

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

NINETEENTH CONGRESS
First Regular Session

HOUSE BILL NO. 1859



Introduced by Rep. Mohamad Khalid Q. Dimaporo

EXPLANATORY NOTE

Pursuant to Article XIV of the 1987 Constitution the Philippines has struggled to ensure quality education and access to the public school system for all. The quagmire of the Philippines education system falls upon the Department of Education's compiling needs, exacerbated by insufficient budgetary support. Coupled with the increase in population there seems to be a continuous deficit of classrooms, teachers, and other educational needs. Those affected most by these inequities are often the rural sector and the marginalized.

As part of the Philippines commitment to the Sustainable Development Goals, the Philippines must ensure access to quality primary and secondary education leading to relevant and effective learning outcomes. The advent of technology has resulted in accelerated development but inadvertently caused those who lack access to technology to lag behind. In the realm of education, this is often referred to as the digital divide. The objective of the bill is to legislate an accelerated road map to infuse the use of technology in the public education system to attain the objectives of the sustainable development goals for education and the government's mandate in Article XIV as enshrined in the 1987 constitution.

The Department of Education embarked on a computerization program over last decades. Computer labs with desk top personal computers have given way to mobile carts carrying laptops and tablets for students to share. Learning resources have moved from the physical copies to digital files and educational portal online. Educational equipment such as digital boards and networks have become more affordable and accessible. However, the attempts of the Department of Education to close the digital divide has been incremental at best. The national government should look beyond a digital rise and forward towards a digital horizon, with the objective of leaving no child left behind and every island with access to digital education.

As a refiled bill from the previous Congress, and in view of the foregoing premises, the prompt approval of this measure is earnestly sought and recommended.


MOHAMAD KHALID Q. DIMAPORO
1st District, Lanao del Norte

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

NINETEENTH CONGRESS
First Regular Session

HOUSE BILL NO. 1859

Introduced by Rep. Mohamad Khalid Q. Dimaporo

AN ACT
ESTABLISHING THE DIGITAL HORIZON IN PUBLIC EDUCATION ROAD MAP,
PROVIDING FUNDS THEREFOR, AND FOR OTHER PURPOSES

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

Section 1. Short Title. - This Act shall be known as the “Digital Horizon Act”

ARTICLE I: POLICIES AND OBJECTIVES

Section 2. Declaration of Policy. - The following are hereby declared the policies of the State:

- a. Guarantee the highest priority to quality education by taking appropriate mechanism to towards inclusion for all Filipino students, regardless of social and economic status;
- b. Harness technological innovations, processes, and instruments in facilitating teaching and learning processes that would enhance the performance;
- c. Provide the citizenry the opportunity to enhance their individual capabilities and learning experience through adapting the development in information and communications technology (ICT);
- d. Create a system that should promote and regulate the use of digital technology in public education;
- e. Enhance the learning experience of students by providing them access to digitized copies of reference materials necessary for the advancement of education in the country;
- f. Provide an accessible alternative learning system to allow students to continue their education;
- g. Encourage the wider participation of private groups, local governments, and community-based organizations in the generation and utilization of the broader spheres of science and technology;
- h. Promote innovations that leverage public and private partnership in improving access to quality education and lifelong learning.

Section 3. Objectives. - This Act shall pursue the following objectives:

- a. Establish an Interagency Taskforce to craft and implement the Digital Horizon Road Map;
- b. Institutionalize an implementation program for the integration of digital technology and innovation into the public school system through the Digital Horizon Road Map;
- c. Identify key components of the Digital Horizon Road Map
- d. Provide an expedient Public-Private Partnership mechanism to attain the objectives under the Digital Horizon Road Map

ARTICLE II: DEFINITION OF TERMS

Section 4. Definition of Terms. - As used in this Act:

- a. Disruptive Technology - refers to any enhance or completely new technology that replaces, disrupts, and renders into obsolescence an existing technology;
- b. Information and Communication Technology (ICT) - refers to the totality of electronic means to access, create, collect, store, process, receive, transmit, present, and disseminate information, as defined in Section 3(a) of Republic Act (R.A.) No. 10844, otherwise known as the “Department of Information and Communication Technology Act of 2015”;
- c. New Media - refers to emerging digital, computerized, or network information and communication technologies that often have interactive capacities, which includes e-mail, instant messaging, text messaging, websites, blogs, interactive gaming, social media, cellphones, and mobile devices;
- d. Internet Safety Policy - refers to age-appropriate, research-based policy that regulates the safe, ethical, and responsible use of the Internet in public education, promotes an informed and critical understanding of the Internet, and educate children and communities about how to prevent or respond to problems or dangers related to the Internet and new media.
- e. High Focus, High Tech – refers to a policy framework supported by the United Nations Education Commission that espouses the need for educators to find a balance between high-tech and high-touch methods of teaching. The latter being teaching methods that are founded on a teacher’s capability to identify, develop, and improve an individual student’s academic weakness.

ARTICLE III: DIGITAL HORIZON ROAD MAP

Section 5. Creation of the Digital Horizon Inter-Agency TaskForce. - There is hereby created the Digital Horizon Inter-Agency TaskForce (Digital Horizon IATF).

The Digital Horizon IATF shall develop the Digital Horizon Road Map, a consolidation of development plans, programs, and projects to be implemented by various Departments and Agencies of the National Government for the purpose of advancing digital technology and innovation in the public school system.

The Secretary of the Department of Education shall be designated as Chairperson, whereas members of the Digital Horizon IATF shall be composed of, but not limited to, The Secretary of the Department of Information and Communication Technology, The Secretary of the Department of Science and Technology, The Secretary of the National Economic and Development Agency, The Secretary of the Department of Budget and Management.

The Digital Horizon IATF shall finalize the Digital Horizon Road Map with twelve (12) months from the effectivity of this Act in accordance with the national development goals, and will be incorporated in the Philippine Development Plan until its completion.

Subject to the approval of the Department of Budget and Management, the DepEd and the DICT may create positions as they deem necessary for the effective implementation of this Act, in accordance with Civil Service laws, rules and regulations.

The DSWD shall formulate a program extending assistance to the marginalized and the disadvantaged students to ensure that they may fully participate in the PSOFT Road Map

Section 6. The Digital Horizon Road Map. - The Digital Horizon Road Map shall serve as the basis for programs and projects aimed at improving the quality of education through the use of digital technology and will be allocated adequate, corresponding appropriations in the annual General Appropriations Act (GAA) until its completion.

Every three (3) years the Digital Horizon Road Map will be subject to review and amendment.

Section 7. Components of the Digital Horizon Road Map. - The Digital Horizon Road Map shall include, but not limited to, the following:

- (a) Physical and Technological Infrastructure
 - 1.) Universal Access to Internet for Public Schools
 - 2.) Public Schools of the Future with Technology
 - 3.) Annual Investment Program for ICT Devices, Tools, and Equipment
- (b) Enhanced Digital Education Program
 - 1.) National Human Resource Development
 - 2.) Training and Development of DepEd personnel
- (c) Digital Reforms in Public School Administration
 - 1.) Internet Safety Policy
 - 2.) National Public School Database
- (d) Development of an Online Learning Portal
 - 1.) DepEd E-Learning Resources
 - 2.) Public Online Library
- (e) Alternative Learning Systems (ALS)
 - 1.) Television and Radio Based Instruction
 - 2.) Digital ALS

ARTICLE IV: PHYSICAL AND TECHNOLOGICAL INFRASTRUCTURE

Section 8. Universal Access to Internet for Public Schools. - All public schools will be provided access to the internet for the purpose reducing the digital divide among DepEd learners and raising the standards in the quality of education for the Philippines.

In addition to traditional means of accessing the internet, such as commercially available connections, or existing land-based initiatives of government programs to expand access to the internet, the Digital Horizon Road Map shall exhaust all options in ensuring internet connectivity for all public schools.

In order to provide remote areas with digital connectivity, the Digital Horizon Road Map shall outline cost effective options of establishing a Telecommunications Satellite in part with National Government Programs under the DICT, DOST, and the Philippine Space Agency.

