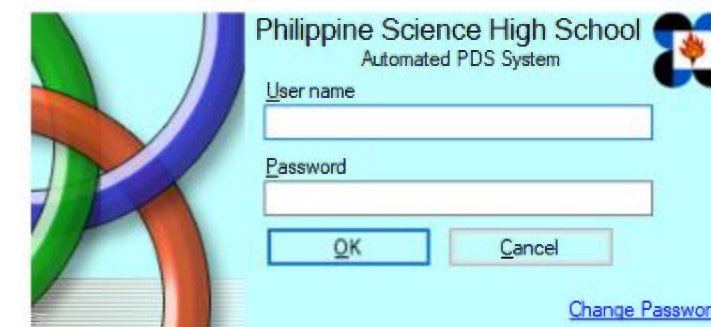


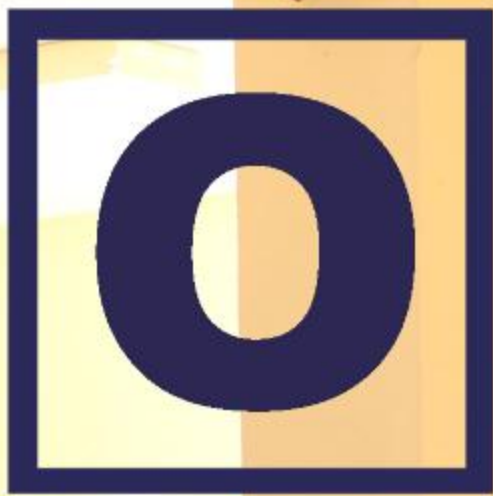
In its effort to optimize wifi connectivity to make the Campus wired enough to support its operations and instruction, especially as urgently necessitated recently by the pandemic, PSHS-IRC started a major network infrastructure undertaking in **2019**.

BUDGET: PhP 2,991,152.00



PSHS-IRC endeavored to create systems that would improve and streamline its processes. With the advent of technology, the Campus was able to digitalize its records management, PDS System, and records of Student Discipline cases.





OUTSTANDING EMPLOYEES

In the speech of the then-DOST Secretary Mario G. Montejo during the installation of Dr. Ronnalee N. Orteza as the new PSHS-IRC Campus Director in 2015, he said that people are the greatest strength of DOST and Pisay. "The success of an academic institution (or any organization for that matter) depends on their engagement. It is critical that they be given the opportunity to be fully engaged and to achieve their potentials," said Montejo.

It is along this principle that PSHS-IRC took it to heart to provide its personnel opportunities for professional development and for maximized engagement.



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
PHILIPPINE SCIENCE HIGH SCHOOL
ILOCOS REGION CAMPUS

PSHS-IRC EMPLOYEE'S ORGANIZATION-MANAGEMENT CONSULTATIVE COMMITTEE
Resolution No. 001
November 20, 2020

A RESOLUTION RECOMMENDING THE PAYMENT OF COLLECTIVE NEGOTIATION AGREEMENT (CNA) INCENTIVE TO ALL ELIGIBLE EMPLOYEES

WHEREAS, Section 3 of Article XIII of the 1987 Philippine Constitution guarantees, among others, the right of all workers to self-organization, collective bargaining and negotiations;
WHEREAS, Public Sector Labor-Management Council Resolution No. 4, s. 2002 provides for the grant of Collective Negotiation Agreement (CNA) incentive for National Government Agencies, State Colleges and Universities and Local Government Units;
WHEREAS, Administrative Order No. 135, s. 2005 authorizes the grant of CNA incentive in recognition of the effort of government agencies;

PSHSSEA has been the partner of the management in the implementation of cost-cutting measures; thus, yearly all employees receive the full amount of CNA bonus. Through their representatives, the employees are consulted on matters concerning them and, together, they are involved in policy-making.



Every year, PSHS-IRC recognizes its best performing employees (both at the campus and Systemwide levels) through its PRAISE Committee. In 2018, this event that seeks to recognize outstanding employees was institutionalized through the PAMMADAYAW, which happens during the school's foundation celebration.



