

Building and sustaining national ICT/education agencies:

Lessons from the Philippines

*World Bank Education, Technology & Innovation:
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The *World Bank Education, Technology & Innovation: SABER-ICT Technical Paper Series* explores a variety of topics and issues related to the use of information and communication technologies (ICTs) in the education sector.

The Systems Approach for Better Education Results (SABER) initiative seeks to improve the global knowledge base related to education systems analyses, assessments, diagnoses, and opportunities for dialogue. SABER-ICT aims to improve the availability of policy-related data, information, and knowledge on what matters most in using ICTs to improve the quality of education.

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Executive summary

Beginning in 1996, the Department of Education (DepEd) started to implement the first large scale ICT/education initiative in the Philippines. This effort was later strengthened and expanded to become the DepEd Computerization Program and DepEd Internet Connectivity Program (DCP/DICP). This was a huge undertaking for DepEd, both to oversee and to implement. Fortunately, many groups were willing to help – other government agencies, international and non-government organizations, private sector, local government units and higher education institutions. That said, coordinating the large scale implementation of ICT/education initiatives by many organizations alongside DepEd's projects proved to be a challenge, especially in an absence of a clear national vision or direction and with no related national standards to meet. Diverse and unclear responsibility for tracking individual projects and initiatives, as well as related donations and support from partners and key stakeholder groups, made it difficult to share information and expertise, coordinate public-private partnerships, and replicate and scale up successful projects.

Many countries have created a distinct agency to coordinate and implement ICT/education. In the early stages of the introduction of ICTs in education in the Philippines, the government largely resisted this idea, although a number of related oversight and implementation models were proposed. Absent such an organization and/or related formal institutional structure, education policymakers, stakeholders and practitioner groups explored other options.

An examination of the Philippine experience circa 2012, where no national ICT/education agency existed but where many of the typical functions of such an agency related to coordination and oversight were in demand, offers several lessons related to options and lessons for countries that choose not to coordinate their national ICT/education efforts through a central agency or institution.



1. Introduction: Context and background

Issues related to ICT use in education in the Philippines are best understood within the larger context of the development of the IT sector in the country more broadly. In 1997, the National Information Technology Center (NITC) of the Philippines developed a master plan called “I.T. Action Agenda for the 21st Century”. The goals were:

“By the turn of the 21st century, the Philippines will have laid the infrastructure for every business, every agency of the government, every school, and every home in the Philippines to have access to information technology.... By the year 2005, I.T. use will be pervasive in daily life. Philippine companies will be producing competitive I.T. products for world markets.... Within the first decade of the 21st century, the Philippines will be a Knowledge Center in Asia: a leader in I.T. education, in I.T. assisted training, and in the application of information and knowledge to business, professional services and the arts”¹.

To achieve these targets, the private sector recommended to the government to create a Department of ICT (DICT), a body with more power and authority than the NITC, to aid with policy development and the implementation of related projects and activities. However, a new law was required to do this. While politicians and lawmakers debated on the merits of having a separate department² for ICT, the government made interim arrangements. Most notably: In 1994, Executive Order (EO) 190 created the NITC. In 2000, EO 264 created the Information Technology & Electronic Commerce Council (ITECC), replacing the NITC. And in, in 2004, EO 269 created the CICT, replacing the ITECC

Since that time, CICT groomed itself to eventually become the DICT. However, in June 2011, the government (under new administration) issued Executive Order 47, transferring CICT to the Department of Science and Technology (DOST) and re-naming it as ICT Office (ICTO) . This move caught many groups, especially the local IT industry, by surprise. One of the local newspapers wrote: “Stakeholders in the Business Process Outsourcing (BPO) and Information, Communication Technology are disappointed by the recent implementation of Executive Order 47, saying it will cause a setback in the ICT sector in the country”.³ BPO is an important industry in the Philippines. It contributed to US\$ 9 billion to the economy and directly employing 500,000 people in 2012 – and was projected to grow rapidly.⁴ To express its concern over the apparent demotion of CICT, the IT-BPO sector issued the following statement:

“We were therefore surprised when we learned of Executive Order 47 ... We were disappointed that EO 47 was issued without the benefit of extensive stakeholder consultation, as we believe that this would have been highly beneficial to the development and execution of public policy on the key ICT sector ... Finally, we believe that the ICT sector is so critical to enhancing our national competitiveness and accelerating economic development that it merits even greater focus from the government, and the creation of a full department of government. Accordingly, we are continuing our long-standing support for the Department on ICT (DICT) ... We believe that further elevating the government’s prioritization of the ICT sector through the creation of a DICT will increase the ability of ICT to ensure the success not just of the IT-BPO industry but of the entire nation”⁵.

¹ National Information Technology Council. (1997). *IT 21 Philippines: Asia’s Knowledge Center (IT Action Agenda for the 21st Century)*. Manila: National Information Technology Council.

