Potentials of Information and Communication Technology as a Strategic Tool for Basic Education

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Introduction

Allow me to begin by congratulating the organizers of the First SEAMEO Education Congress not only for bringing together education experts, field practitioners, and other stakeholders in the Region but most especially the learners and end clients of the education sector who represent the future human infrastructure of Asia. Let me also say that the theme "Challenges in the New Millenium" is very well chosen as indeed it is most appropriate and significant.

I consider this Congress an opportunity for me to share my vision for information and communication technology as a strategic tool for basic education. In so doing it is my hope that you, who are the leaders of education in the Region may appreciate what we in the Philippines, specifically the Senate Committee on Education, Arts and Culture, are doing to push forward an agenda for information and communication technology (ICT) in basic education and in ensuring that funds are appropriated for its implementation.

THE TAO VISION

The vision is that by the year 2010, every school in the Philippines --- pre-school, elementary and high school, public and private --- will be a learning community committed to preparing a new generation of Filipinos to be productive citizens in an information society. Our schools will teach every Filipino boy and girl high quality information technology skills, facilitate knowledge opportunities and impart good values.

In fulfilling the vision, an integrated program of action is called for. It consists primarily of two parts. The first part is called ITEM 2004 or Information Technology for Education Managers. The second part shall be called "e-LEARNING" 2010.

PROJECT TAO I AND II

For the information of the Congress, I wish to say that we already have made considerable strides in terms of establishing the infrastructure for the use of information technology as a tool for education decision makers and managers. It all began with Project TAO I or Teachers Advancement for Optimum Well-Being I which is a nationwide survey that was able to arrive at a profile of the school teacher in the Philippines, particularly his personal and professional circumstances and the learning environment in which he operates. From data generated in Project TAO I, a second project known as Project TAO II was conducted.

Project TAO II expanded the database to include all Department of Education, Culture and Sports (DECS) personnel --- teaching and nonteaching --- and established a Personnel Management Information System (MIS) for use by the DECS Central Office Planning and Personnel Divisions, by all 16 DECS Regional Offices and 143 DECS Schools Divisions. The training of all DECS regional and division MIS and planning officers on the use and maintenance of the Personnel Management databases
has been completed. The computer systems have been deployed to all DECS and schools divisions for that purpose.

**PROJECT TAO LEADS (Leadership in the Effective Administration of Schools) I AND II**

Leadership for the Effective Administration of Schools (LEAD I) is an executive program on the use of information and communication technology for management and for effective system improvements at the regional offices and schools divisions. Project TAO LEADS II on the other hand, is a continuing program on school-based management, instructional leadership and technology applications for school heads. In this course school principals are given training to become the Chief Executive Officers (CEOs) and Technology Leaders of their schools.

Last year we conducted Project LEADS courses for all regional directors, assistant regional directors, schools division superintendents and assistant schools division superintendents, selected school heads of public elementary and secondary schools and selected planning, personnel and Management Information System (MIS) staff from the central office. This year we will continue with the training of more school heads of selected public elementary and secondary schools.

**PROJECT TAO CARES (Computer Assisted Reforms for Schools) I AND II**

Project TAO CARES or Computer Assisted reforms for Schools will begin with a nationwide survey of the information and communication technology (ICT) preparedness of every school --- public and private --- in the country. The result of the nationwide survey will be used as basis for another major legislative intervention in the educational landscape. I refer to the modernization of basic education which shall be an investment program that will provide the funds needed by DECS to introduce information and communication technology (ICT) facilities in the schools for use by school heads and in the classrooms for use by the teachers to improve teaching and enhance learning.

The project consists of two components. One component shall be known as SEAMS or Systems for the Effective Administration and Management of Schools. SEAMS shall be used by school heads for decision-making and shall include a database of personnel (from Project TAO I) and pupils, as well as a database of all school resources including school buildings, desks, textbooks and other instructional materials. The other component shall be known as TSS or Teacher Support System. Teacher Support System (TSS) shall provide information and communication technology (ICT) assistance to help teachers prepare their lesson plans and keep class records including the computation of pupils' grades.

A pilot program is envisioned for Region III, one of the 16 regions in the country. The schools and district offices of this region will be provided with computerized management and operation support tools and the necessary platform to aid school-based management.

The schools and district offices will be "wired" to the regional office and the central office so that planning, resource allocation, administration and program management at the division level may be more effective and efficient.

