

REPUBLIC OF THE PHILIPPINES  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session

House Bill No. 6787

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Introduced by **HON. KRISTINE ALEXIE B. TUTOR**  
Third District, Bohol

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EXPLANATORY NOTE

In recent years, the Philippines has been recognized as one of the top internet users in the world, with Filipinos averaging 10 hours and two minutes of screen time every day.<sup>1</sup> The Digital 2019 report of social media firms Hootsuite and We Are Social showed that Filipinos spent an average of four hours and 12 minutes on social media platforms, almost double of the global average of two hours and 16 minutes.<sup>2</sup>

And with more mobile subscriptions than there are people in the country—109.2 for every 100 inhabitants, according to the *Measuring the Information Society Report 2017* of the International Telecommunications Union (ITU)—the foundations are there for the Philippines to blossom into a truly digital society. But just as the experience with the COVID-19 outbreak and the subsequent Luzon-wide enhanced community quarantine has demonstrated, several gaps and institutional deficiencies persist—underscoring the need for a comprehensive digital transformation policy to be rolled out and implemented, one that is especially focused on digital skills and competencies.

Leveraging on the Filipinos' interest and presence in the digital space and in order to foster digital competency in support of the country's economic and social development goals, this bill seeks to create a national framework for digital competency with focus on information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The proposed digital competency framework is patterned after the European Commission's DigComp 2.0<sup>3</sup>, which identified the five key components of digital competence.

Among the key provisions in the bill is the adoption of information and communication technology (ICT) competency for teachers, since building digital competency should encompass all forms of learning. The proposed provisions were adapted from the 2011 United Nations Educational, Scientific and Cultural Organization (UNESCO) ICT Competency for Teachers, aimed at helping countries develop comprehensive national teacher ICT competency policies and standards and integrate these in overarching ICT in

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<sup>1</sup> <https://www.theguardian.com/technology/2019/feb/01/world-internet-usage-index-philippines-10-hours-a-day>

<sup>2</sup> <https://www.philstar.com/business/technology/2019/01/31/1889736/filipinos-are-worlds-heaviest-internet-users-2018-report-says>

<sup>3</sup> <https://milunesco.unaoc.org/mil-resources/digital-competence-framework-for-citizens/>



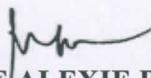
education plans.<sup>4</sup> A 2019 United Nations Conference on Trade and Development (UNCTAD) Report highlights that traditional teaching curricula and training programs contribute to the enhancement of digital skills and at the same time, digital technologies facilitates learning by providing education access to those who might not be able to benefit from formal education.<sup>5</sup>

The bill also seeks to establish and institutionalize a national digital transformation strategy, and a national digital skills development strategy to ensure that every citizen is given the opportunity to understand ICT and develop the necessary skills and ability to apply ICT in their everyday lives.

Finally, the bill also creates the National Digital Transformation Council who will oversee policy formulation for the national digital competency framework and facilitate the development and implementation of the proposed strategies under the bill.

This measure falls under our broad effort towards the formulation and sustained implementation of a “Tatak Pinoy” industrialization campaign and policy that helps Filipino enterprises move up the value chain, Filipino entrepreneurs to produce better quality products, and Filipino professionals to render world-class services.

In view of the foregoing, the passage of this bill is earnestly sought.



HON. KRISTINE ALEXIE B. TUTOR

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<sup>4</sup> <https://en.unesco.org/themes/ict-education/competency-framework-teachers>

<sup>5</sup> [https://unctad.org/en/PublicationsLibrary/dtlstict2019d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/dtlstict2019d3_en.pdf)

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Third District, Bohol

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**AN ACT**  
**PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND**  
**FOR OTHER PURPOSES**

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

1                           **TITLE I**  
2                           **STATE POLICIES AND BASIC PRINCIPLES**  
3                           **CHAPTER I**  
4                           **State Policies**  
5

6                           **SECTION 1.** *Short Title.* – This Act shall be known as the “*National Digital*  
7                           *Transformation Act*”.

8  
9                           **SEC. 2. Declaration of State Policy.** – It is hereby declared policy of the State to  
10 integrate digital technology into all areas of government that will greatly improve Philippine  
11 governance, socio-economic development and services to people. Consequently, the State  
12 shall create a plan that shall transform the government into a digital platform providing  
13 transparent and accountable governance, efficient operations, direct citizen engagement, and  
14 innovation.

15                           **CHAPTER II**  
16                           **Definitions of Terms**

17                           **SEC. 3. Definition of Terms.** – The following terms as used in this Act shall mean:  
18                           (a) “*21st century skills*” refer to skills that are required by new jobs such as critical  
19                           thinking, problem solving, good communication, collaboration, information and  
20                           technology literacy, flexibility and adaptability, innovativeness and creativity.

