



DEPARTMENT OF EDUCATION

**Five-Year
Information and Communication
Technology for Education
Strategic Plan
(DepED ICT4E Strategic Plan)**

EXECUTIVE SUMMARY

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Executive Summary

Our Vision for ICT in Education

Following the overall vision of the Department of Education (DepED), our vision is “21st Century Education For All Filipinos, Anytime, Anywhere. This means an ICT-enabled education system that transforms students into dynamic life-long learners and values-centered, productive and responsible citizens.

ICT plays a major role in creating a new and improved model of teaching and learning where education happens anytime, anywhere. To achieve this vision, we will continue to use ICT to:

- revitalize our schools to make them into dynamic, collaborative and innovative learning institutions where students can become more motivated, inquisitive and creative learners.
- link up our students with the vast networked world of knowledge and information to enable them to acquire a broad knowledge base and a global outlook and provide them with the resources for the development of a creative mind;
- develop in our students skills and capabilities to critically and intelligently seek, absorb, analyse, manage and present information;
- create new knowledge and products; and
- develop in our students habits of self-learning to nurture the attitude and capability for lifelong learning.

In order to achieve our vision within the next five years, we aim to:

- completely integrate ICT into the curriculum, which includes the development of multimedia instructional materials, and ICT enabled assessment;
- intensify competency based professional development programs;
- establish the necessary ICT infrastructure and applications.
- develop processes and systems that ensure efficient, transparent and effective governance;

The key thrusts of this strategy are:

- Enhancing Curriculum
- Empowering Teachers, Administrators, Officials and Students
- Strengthening Schools, Governance and Management

Policy Context: Importance of the Strategic Plan

ICT in Education – Asia-Pacific

Asia-Pacific countries have recognized the importance of ICT in education. They have responded to this challenge by formulating policies and developing strategies in different ways. Some, such as South Korea and Singapore are further down the path of ICT for education, while others, such as Thailand and Cambodia are in the early stages of planning and preparation.

ICT in Education – Global

On a global scale, the use of ICT in education is well underway. The extent to which a country has created and diffused technology and built a human skill base varies considerably. Leaders are countries such as Finland, the United States and the United Kingdom who are at the cutting edge of technological innovation.

ICT in Education – the Philippines

Policy: past and present

The Philippine Government has shown serious commitment to ICT in education by announcing a series of initiatives to apply ICT in teaching and learning. These were aligned to the Millennium Development Goals and the Education For All movements. They have provided a global policy environment for the directions and nature of interventions towards the achievement of improved access to and quality of basic education. Other key policy documents have identified the need for ICT reform within the education sector and these have resulted in more prioritising from regions, schools and teachers regarding the incorporation of ICT into the education system. It is within this context of policy initiatives that this Five-Year ICT Strategic Plan has been developed.

The current situation

Current ICT integration in education remains a large task. For example, student-computer ratios and teacher-computer ratios can be improved. The education system as a whole lacks infrastructure for connectivity and access to technologies. While most of the teacher training institutions (TEIs) have incorporated computer courses into their curriculum as a requirement for graduation, computer literacy is not a requirement for teacher certification/licensure. Partly due to this reason, in-service training is generally limited to basic computer literacy. Therefore, there is a need for more training on integrating ICT into the curriculum.

Fortunately, more government funds are being channelled into ICT for education. Private sector and foreign donors are increasing their support for this agenda. There is a need to consolidate these efforts and help to ensure that the Philippines will realize its ICT4E goals.

Moving Towards an Enhanced Curriculum

The Enhanced Curriculum

The overall curricular goals outlined in BEC remain valid. ICT is simply a tool to more effectively and efficiently achieve these goals. However, to be able to effectively use this tool, students, teachers, school managers and administrators should achieve a certain level of competence in the use of ICT.

ICT Learning targets for students have been identified in the following six areas:

- Basic operations and concepts

- Social, ethical and human issues
- ICT for Producing
- ICT for Communicating
- ICT for Researching
- ICT for Problem-solving

Students will acquire these skills, attributes and knowledge progressively across the formal years of schooling. ICT will be embedded across the curriculum and will be perceived and used as a new approach to teaching and learning.

