Capacity-building for Philippine Public Secondary School Teachers on Information and Communications Technology Literacy Training Program

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Abstract - The Bukidnon State University (BSU), a state university in the province of Bukidnon in the island of Mindanao, Philippines in partnership with the Commission on Information and Communications Technology (CICT), conducts the capacity-building for secondary school teachers in the Philippines on ICT. The training enhances teachers with the knowledge and skills in the Computer Applications and Information Management System (CAIMS). The trainers who are ICT experts facilitated the roll out of the project in the seven regions with a number of activities including hands-on and on-site training on CAIMS, installation and upgrading of computer hardware and software, data banking and continuous technical assistance. Some lessons learned include the following: a) implementation of teaching-learning strategies that integrate a range of information and communication technologies to promote and enhance students learning; b) establishment of cooperative and collaborative technology-supported and learner-centered environments that engage all students

in focused learning experience; c) enrichment in curriculum lessons with students effectively evaluating and using relevant and appropriate software for specific educational use.

INTRODUCTION

Information and Communications Technology (ICT) is used to describe both the study of and the use of computers and other technologies that are used for Communication and Information Systems. It enhances education by enabling a more student-centered learning model, facilitating knowledge creation and helping young people develop the necessary skills to compete in the 21st century. UNESCO (2008) emphasized that ICT can divert scarce resources, and even become a waste of resources if the costs and benefits of using ICT in education are not fully understood; and if decision makers are not aware of the experiences of other countries and the problems they may have experienced. If ICT is not integrated into education effectively or is not appropriate for local circumstances, then, investment in ICT can be a waste of resource.

In the Philippines, ICT is considered a remarkable step that contributes to production of knowledge, communications and information sharing between students and teachers. This is done to enhance the teaching and learning processes of both teachers and students in the public secondary schools. Equipping both public secondary school teachers and students in terms of ICT skills through capacity-building is an interesting and a relevant move of the government. This will not only prepare them for the well-informed society but will help attain meaningful and lifelong learning.

The Commission on Information and Communications Technology (CICT) has partnered with the Bukidnon State University (BSU), a leading educational institution in ICT in the region, in the implementation of its educational projects. Based on this partnership, BSU is one of the implementers of "iSchools Project", a flagship project of CICT. Both CICT and BSU recognize the urgent need to bring

information technology to the countryside. These bring about effective training on the available up-to-date and appropriate information and communications technology which can be best achieved through synergistic cooperation.

Training of secondary school teachers on ICT was considered as one of the best solutions in addressing the digital divide in the country. Digital divide means the gap between those who have access to and control of technology and those who do not (Tinio, 2002). In this on-going project, it is hoped at improving the students' proficiency in the key subjects in English, Science and Mathematics, which has degenerated over the years and has been identified as a major factor for the low academic performance of Filipino public school students (Papa, 2005).

ICT holds great promise and potential for the economies in achieving the Millennium Development Goals (MDGs). These goals include the promise of a better educated workforce, increased research and development and stronger integration with global economy. In capability-building, everyone should have the necessary skills to benefit fully from the Information Society. Thus, it is envisioned that there is knowledge sharing at the grassroots level.

Education can not be globally competitive and enhanced without the integration of ICT. This is a universal norm now and even prescribed by UNESCO (Lapus, 2008). The strategic plan will include activities, such as complete integration of ICT into the curriculum; intensifying competency-based professional development programmes; the establishment of necessary ICT infrastructure, and the development of processes systems for governance and management.

With the scenario cited, BSU and the Department of Education (DepEd) established partnership in the implementation of iSchools Project. It is clearly evident that both parties are cognizant of the growing digital divide in the Philippines, that is, there is a widening gap between the ICT "haves" and "have-nots." Both recognize the urgent need to develop ICT skills among the youth and to integrate ICT in the Philippine educational system by maximizing the use of such technology in teaching and learning in the core subjects, such as Math, Science, languages, Social Science, etc.

The integration of ICTs in the classroom settings suggests that the full realization of the potential educational benefits of ICTs require good planning. The effective integration of ICTs into the educational system is a complex, multifaceted process that involves not just technology. Are the schools ready? Are the teachers competent enough to handle the technology? Is there enough funds for the project? To address these questions, capacity-building for secondary school teachers on ICT is greatly needed.