The necessary funding to determine the feasibility of a Telecommunications Satellite Program through build, purchase, and/or lease shall be appropriated in accordance to the Digital Horizon Road Map.

Section 9. Public Schools of the Future with Technology. - There is hereby instituted a Public School of the Future in Technology in all public elementary and secondary schools.

The Public School of the Future shall adopt the following principles upon administering basic education in the Public School system:

- (a) Broaden and maximize the use of ICT to aid learning;
- (b) Establish a system of upgrading and replacing outdated technology;
- (c) Provide technical support to maintain ICT and other technology;
- (d) Train and support teachers and students on ICT and other technology;
- (e) Develop educators to use ICT effectively in the classroom; and
- (f) Ensure that the High Touch, High Tech paradigm will be utilized to keep students engaged and learning outcomes optimal.

Section 10. Public Investment Program for ICT Devices, Tools, and Equipment. - The Department of Education shall appropriate and provide the following in all public and elementary schools: Personal Computers/Learning Devices, Digital Classroom equipment, and Internet and Hybrid Intranet Connectivity.

The Digital Horizon Road Map shall program the procurement of Personal Computer (PC) Laptops/Tablets for the educational needs of all elementary and secondary public schools. All learners will be provided with the necessary PC learning devices as stipulated in the Road Map. Should budgetary constraints prevent the attainment of such target, the National Government shall endeavor to meet a one (1) device for every six (6) learners ratio for sharing of PC devices.

All public schools has be provided with functional digital classrooms in the Digital Horizon Road Map. Digital Classrooms will be equipped with, but not limited to, digital boards, PC devices, wireless router, multimedia projector, printer, and other needed tools and devices. The National Government shall maintain a fifteen (15) leaners to one (1) PC device sharing

ratio for grade eight (8) to twelve (12) until the requirements of the PSOFT Road Map is fulfilled.

Internet and Hybrid Intranet Connectivity that is stable and reliable for all Public Schools shall be included in the Digital Horizon Road Map. Educators in public schools shall make use of ICT and hybrid intranet connectivity as presentation tools to complement traditional teaching methods. DepEd, with the technical assistance of DICT, shall develop an administrative system in all public schools utilizing hybrid intranet connectivity in order to enhance organizational management and administration, and streamline front office procedures.

Section 11. DIGITAL HORIZON PILOT SCHOOLS. – The National Government shall establish pilot schools in the following academic year after the ratification of this Act. The pilot schools shall be located in the regions of Metro Manila, Luzon, Visayas, and Mindanao. They will showcase the full implementation of Article IV in this Act as follows:

- A.) The Pilot School shall have full access to the internet and be Wi-Fi ready;
- B.) The principles found in Section 9 shall be strictly implemented;
- C.) ICT Devices, Tools, and Equipment will be complete with teachers and students enjoying a 1:1 ratio for devices required for their teaching and learning needs.

The Department of Education, in coordination with the National Economic and Development Authority (NEDA), shall conduct an impact study of the pilot schools to determine its significance in improving the quality of education. Additional pilot schools can be established in the following years, through the National Budget, Foreign Grants, or in cooperation with Local Government Units and/or the private sector.

ARTICLE V: ENHANCED DIGITAL EDUCATION

Section 12. National Human Resource Development. - Students in public elementary and secondary schools must be prepared with technological disruptions that will come with the Fourth Industrial Revolution and will have a significant impact on skills requirements and on creating a range of opportunities for them in the future.

To better equip students to overcome the challenges enabled by ever-increasing technological change and to improve student engagement and achievement, there shall be high-quality introductory courses on the following, among others:

- (a) Advance Manufacturing and 3D Printing;
- (b) Artificial Intelligence, Machine Learning, and Natural User Interface;
- (c) Big Data Analytics;
- (d) Bio-Process Engineering;
- (e) Energy Storage;
- (f) Materials Science, Biotechnology, Genetics, Genomics;
- (g) Nanotechnology;
- (h) Quantum Computing;
- (i) Robotics and Autonomous Transport; and
- (j) Such other fields and disciplines that would advance technology in the future.