Some employees were given the chance to go abroad to attend benchmarking activities through the Sakura Exchange Program organized by the PSHSS Office of the Executive Director. In 2016, PSHS-IRC participated in its first Sakura Exchange Program. Since then, several of its students and faculty have participated in this annual event.

Since 2015, PSHS-IRC has hired **eight (8)** of its own alumni and **two (2)** alumni from other campuses of the Philippine Science High School System.



Arianne Noreen B. Ambion Special Science Teacher II PSHS-IRC Batch 2008
Marvin Christian R. Ragasa Science Research Specialist I PSHS-IRC Batch 2009
Eleanor Joyce R. Magallanes Special Science Teacher I PSHS-IRC Batch 2009
Engr. John Dee A. Mangoba Special Science Teacher III PSHS-IRC Batch 2010



Engr. Nelwin G. Piza Special Science Teacher I PSHS-IRC Batch 2012
Levannie A. Mabuti Special Science Teacher I PSHS-IRC Batch 2013
Bonnie Kylie M. Estocapio Special Science Teacher I PSHS-IRC Batch 2013
Darlene Jane C. Rivera Special Science Teacher I PSHS-IRC Batch 2013



Franz Jeramienne B. Lacangan Special Science Teacher III PSHS-CVC Batch 2005



Ana Lorraine M. Dalilis Special Science Teacher I PSHS-CARC Batch 2013

Promotion of Employees



PSHS-IRC recognizes that learning never stops; thus, it has continuously provided its employees various opportunities and support for professional development.

From 2015 to 2020, **100%** of its employees were able to attend various in-house and external seminars and trainings.

Six (6) of its employees earned their masters' degree and **three (3)** their doctorate degrees in reputable universities in the country.

Three (3) were given the privilege to pursue graduate and post-graduate studies as scholars under the DOST-HRDP program. In 2019, **twenty-seven (27)** had the opportunity to take the Certificate in Professional Education (CPE), a program of the Office of the Executive Director in partnership with Don Mariano Marcos Memorial State University.



In recognition of the fact that its employees are the crucial system underpinning PSHS-IRC's ability not only to fulfill its mandate but also to grow and thrive, it has provided certain benefits and support (on top of the mandatory magna carta benefits) not only to encourage productivity but also to underscore how PSHS-IRC puts premium on their significant contribution to the organization. Such provisions include:

- Yearly allotment for trainings and seminars outside PSHS-IRC (average of **PhP 10,833.33**; the highest was **PhP 12,500**)
- Allotment for annual medical and physical examination (average of **PhP 7,333.33**; the highest was **PhP 15,000**)
- Construction of a faculty housing, which currently accommodates **30** employees, most of whom are non-Ilocos Sur residents.
- Conversion of the Community Center 2 as a quarantine facility for employees as well as construction workers, suppliers, and contractors from outside Ilocos Sur, especially at the height of the pandemic
- Shuttle services to and from PSHS-IRC