² In the Philippines, government ministries are called “Departments”, e.g. Department of Education = Ministry of Education in other countries.

³ “BPO stakeholders lament on EO 47 implementation”, *The Philippine Star*, July 9, 2011.

⁴ Business Processing Organization Philippines (BPA/P). (October 2010). *IT-BPO Road Map 2011-2016 Driving to Global Leadership*.

⁵ Statement by IT-BPO Industry Associations on Executive Order 47 and the Department of ICT Bill, July 8, 2011.

Hope was revived in February 2012 when lawmakers finally approved the DICT bill. At that point, people were waiting to see whether or not the President would sign the formal creation of the DICT, or would veto it. As of June 2012, news reports came out indicating that the government was “lukewarm to the DICT bill”.⁶

If the government showed reluctance to establish DICT, did this mean that the idea of a separate ICT/education agency for the Philippines – an institution commonly found in many other countries around the world and desired by many key actors in the Philippines -- would be a non-starter? Considering this question, the government (reasonably) asked: Why add another layer of bureaucracy to the country’s education sector when there were already three education agencies with an explicit mandate to help manage the education sector in the country?

Background

In 2012, three government agencies managed the education sector in the Philippines: the Department of Education (DepEd) had responsibility for basic (i.e. primary and secondary) education; the Technical Education and Skills Development Authority (TESDA) had responsibility for skills training; and the Commission on Higher Education (CHED) was responsible for universities and colleges. Among these three, DepEd had pursued ICT-related initiatives most vigorously and visibly. This paper focuses on the relevance of a potential Philippine national ICT/education agency as it might relate to DepEd, given that many of the educational technology initiatives in the Philippines have historically targeted public primary and secondary schools.

ICT in education in the Philippines: Key Government Actors

The *Department of Education (DepEd)* implemented the biggest ICT/education initiative in the Philippines, part of its overall mandate to manage the delivery of basic education and 46,000 public primary and secondary schools.

The *Department of Trade and Industry (DTI)* was second biggest donor of computers to public secondary schools, supporting its efforts to ensure that students became computer-literate and ready for work.

The *Commission on Information and Communications Technology (CICT)* was the government’s focal agency for ICT; it implemented the “i-Schools” project for public secondary schools and “e-Skwela”, which delivered ICT-based non-formal education.

The *Department of Science and Technology (DOST)* served as the government focal agency for all ICT concerns; it absorbed the former CICT under a new group called the “ICT Office”.

According to DepEd statistics, as of 2012, only 51% of public primary schools and 88% of public secondary schools (whose initial computerization was prioritized) had computers.⁷ However, not all schools with computers had the same level of access. Schools with large student populations had particular challenges. Table 2 details the number of schools in the Philippines according to pupil-computer ratios. Only one percent (1%) of primary schools had 20 or less students sharing one computer, while the situation in secondary schools was a little bit better (35%). In other words: Many schools had computers, but not in sufficient numbers for students to have reasonable time to use them. Due to scheduling difficulties, most students only had a one-hour computer class per week, despite the DepEd Secretary mentioning in a contemporaneous speech that the ideal ratio would be to provide one computer for every eight students.

⁶ “Palace lukewarm to DICT bill, says legislator,” *Inquirer.net*, June 15, 2012.

⁷ See the Annex to this paper for related data.

In addition, only 12% of the public schools had Internet access, with the situation better in secondary schools (40%) than in primary schools (16%). There were two main reasons for schools not being able to connect to the Internet. The first one was reasonable: Infrastructure was not yet in place, especially in rural and remote areas. More than 6,500 schools (14%) had no connection to electric power lines. The second reason was bureaucratic, related to administrative and financial rules that governed schools that made the procurement and ongoing maintenance of connectivity difficult.



2. Institutions and initiatives

In 2012, the Philippines had an enthusiastic crowd of institutions implementing ICT/education initiatives of various sorts. What motivated them? Generally, it was the common desire to help the education sector, and a common belief that ICT represented a necessary investment for the future of the country. These institutions believed that something needed to be done to improve the current situation in most public schools, and that government institutions could not do it alone – especially when it came to the use of ICT.

In June 2012, USAID commissioned an internal study to conduct a national ICT/education survey, in order to create an inventory of completed and on-going projects in place since 2000. While it was acknowledged that there were still many undocumented ICT/education initiatives, especially those spearheaded by the local government units (LGUs), state universities and colleges (SUCs), non-governmental organizations (NGOs), and the private sector, the report highlighted the following notable actors and efforts:

The Department of Education (DepEd) ran the biggest ICT/education initiative in the Philippines. The ‘school computerization’ program began in some places as early as 1996, but its implementation was not consistent. This effort was later strengthened and expanded into what was known as the “DepEd Computerization Program/ DepEd Internet Connectivity Program (DCP/DICP).” (Despite this strengthening and expansion, it should be noted that the programs’ entire budget never amounted to more than 1% of DepEd’s annual budget.)