- 1                   (b) “*Automatic and Artificial Intelligence*” refers to combining technology such as  
2                   Robotics Process Automation or RPA, Artificial intelligence (AI) and machine  
3                   learning;
- 4                   (c) “*Big Data and Analytics*” refers to data discovery process using techniques and  
5                   tools like mining useful information or insights from huge sets of data either  
6                   structure or unstructured. This is enabled through exponential increase in both  
7                   computing power and storage capacity;
- 8                   (d) “*Cloud Computing*” refers to the delivery of IT services hosted over the  
9                   internet to transform compute resources into a utility;
- 10                  (e) “*Data*” refers to a sequence of one or more symbols given meaning by specific  
11                  act(s) of interpretation. Data can be analysed or used in an effort to gain  
12                  knowledge or make decisions. Digital data is represented using the binary  
13                  number system of ones (1) and zeros (0) as opposed to its analogue  
14                  representation;
- 15                  (f) “*Digital Competence*” refers to the confident, critical, creative, relevant and  
16                  responsible use of, and engagement with, digital technologies for learning or  
17                  education, for work or occupation, and for participation in society;
- 18                  (g) “*Digital content*” refers to any type of content that exists in the form of digital  
19                  data that are encoded in a machine-readable format, and can be created, viewed,  
20                  distributed, modified and stored using computers and digital technologies, e.g.  
21                  the internet. The content can be either free or pay content such as web pages and  
22                  websites, social media, data and databases, digital audio, such as mp3s, and e-  
23                  books, digital imagery, digital video, video games, computer programmes and  
24                  software.
- 25                  (h) “*Digital entrepreneurship*” refers to combining traditional entrepreneurship  
26                  with new digital technologies, thus creating digital enterprises which are  
27                  characterized by a high intensity of utilization of novel digital technologies,  
28                  particularly social media, big data analytics, mobile and cloud solutions to  
29                  improve business operations, invent new business models, sharpen business  
30                  intelligence, and engage with customers and stakeholders;
- 31                  (i) “*Digital services*” refer to public or private services that can be delivered  
32                  through digital communication, such as Internet, mobile phone network that

1 might include delivery of digital information, data or content or transactional  
2 services;

- 3 (j) “*Digital skills*” refer to range of abilities, from basic to more advanced,  
4 encompassing a combination of behaviors, expertise, know-how, work habits,  
5 character traits, dispositions and critical understandings on the use of digital  
6 devices, communication applications, and networks to access and manage  
7 information;
- 8 (k) “*Digital technology*” refers to any product that can be used to create, view,  
9 distribute, modify, store, retrieve, transmit and receive information  
10 electronically in a digital form such as personal computers and devices like  
11 desktop, laptop, netbook, tablet computer, smart phones, PDA with mobile  
12 phone facilities, games consoles, media players, e-book readers, as well as  
13 digital television, and robots;
- 14 (l) “*Digital tools*” refer to technologies used for a given purpose or for carrying out  
15 a particular function of information processing, communication, content  
16 creation, safety or problem solving;
- 17 (m) “*Digital Transformation*” refers to the total and overall societal effect of  
18 digitalization;
- 19 (n) “*Digitization*” refers to the technical conversion from traditional to digital;
- 20 (o) “*Innovation*” refers to the creation of new ideas using new or existing  
21 technologies that results in the development of new or improved products,  
22 processes, or services, which are then spread or transferred across the market;
- 23 (p) “*Internet of Things (IoT)*” refers to everyday devices connected to the internet  
24 through sensors and computing power to monitor and manage actions, offering  
25 users greater influence over their environment;
- 26 (q) “*Social inclusion*” refers to the process of improving the terms for individuals  
27 and groups to take part in society (World Bank). Social inclusion aims to  
28 empower poor and marginalized people to take advantage of burgeoning global  
29 opportunities. It ensures that people have a voice in decisions which affect their  
30 lives and that they enjoy equal access to markets, services and political, social  
31 and physical spaces;
- 32 (r) “*Well-being*” is related to the World Health Organization definition of good  
33 health as a state of complete physical, social and mental well-being, and not

merely the absence of disease or infirmity. Social well-being refers to the sense of involvement with others and with the communities such as access and use of social capital, social trust, social connectedness and social networks;

**TITLE II**  
**DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS**  
**CHAPTER I**  
**Functions**

**SEC. 4.** *Digital Competence Framework for Citizens.* – A Digital Competence Framework for Citizens is hereby created. It shall serve as a tool to improve the digital competence of citizens and a guide in the formulation of policies that support digital competence building. The framework shall include education and training initiatives to improve the digital competence of various specific target groups.