Based on the results of the pilot program in Region III it is hoped that project TAO CARES will be expanded so that implementation and adoption of the
information and communication technology (ICT) packages of the System for the Effective Administration and Management of Schools (SEAMS) and the Teacher Support System (TSS) will be extended to all regions of the country. CARES II will be a colossal project which will now require funds only Congress can appropriate. This is the reason why I intend to sponsor for this purpose a bill on "Modernizing Basic Education". This initiative needs substantial information dissemination to various sectors in the country in order to generate public support for the bill and push for its early passage into law.

PROJECT TAO CONNECTS I

You will note that the interventions to install ICT facilities and provide ICT training for use by education managers in decision-making are “stand-alone” facilities. By “stand-alone” I mean ICT facilities to generate valuable information are accessible only by individual field offices; that is by the central office alone, or by the regional office alone, or by the schools division office alone. But we do not need a “stand-alone” ICT facility. What we need is an ICT network.

Project TAO CONNECTS I will provide connectivity facilities through internet service providers from the Central Office Planning Division to all 16 DESC Regional Offices and to all 143 DECS Schools Divisions in the country. With the Central Office Planning Division as the national hub, information may now be accessed – subject to security controls – at various levels of the DECS hierarchy.

ITEM 2004

All the TAO projects are ICT projects for education managers. These projects constitute the first part of the initiative for information communication technology in basic education which I shall call ITEM meaning information Technology for Education Managers as ITEM 2004 because I expect to complete all these projects before the end of my six-year term as a Senator in June 2004.

E-Learning 2010

Let me now share with you the second part of the initiative which I shall call E-Learning 2010. “E-Learning” is to indicate that the timeframe is a period of 10 years to begin in 2001 and end in 2010. As I said earlier my term as a senator ends in 2004. What happens after then is something I will leave for the future to determine.

What is “E-learning 2010”? “E-Learning 2010” is ICT for the classroom, for use as tools to improve teaching and enhance pupil learning. Hence, it is a total package of policy interventions and program initiatives designed to develop learner skills and competencies for generating, processing and utilizing information; facilitate access to knowledge and knowledge opportunities; and inculcate appropriate values and sound behavior towards the benefits of IT and its many applications.

“E-Learning 2010” involves a two-tired strategy and focus: the teacher and the learner.
FOCUS ON THE TEACHER

One can never begin any reform program – especially a reform program for IT in basic education unless the teacher is prepared and prepared well. If the teacher must teach using ICT applications and teach the learner skills to access knowledge through ICT and ICT applications, then the future and present teachers must be our first concern.

Our teacher education institutions must now integrate in the teacher education curriculum a subject on knowledge management for them to acquire the knowledge-skills and be trained in its proper and effective utilization. If we begin now, then by year 2005, we shall have the first batch of teacher graduates ready and able to manage knowledge and knowledge-skills in our classrooms.

This is the great challenge that faces all our teacher education institutions in the country today!

I refer to the task of re-tooling and re-training every schoolteacher in the country so that they too will acquire technology-enhanced teaching skills. There must be a continuing initiative in the education sector towards the development of knowledge management skills among all schoolteachers. The education sector in the country has my full and wholehearted support in this regard.

FOCUS ON THE LEARNER

I hope that by now you are with me in believing that every school in the country and the region must be transformed into learning communities that will enable the development of knowledge skills among our pupils and students.

Let us envision a scenario where – by year 2010 – every elementary school graduate will have acquired basic ICT skills; developed fundamental thought processes and thinking skills; and acquired positive and sound values for ICT and its applications. On the other hand, every high school graduate will have acquired competencies and skills in utilizing information and communication technologies in preparation for further higher learning or for the world of work.

CLOSING REMARKS

In closing, let me invite you to imagine with me how tomorrow’s schools will look like: Tomorrow’s schools will have classrooms fully equipped with ICT and other multimedia facilities that will enable the teacher to facilitate learning; the learner to access knowledge and acquire knowledge skills and the values needed to become productive citizen in an information society; and the school heads to make informed and intelligent decisions for a more effective and efficient administration and management of schools.

It may be true that the educational system in our country, as in other developing countries in the Region, needs to spend considerable effort in the are of ICT and its use and application for teaching, for learning and for decision-making. But I am confident that if we engage in open sharing of both our successful and not-so-successful experiences, work together and help each other; we in the Region shall
be able to gain inroads in the use of ICT as a tool for education and give our schoolchildren and other learners the high quality of basic education they truly deserve.

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