Competency standards for ALS learners and Technical-Vocational High School Students have also been developed for this ICT4E Strategic Plan.

The use of ICT in teaching and learning must be accompanied by a corresponding enhancement of the school curriculum. However, in the initial stages of this Strategic Plan, it is suggested that ICT be integrated within the existing curriculum. Therefore, it is envisaged that curriculum reform will proceed by two stages; (1) enhancing the level of awareness and use of ICT in the existing curriculum and (2) full integration of ICT in the enriched curriculum.

Multimedia Instructional Materials Development

Already, various independent initiatives within DepED have developed customized teaching and learning digital content tied to the curriculum. These materials are being collated and are available for use by teachers through the DepED website. However, access to existing digital content remains limited and creating a comprehensive inventory of these materials continues to be a challenge.

In anticipation of the more widespread use of Multimedia Instructional Materials (MIM), a sector-wide Digital Content Development and Usability Framework has been drafted.

In the course of this plan's implementation, DepED will intensify the development and acquisition of MIM as supplement to, not as a replacement of, existing (printed) instructional materials.

ICT-enabled Assessment

DepED through BESRA is developing an Assessment Framework which requires a re-conceptualization of the national assessment system of the Department. This framework entails a range of actions that include development of assessment standards, tests and other instruments, conduct of training and advocacy programs and the formalization of assessment roles and responsibilities. Dovetailing with this major initiative, ICT will have the dual role of being one of the areas to be assessed and enabling the efficient and effective implementation of the assessment program.

The goals and outcomes of this plan are well articulated and will serve as the basis for the indicators in the actual instruments that will assess ICT integration and competencies. But more importantly, a sound approach in the use of ICT in assessment will open up new possibilities in the menu of available assessment methods. ICT can greatly improve assessment planning, collecting and analyzing of data and recording and reporting of findings. The main goal would be to lessen the reliance on traditional pen-and-paper tests and conduct a multi-dimensional portfolio assessment of the learner.

Competency Standards and Professional Development

In order to realize this ICT4E masterplan, ICT competency standards for teachers, education managers, school officials and non-teaching personnel/administrative staff shall be developed and adopted. A Competency Standards “is a document that specifies in a structured format how people should perform a job or work role. Organisations use competency standards. ... Competency standards attempt to capture the various dimensions that, when taken together, account for 'competent' performance.”

It is envisaged that this Strategic Plan will bring all schools, teachers, Educational Managers, School Administrators as well as Non-Teaching Personnel/Administrative Personnels to certain threshold levels of ICT provision and skills. Levels of provision for elementary, primary, secondary schools and alternative learning systems have been suggested.

Enterprise Architecture

In the first year of its implementation, DepED will design and implement an Enterprise Architecture (EA) to guide the development of interoperable ICT systems in the Department. This EA would define the various hardware and systems for pedagogy and professional development as well as governance and management.

The following principles shall guide the design and will be promoted by the DepED EA:

- Interoperable
- User-centric
- Sustainable
- Flexible
- Collaborative

EA – Administration and Management

The DepED EA would help achieve efficiency and effectiveness in operations. Through it, the DepED will establish an integrated service network that ensures efficient, transparent and effective governance and management. This relies on timely access to information, knowledge and funding. The EA would prescribe systems that would minimize the burden of data collection and reporting from key school personnel to allow them to focus on their critical tasks in pedagogy.

Among the systems that will be developed, in the order of priority, are:

- School-based Information Management System (includes raw data on enrollment, assets, number of teachers, etc)
- Enterprise Learning Management System,
- Human Resource Information System – that interfaces w/ GSIS, PhilHealth, BIR, DBM, banks, etc,
- Resources Management System
- Performance Management System

- Globalized Service Support
- Executive Information System (enhanced BEIS) with Geographical Information System (GIS)

EA – Pedagogy

In terms of pedagogy, the EA will allow the deployment of new modes of delivery envisioned by this ICT4E strategic plan. It shall pave the way for more collaborative and learner-centered pedagogy. The EA will help fulfill the goal of providing anytime, anywhere 21st century education for all.