The essential knowledge, skills, and attitudes that comprise digital competence are, generally classified as follows:

(a) *Information and Data Literacy.* – The ability to articulate information needs, to locate and retrieve digital data, information and content, to judge the relevance of the source and its content and to store, manage, and organize digital data, information and content. The skills are as follows:

1. Browsing, searching and filtering data, information, and digital content
2. Evaluating data, information, and digital content
3. Managing data, information, and digital content

(b) *Communication and collaboration.* – The ability to interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity, to participate in society through public and private digital services and participatory citizenship and to manage one's digital identity and reputation. The skills are as follows:

1. Interacting through digital technologies
2. Sharing through digital technologies
3. Engaging in citizenship through digital technologies
4. Collaborating through digital technologies
5. Netiquette
6. Managing digital identity

1           (c) *Digital Content Creation.* – The ability to create and edit digital content, to  
2 improve and integrate information and content into an existing body of knowledge while  
3 understanding how copyright and licenses are to be applied, and to know how to give  
4 understandable instructions for a computer system. The skills are as follows:

- 5           1. Developing digital content
- 6           2. Integrating and re-elaborating digital content
- 7           3. Copyright and licenses
- 8           4. Programming

9           (d) *Safety.* – The ability to protect devices, content, personal data and privacy in digital  
10 environments, to protect physical and psychological health, and to be aware of digital  
11 technologies for social well-being and social inclusion, as well as to be aware of the  
12 environmental impact of digital technologies and their use. The skills are as follows:

- 13           1. Protecting devices
- 14           2. Protecting personal data and privacy
- 15           3. Protecting health and well-being
- 16           4. Protecting the environment

17           (e) *Problem Solving.* – The ability to identify needs and problems, and to resolve  
18 conceptual problems and problem situations in digital environments, to use digital tools to  
19 innovate processes and products and to be updated with the digital evolution. The skills are as  
20 follows:

- 21           1. Solving technical problems
- 22           2. Identifying needs & technological responses
- 23           3. Creatively using digital technologies
- 24           4. Identifying digital competence gaps

25           The Department of Information and Communications Technology (DICT) and the  
26 Department of Education (DepEd) in collaboration with the Commission on Higher  
27 Education (CHED), and the Technical Education and Skills Development Authority  
28 (TESDA) shall design and develop an instrument to measure and certify citizens' digital  
29 competence based on the framework. These agencies shall consult experts in the field of  
30 various technologies necessary for digital transformation, such as but not limited to cloud  
31 computing, automatic and artificial intelligence, robotics, big data and other disruptive  
32 technologies.

1

## CHAPTER II

### ICT Competency Framework For Teachers

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4     **SEC. 5. ICT Competency Framework for Teachers.** – An ICT-Competence Framework  
5     for Teachers is hereby created. This shall be used to outline the competencies that teachers,  
6     educators, and trainers need in order to integrate Information and Communication  
7     Technologies (ICTs) into their professional practice.

8         The framework shall be used to compare the teachers' competencies in different  
9     regions, provinces, cities, and municipalities in order to analyze and develop educational  
10    programs and training courses for teacher professional development at national or regional  
11    level.

12         The required competencies are defined as the intersections of the three approaches to  
13    teaching, as follows:

- 14             (a) **Technology literacy approach** shall enable students to use ICT in order to learn  
15         more efficiently and increase the extent to which new technology is used by  
16         students, citizens and the workforce by incorporating technology skill into the  
17         school curriculum. The goal of the technology literacy approach is to enable  
18         learners, citizens, and the workforce to use ICT to support social development and  
19         improve economic productivity.
- 20             (b) **Knowledge deepening approach** shall enable students to acquire in-depth  
21         knowledge of their school subjects and apply it to complex, real-world problems;  
22         and increase the ability of students, citizens, and the workforce to use knowledge  
23         to add value to society and the economy by applying it to solve complex, real-  
24         world problems. The aim of the knowledge deepening approach is to increase the  
25         ability of students, citizens, and the workforce to add value to society and to the  
26         economy by applying the knowledge gained in school subjects to solve complex,  
27         high priority problems encountered in real world situations of work, society and in  
28         life generally.
- 29             (c) **Knowledge creation approach** shall enable students, citizens and the workforce  
30         they become, to create the new knowledge required for more harmonious,  
31         fulfilling and prosperous societies; and increase the ability of students, citizens,  
32         and the workforce to innovate, produce new knowledge, and benefit from this new  
33         knowledge. The aim of the knowledge creation approach is to increase  
34         productivity by creating students, citizens, and a workforce that is continually

engaged in, and benefits from, knowledge creation, innovation and life-long learning. The six aspects of a teacher's work, under the framework are as follows:

1. Understanding ICT in education
  2. Curriculum assessment
  3. Pedagogy
  4. ICT
  5. Organization and administration
  6. Teacher professional learning

The modular structure of learning shall be encouraged. Teacher-education institutions and providers of professional learning shall design offerings that address and is aligned to the overall goals and rationale of the Framework.