Public primary schools received an “e-classroom” package from DCP/DICP containing a computer with six terminals, an interactive whiteboard, a projector and necessary related peripherals. The pedagogical design was to encourage group collaboration: The teacher controlled the main computer and then directed groups of students to use the six terminals. The interactive whiteboard and projector were used for class presentation and discussion.

Public secondary schools received a “computer laboratory” package from DCP/DICP. A school with less than 2,000 students got the standard package of 11 computers, 11 power supplies, one wireless broadband router, one printer and a set of software. Given that secondary schools served widely varying student populations, DepEd set the following guidelines: schools with 2,000 to 4,999 students would receive 50 terminals; schools with 5,000 to 9,000 students would receive 100 terminals; and schools with more that more than 9,000 students would receive 150 terminals.⁸

The ICT Unit of DepEd handled the entire operation of DCP/DICP. A small office with less than ten people, it was responsible for the entire process beginning with submission of budget, selection of schools, preparation of bidding documents, meeting with bidders, awarding of contracts, procurement and deployment of computers. A group of around 200 DepEd ICT Coordinators acted as support at the sub-national level.

DepEd was also engaged another type of ICT initiative that was not widely reported, or recognized as DCP/DICP: the use of ICT to improve management and governance of the basic education sub-sector. By 2012, DepEd deployed approximately 20 such information systems in areas like human resources; school-level data; asset management of facilities and equipment; and digital learning resources.

⁸ Department of Education. (June 10, 2010). DO 78, s. 2010: Guidelines on the Implementation of the DepEd Computerization Program (DCP).

In 2009, DepEd started a process to develop an ICT/education master plan, called the “ICT4E Strategic Plan”⁹, and undertook extensive consultations with regional education officers and schools. However, the draft document was put on hold when the new government took over in 2010.

The Department of Trade and Industry (DTI) implemented the “Personal Computers for Public Schools” (PCPS) project from 2001-2009. DTI’s interest in this project was to “develop the information technology (IT) skills of Filipino youth as the country’s future knowledge workers by providing computer laboratory packages to public high schools”.¹⁰ DTI provided 60,300 computers to 4,914 public secondary schools; this represented 66% of the total number of public secondary schools under DepEd. DTI also trained 52,728 teachers on basic computer operation and troubleshooting, as well as techniques and methodologies on integrating productivity tools in the classroom. Funding for this project came from the Government of Japan through its Non-Project Grant Assistance Counter-Value Funds (NPGA-CVF).

The Commission on Information and Communications Technology (CICT) served as the “primary policy, planning, coordinating, implementing, regulating and administrative entity of the executive branch of government that will promote, develop and regulate integrated and strategic ICT systems and reliable and cost-efficient facilities and services” prior to its transfer to the Department of Science and Technology (DOST).¹¹ CICT implemented two ICT/education initiatives: iSchools and eSkwela. iSchools provided approximately 1,000 secondary schools with a computer lab package (with a preference for the use of free and open source software), free one-year Internet connection and training for teachers. Implemented in 95 sites, mostly in community learning centers (CLCs), the award-winning¹² eSkwela developed interactive e-learning modules using DepEd alternative learning materials to attract more out-of-school youth to go back and finish their secondary education.

The Department of Science and Technology (DOST) piloted the use of tablet computers in select public schools using science and math learning resources it had developed. DOST, with the cooperation of DepEd, led another initiative called the “Cloud Top” project. It designed thin-client computers to fit the needs and conditions of Philippine public school classrooms, which typically were not air conditioned and were access to reliable, sufficient power was not always at hand. It used cloud technology to distribute learning contents to schools and help teachers facilitate blended learning to students.¹³

Local Government Units (LGUs) were also important players. Education in the Philippines in 2012 was one of the social services decentralized to the LGUs. Although DepEd still administratively managed the public school system, the 1991 Local Government Code mandated LGUs to create local school boards and have their own “special education fund” (SEF), a one percent (1%) levy collected together with real property taxes paid to the local government. For big and rich municipalities, their SEF represented a significant amount for schools.¹⁴ Through this funding mechanism, many LGUs were able to provide computers to

⁹ Department of Education. (2009). *Five-Year Information and Communication Technology for Education Strategic Plan (DepED ICT4E Strategic Plan)*. Manila: Department of Education.

¹⁰ See updates on PCPS project on the DTI website: www.dti.gov.ph/dti/index.php?p=443

¹¹ See CICT’s website: www.cict.gov.ph/content/view/113/131/index.html

¹² In 2008, eSkwela received a Certificate of Commendation from UNESCO Bangkok’s Innovative Practices Award, and got an Honorable Mention from the 2010 UNESCO King Hamad bin Isa Khalifa Prize for the Use of ICT in Education.