To allow students to acquire the appropriate aptitudes and competencies on these fields, the Digital Horizon Road Map shall provide for the establishment of Innovation Hubs in every school. Innovation hubs will enable students to hone their skills and techniques using a wide variety of physical and digital tools and equipment. The innovation hubs shall allow teachers and learners to carry out technology-based projects that address local problems in the community.

In addition to the standard ICT curriculum taught for basic education in the public schools, the Department of Education shall endeavor to include the following subject matters in its curriculum:

- (a) Respecting and protecting personal information on the Internet;
- (b) Understanding computer security systems;
- (c) Online gender sensitivity;
- (d) Proper use of social media and social networking;
- (e) Responsible and ethical use of the Internet, photographic equipment, smart phones, and other equipment of similar nature;
- (f) Insights of the Cybercrime Prevention Act and other related legislation.

The Department of Education, in coordination with the Department of Information, Communication, and Technology shall enjoin the use of the DICT Academy and its relevant specialized ICT subjects to be utilized as electives in Grades eleven (11) and twelve (12).

Section 13. Training and Development of DepEd Personnel - the PSOFT Road Map shall determine the training and development needs of school administrators, teachers, and personnel on ICT and ICT-assisted instructions on the various types of disruptive technologies.

To ensure that teachers are technologically knowledgeable and well equipped with the right aptitudes and competencies, the DepEd shall establish an Education Technology Division that shall implement teaching programs and technology-based instruction aids for the effective and efficient performance of teachers under the Digital Horizon Road Map. The DICT shall extend its support in the implementation of training for teachers on ICT, through its ICT Literacy Competency and Development Bureau.

The regional offices of the DepEd, in collaboration with the DICT, shall carry out training for educators in public schools to integrate ICT in classroom learning and instruction, to instill professional and educational benefits of investing in ICT, and to develop a proficiency in outsourcing appropriate resources for education.

ARTICLE VI: DIGITAL REFORM IN PUBLIC SCHOOL ADMINISTRATION

Section 14. Internet Safety Policy. – To advance a safe and secured education under the Digital Horizon Road Map, The Department of Education shall formulate and enforce a policy on internet safety for students concerning access to visual depictions that are obscene, pornographic, and harmful to minors, within six months after the effectivity of this act. The Internet Safety Policy should include, but not limited to, the following objectives:

- (a) Identify, develop, and implement Internet safety education that includes educational technology, multimedia and interactive applications, and online resources;
- (b) Develop online risk interventions for children;
- (c) Train and support peer-driven Internet safety education initiatives;
- (d) Coordinate and fund research initiatives on Internet safety education and online risks to children;
- (e) Develop and implement public education campaign to promote awareness of Internet safety education and online risks to children; and
- (f) Educate parents on teaching their children the responsible and ethical use of the Internet and new media and their protection from risks relating to the use of the Internet and new media.

Section 15. National Public Schools Database. - Under the Digital Horizon Road Map the Department of Education is mandated to develop, operate, and maintain a National Public School Database (NPSD) that contains pertinent information of students concerning their personal data and school records.

School administrators and personnel shall be trained on the operation and access of the NPSD. They shall likewise be given access to the NPSD concerning student records and other related data, which may include school attendance, good moral character, grade level, examinations scores, improvement tracking, and immunization and health record, among others, for purposes of recording student biographical data, handling admissions and discharges, and transferring to other schools.

Any person who is caught illegally altering, falsifying, or misusing student information in the NPSD shall be sanctioned with the penalty in accordance to RA 10173, the Data Privacy Act of 2012.

ARTICLE VII: DEVELOPMENT OF AN ONLINE LEARNING PORTAL

Section 16. DepEd E-Learning Resources. - The Department of Education shall develop an online portal that provides access, or links, to Internet learning resources. The online portal shall include, but not limited to, the following: e-books and videos, learning materials and teachers guides, materials for senior high school subjects ranging from math, disaster readiness, and science, materials on science, agriculture, livelihood and information technology, interactive exercises on math, science, history and economics.