# **PART III**

## **NATIONAL DIGITAL SKILLS STRATEGY**

### **CHAPTER I**

#### **Definitions**

**SEC. 6. National Digital Transformation Strategy.** – A National Digital Transformation Strategy shall be created. The Strategy shall ensure that every citizen shall have the opportunity to understand ICT and develop skills and ability to apply the ICT in their work, vocation, business, and life in society. The Strategy shall include, but not limited to:

- (a) *Affordable and clean energy and growth*, which includes plans and programs to ensure competitive costs as well as lower adverse impact to the environment;
  - (b) *Digital inclusion*, which includes plans and programs to spread growth across the country, and identify potential areas for various industries to unlock growth, increase skill levels, or promote local innovation;
  - (c) *Infrastructure*, which includes concrete plans and strategies to develop and upgrade performance on digital, energy, and transport infrastructure, to effectively align central government infrastructure investment with local growth priorities;
  - (d) *Institutional framework*, which includes strategies and directions to establish or improve existing institutions such as innovation councils, local educational institutions, trade associations or financial networks;

- 1                   (e) *Procurement policy*, which includes concrete and specific plans in the  
2 government procurement in order to drive innovation and enable the  
3 development of effective, efficient and transparent supply chains across the  
4 country;
- 5                   (f) *Science, research, and innovation*, which include concrete set of plans and  
6 strategies to ensure a knowledge economy, create and commercialize intellectual  
7 property that will promote and enhance the global brand of the Philippines;
- 8                   (g) *Sectoral engagement*, which includes plans, policies and strategies programs to  
9 enhance areas of competitive advantage, and help new sectors to grow;
- 10                  (h) *Skills*, which include concrete plans and strategies to ensure that the Filipino  
11 workforce is equipped with the relevant and necessary 21<sup>st</sup> century skills for  
12 them to thrive in a modern economy and build learning organizations and  
13 systems to benefit the everyone especially those who are not able to attend or  
14 complete formal education, and enhance science, technology, engineering, and  
15 math (STEM) skills and numeracy, and raising skill levels especially in  
16 underprivileged areas;
- 17                  (i) *Trade and inward investment* which includes plans and strategies to boost  
18 productivity and growth across the economy by increasing competition and  
19 helping to bring innovation and new ideas, systems and processes; and
- 20                  (j) *Supporting businesses to start and grow*, where we the government must ensure  
21 that businesses across the country can access the finance and management skills  
22 they need to grow; and create the conditions to enable firms to invest for the  
23 long term.

24

25                  **SEC. 7. Digital Inclusion.** – The DICT shall enable all citizens, irrespective of age,  
26 gender, physical ability, ethnicity, health conditions, or socio-economic status to access the  
27 opportunities of the internet. Citizens, businesses and public services must take full advantage  
28 of the transformational benefits of the digital revolution. The Department must identify the  
29 root causes of digital exclusion in all sectors and regions for the purpose of increase their  
30 digital competence.

31                  The DICT shall identify and develop the full range of digital skills that individuals  
32 and companies across the country need to address the requirements of a digital economy and  
33 instill measures and programs for citizens to continuously up-skill and re-skill throughout  
34 their working lives.

1 It shall also develop a strong collaboration between the public, private, and  
2 educational sector to address the digital skills gap in a coherent and holistic way.

3

4 **SEC. 8. Digital Libraries and Learning Hubs.** - The DICT and the National Library  
5 of the Philippines shall enhance and promote the role of libraries in improving digital  
6 communication, increasing citizen's digital footprint, promoting digital inclusion and  
7 transform these libraries as providers of digital access, training and support for local  
8 communities.

9

10 **SEC. 9. Digital Entrepreneurship.** – The Department of Trade and Industry (DTI) and  
11 the DICT shall strongly promote the digitization of businesses according to their own specific  
12 digital needs, mainly focused on these four core digital activities, namely maintaining a web  
13 presence, selling online, using the cloud, and digitizing back-office functions such as payroll  
14 and human resource management, in order to become or remain competitive. The DTI shall  
15 ensure that entrepreneurs undertake the certification under the digital competence framework  
16 for citizens to identify areas the need training and intervention.