¹³ PH to roll out e-learning project based on cloud. February 06, 2012. [science.ph. http://www.science.ph/full_story.php?type=News&key=2778:ph-to-roll-out-e-learning-project-based-on-cloud](http://www.science.ph/full_story.php?type=News&key=2778:ph-to-roll-out-e-learning-project-based-on-cloud)

¹⁴ Robredo, J. (undated). “Reinventing Local School Boards in the Philippines”, http://naga.gov.ph/cityhall/SCHOOL_BOARD.pdf

public schools and, in some cases, even to provide financial support to teachers to attend ICT training.

State Universities and Colleges (SUCs) have traditionally supported many local initiatives for schools in their localities as part of their extension service function. In many cases, SUCs became preferred partners for large-scale ICT/education initiatives. Geographically distributed throughout the country, they formed a good network to implement ICT/education projects in the provinces. For example, CICT chose SUCs to implement iSchools and eSkwela. Microsoft and Intel also used the SUCs to be part of their network to train teachers.

The Foundation for Information Technology Education and Development (FIT-ED) was created by former government policymakers and prominent business leaders in 2009 to "increase I.T. awareness in the Philippines and contribute to the effort to enable Philippine society for the Information Age".¹⁵ FIT-ED initiated the *Pilipinas SchoolNet* to promote the effective use of ICT tools in teaching and learning. This was later renamed to "ed.Venture" after Coca-Cola Export Corporation provided financial support. Fifteen public schools received computer laboratories, including technical support and training for teachers and school leaders. In partnership with DepEd, FIT-ED organized "National Congress on ICT in Basic Education" in December 2004, September 2006 and September 2008. This event greatly increased the awareness of many public school teachers on the possibilities of ICT in teaching and learning. FIT-ED was also instrumental in drafting the "National Framework for ICTs in Basic Education",¹⁶ which was not completed and implemented due to the change of government administration in 2010.

GILAS (Gearing-up Internet Literacy and Access to Students – the acronym is also a word in Tagalog that, roughly speaking, denotes a 'smart dynamism') aimed was to connect all public secondary schools in the Philippines . A multi-sectoral consortium composed of corporations, non-profit organizations and government agencies raised a total donation of Php 366 million (USD 8.5 million) to support and implement the project. From 2005 to 2011, GILAS provided Internet access to 3,306 public secondary schools (some of which received computer laboratories) and trained 13,538 teachers and 542 principals.

Intel and Microsoft had been the major players in training Filipino teachers to become confident users of technology inside the classroom. While no definite figures are available, it is estimated that Microsoft's "Partners in Learning" and Intel's "Intel Teach", trained 200,000 to 300,000 teachers in the Philippines between 2003 and 2012.

Knowledge Channel Foundation, an NGO established in 1999, was the country's first and only educational cable channel . Through the help of sponsors, Knowledge Channel developed educational television programs based on the official DepEd curriculum and made them available in public school classrooms. Participating schools received a cable TV connection, training for teachers to effectively facilitate television-based school lessons, and continuous technical support.

Procter and Gamble (P&G) committed in 2011 to a long-term engagement to the education sector by promising to donate one million computers to public schools as part of its broader corporate social responsibility (CSR) efforts. Through its "eStudyante" program, implemented in partnership with an NGO called eKindling, P&G hoped to inspire other companies to join the campaign.

SEAMEO-INNOTECH (South East Asian Ministers of Education Organization -- Regional Center for Educational Innovations and Technology) implemented two ICT/education initiatives that

¹⁵ See the FIT-ED website, <http://www.fit-ed.org>

¹⁶ Department of Education / FIT-ED. (2004). *National Framework Plan for ICTs in Basic Education (2005-2010): Harnessing ICTs for Quality Basic Education for All*. Manila: Department of Education / FIT-ED.

both won international accolades. Text2Teach,¹⁷ which won the Asian Corporate Responsibility Award, allowed teachers to send text messages to request digitally recorded, multimedia-based teaching resources, which were broadcast to a television inside the classroom. ICeXCELS, which received a Certificate of Commendation from UNESCO Bangkok's 2008 Innovative Practices Award,¹⁸ was an e-learning module for school administrators to enhance their leadership and management skills.

Bilateral donors and international organizations like AusAid, USAID and JICA also supported a number of ICT activities in DepEd. AusAID funded the development of information systems, including the Enhanced Basic Education Information System (eBEIS), which allowed public schools to submit education data online; and the Learning Resource Management and Development System (LRMDS), an online portal for teachers to access digital teaching and learning materials. The Government of Japan's Non-Project Grant Assistance Counter-value Funds (NPGA-CVF) supported DTI's PCPS project, which was implemented from 2001-2009. In June 2012, USAID commissioned FIT-ED to conduct a national ICT survey on ICT/education.