It is envisaged that this ICT4E Strategic Plan will bring all schools and teachers to certain threshold levels of ICT provision and skills. This will directly aid our students in acquiring 21st century skills.

During the five-year period, the Department will provide a threshold minimum to public schools and would serve as the minimum requirement for private schools.

Governance

ICT Governance means “specifying the decision rights and accountability framework to encourage desirable behavior in the use of ICT”. ICT Governance determines who makes the final decisions on ICT in DepED. It is distinct from ICT “management” which is the process of making and implementing final decisions on ICT.

The DepEd will adopt an ICT Governance Framework in order to: 1) properly evaluate the ICT in the context of the Department’s needs and challenges; 2) set the direction of proposed ICT plans and policies; and 3) the monitor the performance of plans and conformance with policies.

The DepED ICT governance framework will be comprised of 1) a set of principles, 2) decision-making hierarchy and 3) tailor-made suite of reporting and monitoring processes.

DepED has taken an initial step in setting up an ICT governance framework in DepEd Order 1 s 2007. Within the first year of this plan’s implementation it will have a working ICT Governance Framework.

This ICT4E strategic plan recognizes the important role of DepED senior officials in ICT governance.

DepED is committed to ensuring that this ICT4E Plan is based on sound technology and efficient processes. To ensure this, a dedicated unit led by the DepED CIO is necessary. ICT coordinators shall serve as de facto CTO at their level.

Strengthening Schools and the Community’s Role

The successful integration of ICT into the Philippine education system will require a coordinated and comprehensive approach. DepED will lead in developing, implementing and coordinating all activities towards achieving our vision. DepED’s coordinating role includes planning and sustaining investment strategies to achieve our vision and facilitating collaboration between all key stakeholders.

To achieve this, DepED, will play a key role in coordination which will include planning and sustaining investment strategies to achieve our vision and facilitating collaboration between all key

stakeholders which includes school administrators, teachers, students, parents, the private sector and other community bodies.

The Role of Community

As learning will increasingly occur anywhere, anytime, the community will play a vital role as partners of DepED in ensuring a safe and responsible ICT learning environment. The wider community comprises the following groups: (a) parents, (b) tertiary institutions, (c) the private sector, (d) community centers and (e) local government units.

(a) Parents

In alignment with school-based management (SBM), it is recognized that parents will play a vital role in encouraging and guiding their children towards the achievement of 21st century skills. They are also the most important support mechanism for the success of SBM.

(b) Tertiary institutions

Tertiary institutions are well situated to be models of ICT implementation and use for schools. Many university departments and research groups have conducted successful programs, so that they are able to provide support and advice to schools.

(c) The private sector

DepED sees the private sector as an important partner in the implementation of this ICT4E strategy. Thus, it will continue to encourage the private sector to become involved in helping schools achieve the strategic thrusts of this Plan.

(d) Community centers

Local community facilities such as Community eCenters and local Internet Cafes will play an important role in overcoming the digital divide. Equity of access is an issue facing many Philippine students. While there are plans to increase the number of computers and access to ICT in each school, schools should continue to seek alternative ICT access for their students. This may include establishing an agreement with local Internet Cafes, providing students with vouchers to use in the cafes and where possible, making use of public internet access points.

(e) Local government units

With the implementation of SBM, the role of LGUs in school operations become increasingly important. They can provide significant resources that will enable schools to achieve the goals articulated in this plan. Strong relationships between LGUs and all public schools in its area of responsibility may be the key to achieving sustainable ICT-enabled schools.

Implementation

In the interim, the Undersecretary for Programs will oversee the implementation of this Strategic Plan with support from a fully-staffed ICT TC and the Information and Communication Technology Unit – Technical Service (ICTU-TS). In this, the Undersecretary for Programs will be guided by the targets and outcomes as outlined in the Plan.

It is underscored that all DepED units will be responsible for the implementation of this ICT4E Strategic Plan.

With the adoption of the DepED ICT Governance Framework, management of this plan will be transferred to the appropriate office.