The Department of Education will refrain from using unverified learning sources such as Wikipedia and develop its own online library as an alternative.

Section 17. Public Online Library. – The Digital Horizon Road Map shall include the establishment of Philippine Online Library.

The DepEd, DICT, DOST, the Commission on Higher Education (CHED), and the Technical Education and Skills Development Authority (TESDA), in partnership with the National Library of the Philippines and other concerned government agencies, shall develop and maintain an online repository system that contains educational materials and digitized copies of books and publications suitable for Filipino students and researchers that shall complement learning experience acquired through textbook and reference materials given to students.

The DepEd shall create digitized copies of all textbooks and reference materials it deems necessary for the education of public elementary and secondary students. This shall be compiled in the Philippine Online Library, which shall be jointly managed by the DepEd and the DICT.

The DepEd can tap the National Library of the Philippines, other agencies of the government, and the private sector to complement the Philippine Online Library's digital repository of textbooks with additional materials.

The DepEd and the National Library of the Philippines shall have joint custody over the digitized copies of textbooks and reference materials.

The DICT shall ensure the technological management and security of the online repository system to warrant its integrity.

ARTICLE VIII: ALTERNATIVE LEARNING SYSTEM

Section 18. Television and Radio Based Instruction – The DepEd shall institute a Television (TV) and Radio-based Instruction as an alternative or complementary mode of learning in basic education in the Digital Horizon Road Map. It shall be based on the existing curriculum for every grade level, to be delivered through television and radio broadcasting.

The program shall ensure that the learning outcomes are clearly articulated in terms of competencies, skills and behavioral attributes, including the grading system, monitoring protocol, and progress tracking, and conform to the policies, standards and guidelines set by the DepEd. The DepEd shall provide professional training to teachers and non-teaching personnel involved in this program and formulate the necessary guidelines for its implementation.

The parents or guardians shall be the primary supervising authority of the learners under this program. As such, coordination between the parents or guardians and the teachers is significant to ensure its success. To this end, the DepEd shall conduct an orientation and capacity building seminar to prepare them for this role.

All grantees of television and/or radio franchises, including those owned or controlled by the government, are hereby mandated to provide adequate public service time to the government, through their broadcasting stations or facilities, to assist in the functions of public education. Such assistance shall predominantly include, but not necessarily be limited to, the transmission of learning materials to learners.

A minimum of three (3) hours of daily airtime in the morning, from Monday through Saturday, shall be allotted by all broadcasting networks granted franchises or as a condition for renewal of broadcast licenses hereinafter. The donation of more than three hours of airtime shall be considered as part of the network's corporate social responsibility project or program.

All TV stations shall stream the virtual lessons on their own online platforms and make the video file of these classes available to the public for at least one (1) year. Digital, Cable and Satellite TV stations and networks shall allocate for free as a public service at least seven (7) access channels to the DepEd, with each channel catering to a particular level to cover all of Kinder to Grade 12 levels, for the delivery of basic education at all times.

Section 19. Digital Alternative Learning System. - The DepEd shall institute a digital format of the Alternative Learning System in the Digital Horizon Road Map. To attain this objective, the DepEd shall provide professional training to teachers and non-teaching personnel involved in this program and formulate the necessary guidelines for its implementation.

ARTICLE IX: PARTNERSHIP MECHANISM AND ROLES OF PARTNERS

Section 20. Partnership Mechanism and Roles of Partners. - In the furtherance of the Digital Horizon Road Map, The DepEd may coordinate and enter into cooperative agreement, agreement or contract with other government agencies, local government units (LGUs), private and non-profit agencies, institutions or organizations duly accredited or recognized by the government, civil society, business and industrial sector, and other concerned sectors.

In conformity with their respective charters and mandates, government agencies shall define and delineate their respective areas of responsibility in the Digital Horizon Road Map. For the purposes of this Act, these agencies have the following roles:

(a) Department of Education (DepEd) - The DepEd shall be the lead agency responsible for the proper and effective implementation of the various provisions of the Act and ensure coordination and collaboration among agencies of the government.