¹⁷ More information on Text2Teach project available via:
www.seameo-innotech.org/programsandprojects/projects/on-going-projects/t2t

¹⁸ See UNESCO Bangkok announcement here:
<http://www.unescobkk.org/education/ict/ict-in-education-projects/innovative-practices/innovative-practices-awards/winning-entries/icexcels-instructional-and-curricular-excellence-in-school-leadership-and-management/>

3. Issues and challenges

While many of the ICT/education initiatives in the Philippines were welcomed by DepEd and various stakeholder communities, by 2012 there were concerns that they were not well aligned and not working towards a common goal. Indeed, many of them suffered issues and stumbling blocks stemming from poor communication and coordination, which fell into five general categories: no general direction to follow; no national standards to meet; no comprehensive inventory of projects and donations; successful initiatives were not replicated or scaled-up; and public-private partnership models related to ICT/education were unclear.

General direction

Implementing partners and stakeholder groups looked to DepEd to provide general policy guidance and direction on topics related to basic education – including ICT/education. Schools desired direction so that they could be sure that their actions were consistent with national policy. Donors wanted to ensure that their efforts were consistent with DepEd priorities. Other government agencies, private sector companies, local government units, NGOs and higher education institutions needed to know general direction to ensure their actions could relate or respond to the needs of the education sector.

This need for such direction in many countries – especially across Asia -- is often addressed through the development of an ICT/education ‘master plan’. Sometimes, in lieu of the master plan document, the national ICT/education agency provides de facto policy direction. The Philippines, however, had no approved master plan, nor a national agency which could communicate direction and guidance on ICT/education issues. DepEd twice developed an ICT/education master plan: first in 2004, when DepEd and FIT-ED collaborated to write the *National Framework Plan for ICTs in Basic Education (2005-2010)*,¹⁹ and also in 2009, when DepEd, with the support of British Council and AusAid, prepared the *ICT4E Strategic Plan*.²⁰ However, both documents were never formally endorsed and approved due to changes in leadership in DepEd.

While changes in administration and turnover of officials are a characteristic of most governments, in the Philippines there were particularly acute challenges related to how to ensure that previously developed master plans were not disregarded, especially as they had been the result of rigorous consultation and participation of a wide number of partner and stakeholder groups.

In the absence of official guidance, or an official institution charged with leading helping to coordinate related efforts, some organizations (private sector, industry, NGOs, donors) used one or both documents as general reference or guidance documents, in whole or in part. Other groups were unaware of the existence of such documents. Without such a master plan, or explicit policy guidance, there was always a risk that groups will move forward independently in ways that didn’t serve the broader goals of the education sector, especially if it is convenient for the organizations to do so. In part, this is what happened in the Philippines. For example, CICT promoted in its projects the use of open source software in public secondary schools while DepEd distributed computers using proprietary software. The result: Many groups wondered about policies related to the use of open source software. Another example was the use of television in the classroom. Initiatives like the Knowledge Channel and Text2Teach used television programs based on the official curriculum, but there was no official position

¹⁹ Department of Education / FIT-ED. (2004). *National Framework Plan for ICTs in Basic Education (2005-2010): Harnessing ICTs for Quality Basic Education for All*. Manila: Department of Education / FIT-ED.

²⁰ Department of Education. (2009). *Five-Year Information and Communication Technology for Education Strategic Plan (DepED ICT4E Strategic Plan)*. Manila: Department of Education.

communicated about whether or not these initiatives were consistent with DepEd's school computerization program.

Across Asia, many ICT/education master plans signal to donors important priorities to support, helping to avoid duplication of efforts and ensuring an equitable distribution of resources -- especially where needs are greatest and action needs to be taken quickly -- by highlighting particular needs and challenges among specific beneficiary groups and in specific geographic locations. Such official guidance – which was absent in the Philippines in 2012 – could have helped avoid the concentration of ICT/education projects in urban areas, which not only contributed to an inequality of access, but which also contributed to the growth of a digital divide between schools.

National standards

Without a national ICT competency framework for both teachers and students, a document common in many other countries with large scale ICT/education initiatives, organizations funding, designing, implementing and evaluating ICT/education initiatives in the Philippines were not aligned in their approaches to supporting the use of ICT by teachers and students. The absence of a national ICT competency standard for students made it difficult to measure or assess what students should learn and master in school related to the use of ICT. Teacher education institutions (TEIs) taught ICT integration differently because there were no national ICT competency framework or standards for teachers. While numerous institutions (DepEd, Microsoft, Intel, CICT, DTI, FIT-ED and GILAS) provided in-service ICT training to the teachers, such efforts were typically not aligned with each other because there were no national ICT competency standards for teachers to help guide such efforts.