17

18 **SEC. 10. Digital Civil Service.** – To ensure the highest standards of public service,  
19 the DICT and the Civil Service Commission shall identify and consolidate all the skills and  
20 competencies of public employees in the career service and recommend and cause the  
21 conduct of digital skills training under an annual digital skills mapping activity. All public  
22 employees shall be covered under a mandatory basis of certification under the digital  
23 competence framework for citizens to identify areas the need training and intervention.

24

25 **CHAPTER II**

26 **National Digital Skills Development Strategy**

27

28 **SEC. 11. National Digital Skills Development Strategy.** – The State shall create  
29 digital skills development strategy that will:

- 30 (a) Identify the digital skills development goals for:  
31     1. Primary education  
32     2. Secondary education  
33     3. Tertiary education, for students, and digital technology development and design  
34       experts

4. Work-related digital skills training programs for out-of-school youth, including for freelancers and part-time workers;
  5. Work-related digital skills training programs for adults requiring re-skilling;
  6. Skills for life in the digital economy for all citizens;
  7. Training programs both for life and work for under-represented populations;
  8. Develop or plan for a digital entrepreneurship skills strategy.

(d) Inventory existing policies, plans and programs that support the development of digital skills and analyze how they can be used to support the goals of the digital skills strategy

(e) Benchmark the goals against existing frameworks or countries with similar goals as well as identify the existing priorities and challenges in meeting the above goals as well as identify promising solutions for providing digital skills that address the common challenges

(f) Identify current and future trends in relation to demographic trends, technological changes, business trends, trade, industrial policies, and the shift to a greener, digital and knowledge-based economy

(g) Identify available training programs, curriculum and providers that can be leveraged to meet the strategy's goals and develop new curricula where necessary as well as identify gaps in training programs and curricula – and identify providers and strategies that will help fill them.

(h) Identify and recommend new policies and programs that are needed and conduct advocacy both using the existing policies and to build support for new policies.

## **CHAPTER III**

### **Digital Jobs**

**SEC. 12. Digital Jobs.** - The DICT in coordination with Department of Labor (DOLE) and other concerned agencies shall provide jobs which are in line with freelancing, virtual work, homebased digital activities, and the like.

## National Digital Transformation Council

**SEC. 13. National Digital Transformation Council.** – The National Digital Transformation Council is hereby created to ensure the effective implementation of this Act.

**SEC. 14. Composition of the Council.** – The Council shall be composed of:

- (a) DICT
  - (b) Department of Science and Technology (DOST)
  - (c) DTI
  - (d) DOLE
  - (e) DEPED
  - (f) CHED
  - (g) TESDA
  - (h) At least ten (10) members coming from the private sector that is involved in digital skills development, digital industries and jobs, or digital systems and products.

**SEC. 15. Functions of the Council.** – The following are the functions of the Council:

- (a) Take the lead in the formulation and implementation of specific rules for the National Digital Competence Framework for Citizens;
  - (b) Oversee the development and implement the National Digital Transformation Strategy, the ICT Teachers Competency Framework, and National Digital Skills Development Strategy;
  - (c) Recommend, propose or endorse any measure related to the above functions to concerned line agencies for purposes of administrative concerns, to the private sectors, schools or other business entities for policy guidance, and to Congress for policy purposes
  - (d) Provide a report to Congress and to the Office of the President on the progress of the implementation of this Act

**SEC. 16. Council Secretariat.** – The DICT shall provide secretariat support to the Council.

## **TITLE IV**

# **COMMON PROVISIONS**

**SEC. 17. Implementing Rules and Regulations.** – Within sixty (60) days from the effectivity of this Act, the DOLE and DICT together with relevant stakeholders shall promulgate the necessary implementing rules and regulations (IRR) of this Act.

1           **SEC. 18.** *Appropriations.* – The amount necessary for the effective implementation of  
2 the provisions of this Act shall be included in the General Appropriations Act for the year  
3 following the approval of this Act.

4

5           **SEC. 19.** *Repealing Clause.* – All other laws, decrees, executive orders and rules and  
6 regulations contrary to or inconsistent with the provisions of this Act are hereby repealed or  
7 modified accordingly.

8

9           **SEC. 20.** *Separability Clause* – If any provision of this Act is held invalid or  
10 unconstitutional, the same shall not affect the validity and effectivity of the other provisions  
11 hereof.

12

13           **SEC. 21.** *Effectivity* – This Act shall take effect fifteen (15) days after its publication  
14 in the *Official Gazette* or in any newspaper of general circulation.

*Approved,*