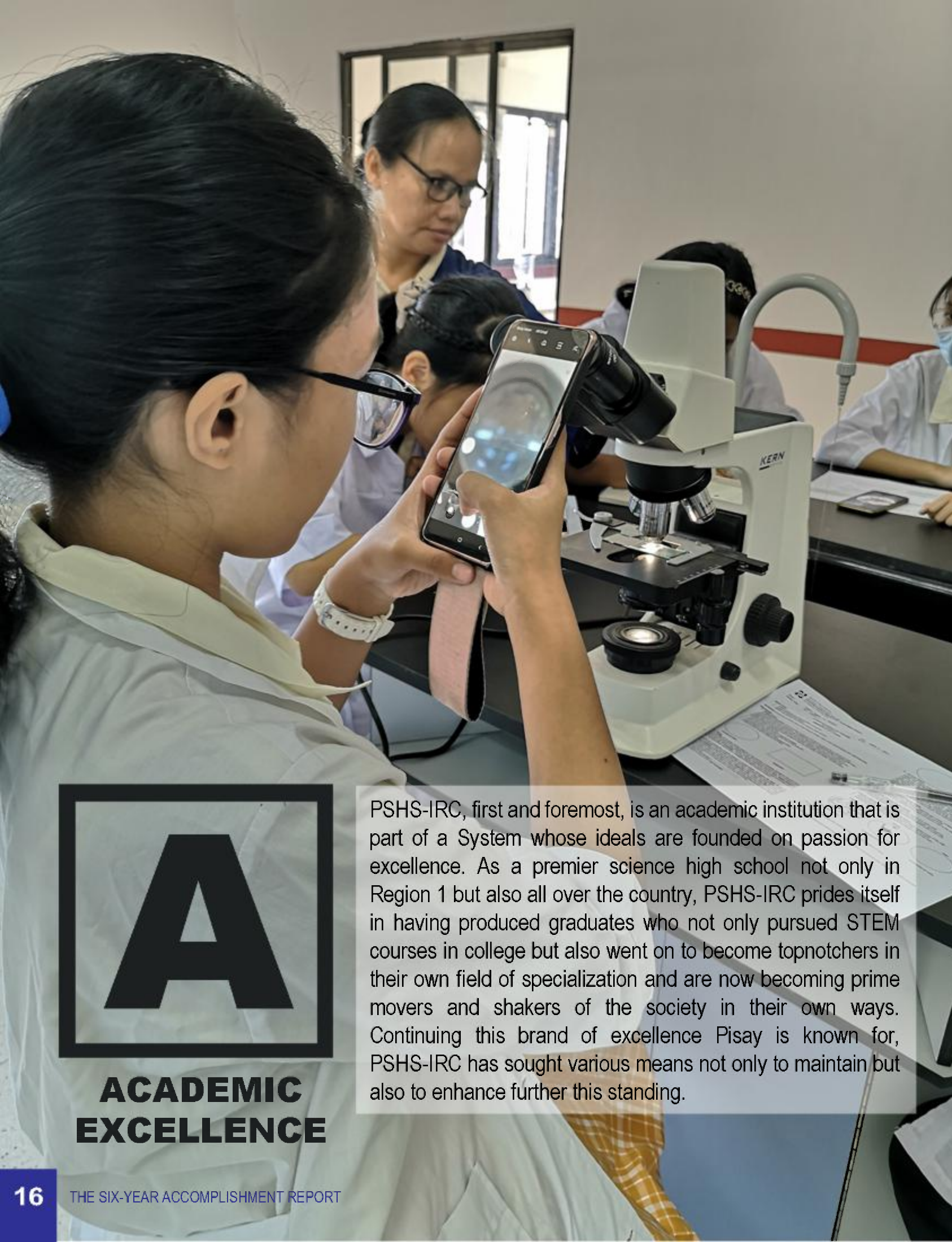
Blessing of the Faculty and Staff House

PSHS-IRC has institutionalized certain measures and programs in line with Gender and Development (GAD). This is in cognizance of the role that PSHS-IRC has as an academic institution in contributing to the country's goal of achieving the long-term vision of gender equality and women empowerment as stated in the Philippine Plan for Gender Responsive Development 1995-2025. Such efforts include:

- Various GAD-related trainings, seminars, and programs not only for its employees but also for its scholars and other stakeholders
- Establishment of a child-minding facility



Certificate in Professional Education (CPE) scholars



ACADEMIC EXCELLENCE

PSHS-IRC, first and foremost, is an academic institution that is part of a System whose ideals are founded on passion for excellence. As a premier science high school not only in Region 1 but also all over the country, PSHS-IRC prides itself in having produced graduates who not only pursued STEM courses in college but also went on to become topnotchers in their own field of specialization and are now becoming prime movers and shakers of the society in their own ways. Continuing this brand of excellence Pisay is known for, PSHS-IRC has sought various means not only to maintain but also to enhance further this standing.



PSHS-IRC puts a premium on the conduct of research of its faculty and scholars. Conducted and allotted with painstaking attention and resources, some of these researches—aside from having been recognized in various science research and project competitions here and abroad—have also been evaluated and awarded certificates of copyright registration and utility model registration by the Bureau of Patents of the Intellectual Property Office of the Philippines through Department of Science and Technology-Technology Application and Promotion Institute (DOST-TAPI).