Project inventory

The effective coordination and management of educational technology initiatives taking place in schools in the Philippines in 2012 suffered because there was no comprehensive inventory of ICT/education projects. In many countries, a national ICT/education agency was responsible for tracking such efforts. Some groups established contacts with DepEd, especially during the early stages of their projects, but did not provide regular updates. Still others went directly to schools, bypassing DepEd altogether, resulting in a situation where no one, not even DepEd, knew what sort of ICT projects and initiatives existed in schools.

As a result, some problems emerged. For example: When GILAS started providing Internet to public secondary schools, it was not fully realized that DepEd would need to pay for the connection fees after the first year. Without the necessary budget, many schools discontinued their Internet subscription. In teacher training, Microsoft and Intel provided support to many schools. However, there was no regular monitoring and reporting of training activities conducted. When Procter and Gamble announced its plan to provide one million PCs to public schools, DepEd was alarmed because it was unclear what sort of related coordination would be needed, by whom, and along what timeline. These cases highlighted the risks of not having the right or complete information, which led to unequal distribution of resources among schools in some cases, and to duplication of efforts in others.

Scaling-up of successful projects

Despite a variety of efforts by various actors – some of which had received international recognition for their success and innovation -- it was noticeable in 2012 that none of the various ICT/education initiatives had been fully replicated or scaled up across the entire education system. Many ICT/education projects in the Philippines were, in fact, initiated as 'pilot projects' to 'show the way'. The hope was that, if a project 'succeeded', DepEd would continue and expand it, integrating it into its regular activities. In 2012, this wasn't happening. Many analyses

sought to explain why this was so, including: a lack of DepEd ‘ownership’ of projects started and overseen by other organizations; a ‘not invented here’ syndrome, where a pilot project initiated by one organization was unlikely to be adopted and supported by another; a lack of a group to coordinate and facilitate the evaluation and scaling up of projects by different actors; as well as general challenges related to a lack of resources.

Public-Private (and other) Partnerships

In 2012 DepEd recognized that public resources alone could not meet the needs of the country’s 46,000 public schools. Indeed, it had supported an “Adopt-a-School” program that recognized and provided tax incentives to groups and individuals who gave donations to schools. Related to ICT/education initiatives, the Secretariat of Adopt-a-School recommended better organization of the private sector and other partners (e.g. LGUs and NGOs), similar to the consortium exemplified by the GILAS approach. Donors and private sector companies interested in supported ICT/education efforts lamented the difficulty of establishing new working relationships and understanding new priority areas for support every time there was a new administration or set of officials. Public-private sector partnership, of course, can become confusing when corporate social responsibility activities become intertwined with profit-making business activities, something that regularly occurs around the world when ICT use in education is concerned. Such concerns made many public officials in the Philippines wary of offers of “assistance” from private sector groups, confused about whether such generosity was genuinely meant to help address educational needs, or simply to promote various technologies or technology-related services.

Timeline: Highlights of ICT/education in the Philippines

| | |
|------|---|
| 1994 | National Information Technology Council (NITC) created. |
| 1996 | DepEd started computerization of public schools. |
| 1997 | NITC prepared I.T. Action Agenda for the 21st Century. Foundation for Information Technology Education and Development (FIT-ED) established. |
| 1999 | Knowledge Channel Foundation, Inc. established. |
| 2000 | Information Technology and Electronic Commerce Council (ITECC) replaced the National Information Technology Council (NITC). |
| 2001 | DTI started PCs for Public Schools (PCPS) Program. |
| 2003 | Microsoft and Intel started education programs in the Philippines, among them Partners in Learning (PIL) and Intel Teach. |
| 2004 | FIT-ED organized 1st National ICT in Basic Education Congress. FIT-ED drafted National Framework for ICTs in Basic Education. Commission on Information and Communications Technology (CICT) replaced ITECC and became the government’s focal agency for ICT. |
| 2005 | GILAS consortium formed to connect all public secondary schools to the Internet. |
| 2006 | FIT-ED organized 2nd National ICT in Basic Education Congress. CICT launched two projects for education: iSchools and eSkwela. Text2Teach won the Asian Corporate Social Responsibility Award. |
| 2008 | FIT-ED organized 3rd National ICT in Basic Education Congress. CICT’s e-Skwela and SEAMEO-INNOTECH’s ICeXCELS project received Certification of Commendation from UNESCO Bangkok’s Innovative Practices Awards. |
| 2009 | DepEd drafted ICT4E Strategic Plan. |
| 2010 | CICT’s e-Skwela received Honorable Mention from UNESCO’s King Hamad bin Isa Khalifa Prize. |
| 2011 | CICT abolished and ICT Office created under DOST. GILAS ended operation. |
| 2012 | Lawmakers approved draft bill creating Department of ICT (DICT) . |

4. Options for policymakers in the absence of a national ICT/education agency

In order to direct, oversee, fund, implement and/or evaluate large scale ICT/education initiatives, many countries have created separate, dedicated ICT/education agencies. However, not all governments have done so; in 2012, the Philippines was one of those countries. This did not imply that the government did not support ICT/education, nor was it (necessarily) a marker of government dysfunction. Rather, it was, in part, the result of a desire to utilize existing institutions and not to create and support a new bureaucratic structure within or supported by government, which could potentially have serious budgetary implications in the future.