(b) Department of Information and Communication Technology (DICT) - The DICT shall closely coordinate and collaborate in the implementation of this act. It shall undertake the installation, maintenance, and operation of hybrid intranet connectivity in all public basic education schools, provide an efficient and reliable broadband connection, assist in the implementation of training and development, construction, maintenance, and operation of a satellite, and set a guideline for the implementation of TV and Radion-based Instruction with broadcasting networks.

Section 21. Public-Private Partnership for the Digital Horizon Road Map. - The DepEd can pursue public-private partnerships under any of the modalities under R.A. 6975, as amended by R.A 7718, entitled, “An Act Authorizing the Financing, Construction, and Operation and Maintenance of Infrastructure Projects by the Private Sector, and For the Other Purposes,” and joint ventures under the 2013 Joint Ventures Guidelines issued by the National Economic and Development Authority (NEDA). In addition to such arrangements, the DepEd can undertake any of the following alternative modalities for the purposes of this Act: Design-Finance-Operate; Lease; Lease-to-Own; Usufruct Agreement; and Real Property Swap.

To accelerate the implementation of the provisions in this Act, the NEDA, in coordination with DepEd, will establish guidelines to expedite public-private partnership with non-government entities for projects within the framework of the DepEd Information System and

Strategic Plan (ISSP) and the Digital Horizon Road Map. NEDA shall formulate guidelines to deputize the Regional Line Agencies to conduct PPP agreements for DepEd projects and programs of a regional scope in accordance to the Digital Horizon Road Map. PPP Projects of DepEd that are localized in scope will be guided in accordance the existing and relevant local ordinances.

ARTICLE X: AUTHORITY TO RECEIVE DONATIONS

Section 22. Authority to Receive Donations. - The DepEd is authorized to accept grants, contributions, donations, endowments, or bequests in cash or kind from local and foreign sources in support of the development and implementation of this Act. The proceeds of such grants, contributions, donations, endowments, or bequests shall be used to finance the following:

- (a) Research, development, and utilization of emerging digital technologies;
- (b) Provisions of Personal Computer Device units and improvement of ICT infrastructure, including hardware and internet connectivity;
- (c) Training and Capacity Building;
- (d) Conduct of other activities reasonably necessary to carry out the objectives of this Act.

ARTICLE XI: REPORTORIAL PROVISIONS

Section 23. Joint Congressional Oversight. – There is hereby created a Joint Congressional Oversight Committee to oversee, monitor and evaluate the implementation of this Act.

The Oversight Committee shall be composed of five (5) members each from the Senate and the House of Representatives, including the Chairpersons of the Committees on Basic Education and Culture and the Committees on Appropriation and Finance of both houses. The membership of the committee for every house shall have at least one (1) opposition or minority member.

Section 24. Annual Report. – The DepEd shall submit to both Houses of Congress, or upon the request by the Joint Congressional Oversight Committee, a report giving a detailed account of the status of the implementation of this Act.

Section 25. Appropriations. – The DepEd, DICT, and PHILSA shall immediately include in their respective programs the implementation of this Act, the funding of which shall be included in the annual General Appropriations Act.

The implementation of Section 11 of this Act, the Digital Horizon Pilot Schools will be provided with an initial amount of Five Hundred Million Pesos (P 500,000,000.00) in the succeeding General Appropriations Act upon ratification of this Act.

Section 26. Implementing Rules and Regulations. – Within one hundred-twenty (120) days from the effectivity of this Act, the DepEd and DICT, in coordination with other concerned

agencies of the government and the private stakeholders, shall promulgate the necessary rules and regulations for the effective implementation of this Act.

Section 27. Separability Clause. – If any provision of this Act is declared unconstitutional, the remainder of this Act or any provision not affected thereby shall remain in full force and effect.

Section 28. Repealing Clause. – All laws, executive orders, presidential decrees, proclamations, rules, regulations, issuances and enactments or parts thereof inconsistent with this Act are hereby repealed or modified accordingly.

Section 29. Effectivity. – This Act shall take effect fifteen (15) days after its publication in the Official Gazette or in a newspaper of general circulation.

Approved,