Number of Researches: **193**
 Certificate of Copyright Registration: **10**
 Utility Model Registration: **3**

COPYRIGHTS

- Alteration of Caesar Cipher Using the Classes of Pythagorean Triples
- Arduino-based Automated Power Switching Technology Via SMS Technology
- Arduino-based Waste Sorter
- Design and Development of LPG Leakage Detector with Sound and SMS Alert Using Arduino
- Floodgate Automation Regulation Monitor and Alarm with the Aid of Arduino-Based Devices
- In Vitro Anti-Proliferative and Antioxidative Activities of Balbas Pusa (*Orthosiphon aristatus* Blume Miq.) on MCF-7 Breast Carcinoma Cell Line Using MTT Assay
- Portable Microcontroller-based on Site Weather Monitoring Instrument with SMS Alert
- Dye-sensitized Solar Cell with Graphene Oxide Incorporation
- LIGMA: A Python-Based Transcription Key Algorithm
- Microcontroller Based Lighting Automation System

UTILITY MODELS

- Microcontroller Based Lighting Automation System
- Preparation of Activated Carbon Adsorbents from Talisay Seed Coats
- Process of Collecting Waste In Bodies of Water Using a Waste Accumulator



Since 2018, PSHS-IRC has endorsed the recognition of some of its faculty members for their effective teaching-learning strategies/methods. These teachers were recognized as Sinagtala Teaching Excellence Awardees: **Michelle B. Ducusin (2018)**, **Jonellyn S. Albano (2019)**, and **Jacquelyn O. Mirasol (2020)**.



Sinagtala Teaching Excellence Awardees



DUCUSIN, MICHELLE B. (2018) ALBANO, JONELLYN S. (2019) MIRASOL, JACQUELYN O. (2020)

At least twice a year, faculty members gather and share with one another helpful tips, practices, development in certain fields, researches, etc. that may be used by other faculty members in improving their instruction through the Forum for School Improvement (FSI).

In **2018**, PSHS-IRC successfully received its **ISO 9001:2015** accreditation after a rigorous process of auditing and scrutiny by the auditing firm, AJA Registrars, Inc. In **2019** and **2020**, PSHS-IRC successfully qualified for **ISO 9001:2015** recertification.



Even before the Covid-19 pandemic, faculty members of PSHS-IRC were encouraged to develop their own instructional materials to enhance their delivery of instruction and to facilitate better teaching-learning process. Through various Forum for School Improvements (FSIs) and seminars, they were exposed to the rigors of developing instructional materials and harnessing educational technology.

In 2020, their skills came in all the more handy when the entire Philippine Science High School System had to create its own learning guides as a response to the shift in teaching modality as demanded by the Covid-19 pandemic. Many of the PSHS-IRC faculty were tapped to be part of the pool of module writers and team leaders.



Forum for School Improvement of the Humanities Department



Malaysia International Young Inventors Olympiad 2017



ASEAN+3 Junior Science Odyssey (APT JSO) 2017, Vietnam



International Mathematics Open for Young Achievers 2017, Singapore



International Biology Olympiad (IBO) 2019 Hungary



Singapore International Math Olympiad Challenge (SIMOC) 2019



Malaysian International Young Inventors Olympiad (MIYO) 2019

The Philippine Science High School-Ilocos Region Campus (PSHS-IRC) has provided a myriad of opportunities where its scholars were able not only to compete and dominate in various competitions that focus on various disciplines but also to stand proudly among the best of the country as well as their counterparts in Asia.

From 2015 to 2020, several PSHS-IRC scholars bagged awards from local **102** and international **23** competitions, a showcase that IRC scholars can compete and even be at par with other students.

Not only to prepare students for competitions but also to bridge certain curricular gaps, PSHS-IRC conducted cliniquing and remedial programs.

Since 2015, the **Remedial Program** has had teachers conduct remedial classes to students with grades below 2.50.