With a national ICT/education agency 'off the table' in the Philippines in 2012, education policymakers and a number of partner organizations sought to explore other options to address existing issues, while at the same time ensuring that actors at all levels – DepEd and national agencies, local government, private sector companies, NGOs, foundations and civil society groups, as well as individual schools – could move forward. To improve coordination of institutions and implementation of ICT/education initiatives, policymakers from the Philippines had a number of potential options to consider, individually or collectively, including: convening a national coordinating council; strengthening the existing office in charge of ICT inside the Department of Education; forging closer coordination with other agencies; developing an ICT/education master plan; and supporting the transformation of an organization outside government to serve as the equivalent of a national ICT/education agency.

Convene a National Coordinating Council. A 'national coordinating council' could, it was hoped, open lines of communication between DepEd and partner institutions, breaking down institutional barriers by providing a venue where institutions could raise issues, share information and find opportunities for collaboration. Such a coordinating council existed in other sectors in the Philippines (e.g. the government had issued a series of Executive Orders to establish the National Information Technology Council (NITC) and the Information Technology and Electronic Commerce Council (ITECC); in both councils, representatives from both government and private sector collaborated), but had not existed for this purpose in the education sector. Could an 'edtech coordinating council' be established in the Philippines?

Strengthen the existing ICT Unit in DepEd. Absent a national educational technology agency, one option was to strengthen the existing ICT unit within DepEd, which at the time was short staffed and had limited authority to perform other important functions. Transforming an individual component unit within an existing bureaucracy presented significant challenges, however, and the unit was already overtasked in its efforts to focus on the effective implementation of DCP/DICP. Taking on additional responsibilities would entail additional funding, staffing and leadership support in order to perform functions such as, e.g., capturing and disseminating innovations and best practices from across the entire education system (and not just from within DCP/DICP) and piloting and evaluating new practices and ideas, which could then be recommended to be 'scaled up'; taking a larger strategic and leadership role in related policy planning processes; as well as implementing various existing DepEd efforts related to ICT/education. Where could support for strengthening the existing ICT unit in DepEd come from, and who would spend the political capital to make it happen?

Coordinate with a (new) Department of ICT. After many years of debate, Philippine lawmakers approved a bill in 2012 to allow the creation of a new Department of ICT (DICT), something that

the country's IT-BPO industry had long sought. While the fate of new department was unclear,²¹ education policymakers and groups supporting and implementing ICT/education initiatives were confronted with new potential challenges – and opportunities: How could efforts be coordinated with a new government department? Would such a department play a lead role in providing policy oversight and direction for all government-supported ICT efforts (potentially diminishing the power and mandate of DepEd when it came to ICT/education issues)? Would the new department emerge as a new 'power center', further complicating an already fractured policy and implementation landscape? What might be a desired division of labor and roles between a new DICT and DepEd when it came to support for ICT/education in the Philippines?

Develop, and approve, a (new) ICT/Education Master Plan. By 2012, the Philippines had developed two national ICT/education plans, neither of which had been formally approved by government. That said, the need for related policy direction and implementation coordination had not diminished, but no agency or group presented itself to lead the process to develop a new master plan. There was a danger that DepEd and other key stakeholder groups like TESDA and CHED developed their own visions and plans on their own -- especially if they were not compatible with each other. The three agencies also (it was assumed, not without reason) needed to agree on a common ICT competency framework for students, as well as for teachers. That said, given its mandate, DepEd could proceed and develop an ICT/education master plan for only for basic education, inviting key stakeholders already supporting ICT/education efforts in primary and secondary schools (including DTI, DOST, LGUs, SUCs, private sector companies, NGOs, local communities and parents) to join a related development process, and build from there. But DepEd had more than enough on its plate already managing basic education. Given that such a process had already failed twice, what was the likelihood for success the third time around?

Recognize, support and help transform an external organization into the equivalent of a national ICT/education agency. By virtue of its name, its lead role in helping to organize a number of 'national congresses on ICT in basic education', and its coordination role in helping to draft a National Framework for ICTs in Basic Education (which was never officially endorsed or adopted by government, although DepEd was involved in its development), the Pilipinas Schoolnet was recognized internationally in some circles as the de facto national ICT/education agency for the Philippines – or at least the closest thing to it. That said, as a specific project of the Foundation for Information Technology Education and Development (FIT-ED), it had no official mandate from government to serve this function. Notably, its funding was project-based – targeted support from the Coca-Cola Export Corporation led to its transformation into the "ed.Venture" project, which complicated the pathway and potential for it to be further transformed and restructured to serve as the equivalent of a national ICT/education agency. There were no other existing institutions outside government well placed to assume this role either.

