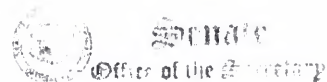


NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



'22 AUG -8 P 1 :28

SENATE

RECEIVED BY

S. No. 1081

Introduced by Senator Jinggoy Ejercito Estrada

**AN ACT
REQUIRING THE ESTABLISHMENT OF FULLY EQUIPPED SCIENCE
LABORATORIES IN EVERY PUBLIC ELEMENTARY AND SECONDARY SCHOOL
AND FOR OTHER PURPOSES**

EXPLANATORY NOTE

This bill aims to enhance the teaching and education of students in public elementary and secondary schools in the country through the construction of more science laboratories. This is one of the practical interventions to the low scores of Filipino students in math and science assessment.

According to Trends in International Mathematics and Science Study (TIMSS) 2019 by the International Association for the Evaluation of Educational Achievement (IEA), Philippines fared worst among fifty-eight countries in an evaluation for Grade 4 students¹. The report further said: "In science, 13 percent of Filipino students were in the low benchmark, indicating, 'Students show limited understanding of scientific concepts and limited knowledge of foundational science facts' ... only 1 percent of Filipino students are in the high benchmark while 5 percent are in the intermediate."

The Department of Science and Technology Philippine Council for Industry, Energy and Emerging Technology Research and Development (DOST-PCIEERD), who

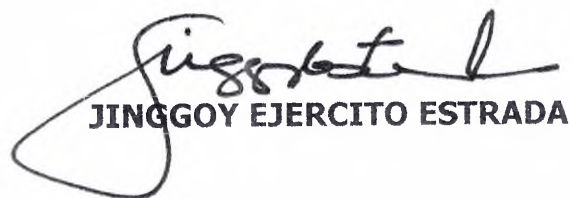
¹ "PH ranks last among 58 countries in Grade 4 math, science: study." December 9, 2020. <https://news.abs-cbn.com/news/12/09/20/ph-ranks-last-among-58-countries-in-grade-4-math-science-study>

introduced VISSER² which was designed in order to put modern science laboratories in every school and college, also recognized the lack of laboratories in many schools throughout the country:

“Out of approximately 13,000 high schools across the Philippines, more than 4,500 have no access to a designated (and working) laboratory for their students. On the other hand, from the fraction which have working laboratories, around 2,800 have no access to newer, digital tools³.”

While lectures and class discussions are important teaching methods, hands-on and immersive learning experience prove useful and effective in allowing students to better appreciate new concepts and ideas. Science laboratories are also instrumental in helping students develop skills in problem-solving, critical thinking, creativity, resourcefulness, reasoning, and analysis – which are all basic and essential capacities that every child needs. Lastly, such facilities can serve as playgrounds for our students wherein they can build and nurture interest in science and all its related fields at an early age, which is also strategic move in readying the younger generation for a science and technology-driven future.

The immediate passage of this legislation is earnestly sought.

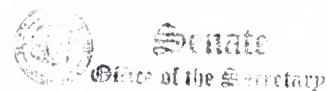


JINGGOY EJERCITO ESTRADA

² Versatile Instrumentation System for Science Education and Research (VISSER) is a research-grade laboratory system developed by researchers from the University of the Philippines. It is a handheld device that serves as a hub for various sensors that can be used to perform experiments in various fields of science.

³ <http://projects.pcieerd.dost.gov.ph/technology-profile/3>

NINETEENTH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



'22 AUG -8 P 1 :28

SENATE
S. No. 1081

RECEIVED BY

Introduced by Senator Jinggoy Ejercito Estrada

**AN ACT
REQUIRING THE ESTABLISHMENT OF FULLY EQUIPPED SCIENCE
LABORATORIES IN EVERY PUBLIC ELEMENTARY AND SECONDARY SCHOOL
AND FOR OTHER PURPOSES**

Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled:

1 Section 1. *Short Title.* – This Act shall be known as the "*Science Laboratory for*
2 *Basic Education Act.*"

3 Sec. 2. *Declaration of Policy.* – It is hereby declared a policy of the State to give
4 priority to scientific and technological efforts vital to national development. It has been
5 proven that industrialization can be achieved if schools adopt modern methods of
6 teaching science and technology during the early stages of education.