Advancement/Coaching Program has been given to students who are preparing to participate in national and international competitions.



To foster camaraderie between and among scholars across batches, PSHS-IRC conceptualized certain **peer mentoring programs/mechanisms**.

The higher years are assigned to lower years as buddies to foster brotherhood/sisterhood while the higher years also get to mentor the lower years not only academically but also socially.

In 2018, the concept of **by-house** was introduced during **Intramurals** to let students widen their set of relevant schoolmates beyond their batchmates or classmates.





PSHS-IRC forged partnerships with various universities where its scholars were able to conduct research under the mentorship of certain faculty members or researchers of the said universities.

Several members of the academe (e.g., University of the Philippines Baguio, Mariano Marcos State University, University of Northern Philippines, and Don Mariano Marcos Memorial State University) were also tapped to sit as panelists in the school's Research Congress.

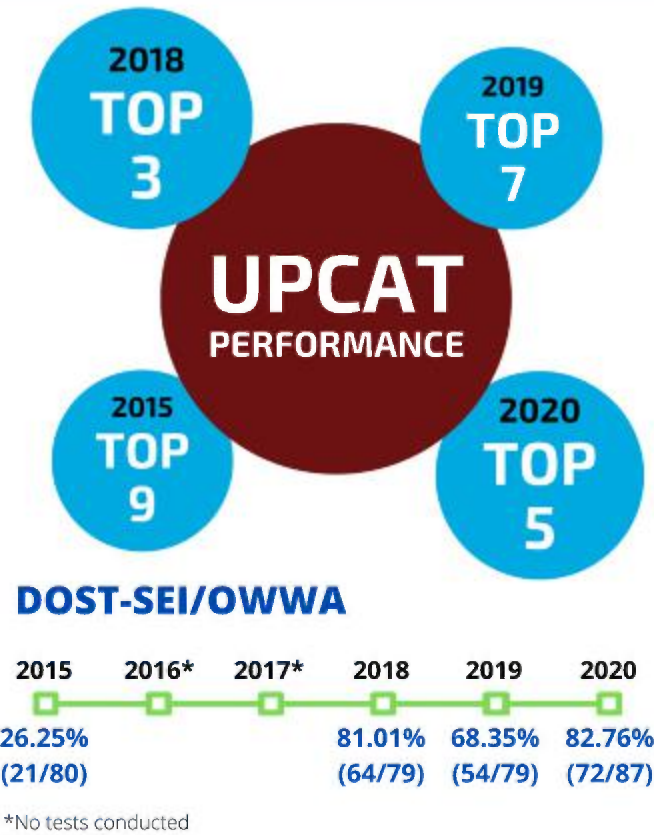


To assist Grade 7 scholars in adapting and transitioning to the new environment, the **Guardianship Program** was established in 2015. A Grade 7 scholar is assigned to a teacher who serves as the guardian of the scholar all throughout his or her 6-year stay in Pisay Ilocos.

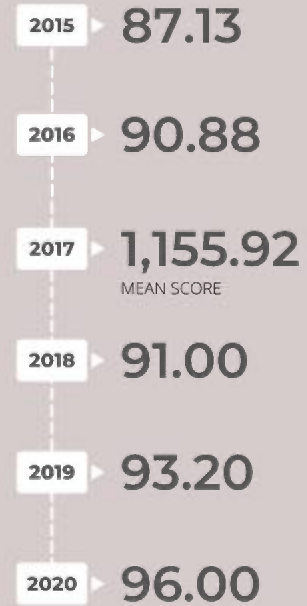


Aside from the IRC scholars' performance in college entrance examinations of various universities in the country, PSHS-IRC has also facilitated the participation of its scholars to various international educational assessments and standardized tests.

The past 5 years saw the impressive performance of PSHS-IRC scholars in these examinations and assessments.



PERCENTILE RANK OF STUDENTS IN MATH SCHOLASTIC APTITUDE TEST (SAT)



Several PSHS-IRC have had the opportunity to take part in the Sakura Exchange Program organized by the PSHSS Office of the Executive Director. In 2016, PSHS-IRC participated in its first Sakura Exchange Program. Since then, several of its students and faculty have participated in this annual event.