There was also, of course, an additional option: *Maintain the status quo and do nothing.* After all, a lot had happened, and was happening, related to ICT use in education across the country, despite the absence of any official governing policy or masterplan; the lack of a national ICT/education agency; the absence of key related standards related to ICT competencies for teachers and students; and the lack of the sort of national coordinating councils which functioned in other sectors in the Philippines. Policymakers could decide not to make a choice here. But would choosing not to decide be a wise choice?

²¹ In fact, a new Philippines Department of ICT (DICT), would not be formed until July 2016.

5. Conclusions and moving forward

An examination of the state of coordination related to ICT/education efforts in the Philippines in 2012 highlights many challenges that can exist in the absence of a dedicated related national body, agency or coordination mechanism. Policymakers in other countries may find three related lessons from the Philippine experience to be of relevance:

ICT/education planning and implementation benefit from coordination and a holistic approach. A national ICT/education agency can help with this. In countries where there is only one key government ministry, department or agency responsible for education, responsibility for policy and planning related to ICT/education is usually pretty clear (although, in practice, there may be competition between government agencies, e.g. between a ministry of education and a ministry of ICT). That said, for the Philippines, where there were multiple government organizations responsible for various aspects of public (and private) education, it proved difficult to develop a single plan, agree on common standards and frameworks, and speak on behalf to the government to partners in the private sector, civil society and international donor agencies.

National ICT/education vision and standards can help align activities of various actors – especially in the absence of related policy guidance or a national coordinating agency. The Philippine experience demonstrates that without a clear national vision and related masterplan and standards, various stakeholder and implementing groups may well develop their own policies and plans and proceed accordingly.

Government must strike a healthy balance between encouraging institutions to support ICT/education efforts while helping to ensure a general coherence between such efforts. In 2012, there were many institutions willing to help the Philippine Department of Education (DepEd) in efforts to support ICT use in education in schools across the country. That said, where such offers of assistance are not well coordinated, ‘partnerships’ of various sorts to support ICT/education efforts failed to realize their full potential. A national ICT/education can help with such coordination.

Functions without form in the Philippines

The situation in the Philippines in 2012 provides insight into how unorganized and/or very loosely organized groups of institutions with complementary – and sometimes even competing – activities can, partially and incompletely, help provide some of the functions traditionally associated with national ICT/education agencies, even in the absence of explicit direction and coordination from the ministry of education. Individual groups developed their own policies, plans and standards, sometimes in alignment with, and sometimes in opposition to, each other – and sometimes without the knowledge of government. Related information sharing occurred between various actors, but it was partial and incomplete. Such a situation was usually far from ideal, as complications arose related to planning and coordination, with individual groups acting largely in their own interests, and because there were not clear channels of collective communication between the private sector and civil society with related governmental bodies. Even where such a dedicated agency is not desired or possible, given a country’s context, many of the common functions of performed by such an institution are nevertheless needed to maximize the potential benefits of efforts to support the use of ICT in education across a country’s education system.

Annex: Data

All figures courtesy of the Philippines Department of Education.

table 1. Public schools with computers

| Type | Number of Schools | Schools with Computers | Percent |
|-----------|-------------------|------------------------|---------|
| Primary | 38,501 | 19,482 | 51% |
| Secondary | 7,470 | 6,544 | 88% |
| Total | 45,971 | 26,026 | 57% |

source: DepEd (2012)

table 2. Pupil-computer ratio in public schools

| Pupil-Computer Ratio | Number of Primary Schools | Percent of Primary Schools | Number of Secondary Schools | Percent of Secondary Schools |
|----------------------|---------------------------|----------------------------|-----------------------------|------------------------------|
| 20 and below | 225 | 1% | 2,634 | 35% |
| 21-40 | 1,202 | 3% | 2,157 | 29% |
| 41-60 | 4,413 | 11% | 955 | 13% |
| 61-80 | 3,336 | 9% | 338 | 5% |
| 81-100 | 2,029 | 5% | 145 | 2% |
| 101 and above | 8,277 | 21% | 315 | 4% |

source: DepEd (2012)

table 3. Public schools with internet

| Type | Number of Schools | Schools with Internet | Percent | Schools without Electricity | Percent |
|-----------|-------------------|-----------------------|---------|-----------------------------|---------|
| Primary | 38,501 | 2,610 | 7% | 6,267 | 16% |
| Secondary | 7,470 | 2,969 | 40% | 297 | 40% |
| Total | 45,971 | 5,579 | 12% | 6,564 | 14% |

source: DepEd (2012)

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