7 Furthermore, the Constitution provides that the right of teachers to professional
8 advancement should be enhanced. With this mandate, quality education shall be
9 ensured.

10 Sec. 3. *Objectives.* – This Act aims to attain the following objectives within the
11 period of five (5) years.

- 12 1) To improve the quality of science and technology education in the country;
13 2) To provide basic and advance S&T education in high school, respectively in
14 preparation for higher education;
15 3) To teach the students the effective use and operation of modern laboratory
16 equipment and facility related to science and technology; and

1 4) To train S&T teachers the use of modern laboratory equipment so that they
2 will be more effective in demonstrating their uses.

3 Sec. 4. *Funding Source.* – In addition to the funds to be provided by the
4 Legislature, this Act shall receive funding support from the following:

- 5 a) Twenty percent (20%) share from the gross proceeds of travel tax
6 collections over and above the share of the National government therefrom;
7 b) Twenty percent (20%) share from the net income of the Philippine Games
8 and Amusement Corporation (PAGCOR) over and above the franchise tax
9 and the corporate income tax therefrom.

10 Sec. 5. *Incentives.* – Incentives shall be given to the following:

- 11 a) Tax Incentives shall be given to private entities engaging in S&T
12 development;
13 b) Private schools who shall import laboratory equipment/facilities for the
14 exclusive use in their school shall be given a twenty percent (20%) tax
15 deduction from the total revenue obligations;
16 c) Private entities engaged in the manufacture of laboratory equipment
17 needed in public schools shall be given a three percent (3%) tax
18 incentive/deduction from the importation of raw materials.

19 Sec. 6. *Proposed System.* - This Act shall provide the following:

- 20 1) Construction of laboratory buildings;
21 2) Provide required laboratory equipment and facilities;
22 3) Continuous development and updating of standards for facilities;
23 4) Strengthen partnership between public and private institutions in promoting
24 science and technology;
25 5) Strengthen the coordination between the Regional Science and Technology
26 Teaching Centers (RSTCs) and the Department of Education regional Offices
27 in monitoring / utilization of laboratory equipment;
28 6) Train math and science teachers the proper use, repair and maintenance of
29 the laboratory facilities and equipment;
30 7) Create required laboratory technician positions at least for every elementary
31 and secondary schools for the operation, repair and maintenance of the
32 laboratory equipment (or alternative scheme of maintenance) and facilities;

1 8) The number of laboratory rooms/facilities per school shall be determined by
2 science and technology experts of DOST; and

3 9) The building, plans and design shall be drawn and approved by DOST-SEI.

4 *Sec. 7. Disposition of Funds.* – The Fund shall be utilized for the construction
5 of school laboratories including equipment / facilities and the creation of required
6 positions of a technician in every public elementary and high schools throughout the
7 country.

8 The Department of Science and Technology (DOST) through the Science
9 Education Institute (SEI) in coordination with the regional offices of DepEd and the
10 RSTCs shall implement the program. The above-mentioned offices shall also monitor
11 the utilization and maintenance of the equipment.

12 *Sec. 8. Implementation.* – The implementation of the activities of this Act shall
13 be undertaken by SEI in coordination with the RSTCs and DepEd Regional Offices.

14 The maximum number of pupil/students in every laboratory class must not
15 exceed fifty (50) and there must be at least one laboratory room for every forty five
16 (45) pupils / students.

17 *Sec. 9. Separability Clause.* – If any provision of this Act is declared invalid or
18 unconstitutional, the remaining provision not affected thereby shall continue to be in
19 full force and effect.

20 *Sec. 10. Repealing Clause.* – All laws, decrees, orders or regulations or part
21 thereof inconsistent with this Act are hereby repealed or modified accordingly.

22 *Sec. 11 . Effectivity.* – This Act shall take effect fifteen (15) days following the
23 completion of its publication in the *Official Gazette* or in a national newspaper of
24 general circulation.

Approved,