Bea Burgonio and Michaela Faye Gacula (2016)
 Marvin Jericho Cava and Maria Kizha Jillian Espejo (2017)
 Ethan Heinrich Ancheta (2018)
 Gene Rendell Aquino and Ericka Joy Peria (2019)



The kind of education that Pisay Ilocos offers goes beyond academics. Equally important is educating them to be holistically-developed men and women who shall become this country's next generation of STEM professionals. With this in mind, PSHS-IRC developed several programs and activities that target this goal.

- > Survival Camp
- > Leadership Training
- > Retreat and Recollection Activities: Character Development Program
- > Tree Planting
- > Coastal Clean-Up





RELEVANT LINKAGES

PSHS-IRC has established an intricate web of partnerships founded on trust and a common goal of honing the scholars' minds and developing their talents to be harnessed for the development of this nation in the future. At the same time, PSHS-IRC has made it a purpose to provide an avenue for its scholars to develop a sense of and dedication to service and giving back to the community.

In recognition of its social responsibility and its role in nation building, PSHS-IRC has conducted **outreach programs** that benefited not only the immediate communities but also communities in the nearby provinces in the region.

These outreach activities serve as community service and a means to extend a hand to those who are in need.

From medical and dental missions to math, science, and English enhancement programs to feeding programs, the PSHS-IRC sees to it that no one is left behind and that sharing and caring become a way of life.

But, more importantly, these outreach activities have sown a seed of consciousness among the Northern scholars about the significant role they play and will be playing as future leaders of this nation.



Ading Ko Program



Adopt-a-School



Tulong-Dunong



Livelihood Program for 4Ps



Project T.E.A.C.H.



Pamaskong Handog



Forged Partnership with Various Agencies

- a. NCE/RACE Campaign with PIA
- b. Establishment of Fabrication Laboratory with DTI Regional Office 1
- c. Research Collaborations
- d. Science Internship Program
- e. Lecture Series
- f. Parenting Seminar
- g. A Day with a Scientist

- Collaboration with Alumni

- a. A Day with an Alumni
- b. Pisayuda

- Collaboration with Parents

- a. Medical-Dental Mission
- b. Pisayuda
- c. Adopt-a-Scholar Program



In 2016, the Ilocos Innovation Center-Fabrication Laboratory was established in partnership with the Department of Trade and Industry (DTI). A technical prototyping platform for ideation, innovation, and invention, this Fab Lab has been providing stimulus and needed equipment and space for local entrepreneurship among micro, small, and medium enterprises (MSMEs) and a platform for PSHS-IRC scholars to learn, innovate, and translate their research ideas into prototypes. Since its establishment, it has conducted various trainings and mentorship programs to the members of the community and PSHS-IRC scholars.

Year	Number of MSMEs Assisted
2016 (September-December)	39
2017	161
2018	116
2019	29
2020	17
TOTAL	362



PisAYUDA: SIYENSIYA Para sa Bayan

PSHS-IRC RELIEF PROJECT

BENEFICIARIES

PSHS-IRC Workers

11 utility workers/JOs/dorm assistants
10 security guards | 22 canteen personnel

Non-PSHS-IRC Workers/Service Providers

258 poorest of the poor families (including dorm laundry workers) | 32 tricycle drivers
15 barangay secretaries | 12 utility workers
6 Poblacion East frontliners

TOTAL DONATION

PhP 372,986.75

from the different donation drives by the
Alumni (PhP 105,239.25) | PSHS-IRC (PhP 199,047.50)
Scholars/Student Alliance (PhP 30,000)
Employees (PhP 38,700.00)

DONORS

PSHS-IRC Alumni (2007-2014)
Parents-Teachers Association
Scholars & Student Alliance
Faculty and Staff Members

Special Thanks
KOICA (LingaPhilkofa Project)
for the additional 100 grocery packs



**Philippine Science High School
ILOCOS REGION CAMPUS
Poblacion East, San Ildefonso 2728 Ilocos Sur
2021**