In the context of developing countries, adapting the United Nation Development Programme's definition of capacity – it means the consideration of the ability of individuals, institutions and societies to perform functions, solve problems, and achieve objectives in a sustainable manner. The term capacity-building or capacity-development describes the task of developing levels of human and institutional capacities. Capacity building is one of the most challenging functions of development. However, conducting capacity-building for teachers is a complex process. There are prerequisites in achieving technological set-up in the classroom and collaboration with the people in the communities.

This paper presents the capacity-building for Philippine secondary school teachers training program. The introductory part underscores views of ICT. It illustrates some reforms and innovation, pedagogical strategies and curricular initiatives of enabling the Philippine educational system towards global competitiveness. Then ICT in the Philippines is presented. The issues and concerns are highlighted while the training and its results are presented where the actual conduct of the training and project descriptions are integrated. Challenges and lessons learned which were gathered from the trainers and trainees are presented. This paper concludes with the policy recommendations.

ICT IN THE PHILIPPINES

The various ICT plans and programs of the Philippine government have their bases in the Philippine Constitution as provided in Section 24 of Article 2 and Section 10 of Article 16. These general provisions convey that "the State recognizes the vital role of communication and information in nation-building" and, "the State shall provide the

policy environment for the full development of Filipino capability and the emergence of communication structures suitable to the needs and aspirations of the nation and the balanced flow of information…"

It was only in the mid 90's, however, that ICT began to vigorously and actively take roots in the Philippines (Felipe, 1997). Prior to the 90's, IT in the Philippines did not generally prosper primarily because of other concerns and priorities. The biggest support came from then President Fidel V. Ramos when he approved in 1996 "A National Information Technology Plan" (NITP 2000)," also known as "The National Information System Plan" which was subsequently revised in October 1997 and became known as IT21. The said plan has its ultimate goal of making the Philippines as "the Knowledge Center for Asia." Specifically, the Plan laid down the course for Information Technology (IT) development in the country.

To implement the said IT plan in education, DECS and CHED issued in 1996 Memo No. 318 and Memo No. 10, respectively, both calling for the first congress on Information Technology (IT) in education. The Congress was called the "First Congress on Information Technology and Telecommunications in Education," which was held from February 19 to 21, 1997 and was attended by the key administrators and other prime movers of Information Technology of the DECS, DOST, CHED, and TESDA and other concerned government agencies, like the Houses of Representatives and the Senate. This gathering was under the sponsorship of the New Educational Technologies Foundation (Cayaban, 2004).

The congress addressed the following concerns: (1) the status of Information Technology (IT) and Telecommunications (T) in Philippine education, (2) the problems and concerns in policy, regulation, facilities, manpower and training courseware and finding, (3) the various means by which schools can access the technology and infuse instruction and management with it.

The result of this congress considerably pushed IT to its present status. Since then several laws and other directives from concerned government departments and agencies have been issued to further improve the adaptation, access, use, and even appropriations of funds for Information Technology not only in the educational sector but other government instrumentalities.

In the words of Carague (1998), the plan advocates the following objectives: (a) educate government, business and private leaders on the uses of IT in enterprise and nation –building; (b) expand IT awareness among the general public; (c) promote the Philippines as an alternative center for IT education; (d) build a capacity for self-reliance in the country's educational and training institutions in the area of IT education, research, and development; (e) upgrade IT training and educational institutions; (f) produce a critical mass of IT workers of good quality and number of industry and government.

In 2000, Information Technology and E-Commerce Council (ITECC) was formed to provide effective and focused leadership in the implementation of ICT policy. There was a merging of National Information Technology Council (NITC) and the Electronic Commerce Promotion Council (ECPC). In 2001, the Chairmanship of ITECC was transferred to President Gloria Macapagal-Arroyo (PGMA). PGMA puts ICT in the forefront of government priorities and national consciousness. She recommended the creation of a Department of Information and Communications Technology (DICT).

On July 12, 2004, Philippine President Gloria Macapagal Arroyo signed into law Executive Order No. 269 creating the Commission on Information and Communications Technology. Section 2 mandates that "the Commission shall be 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 communication facilities and services." The commission has since composed and implemented its plans as regards its mandate. Active role in streamlining, managing, coordinating, and implementing the various ICT-related plans and policies of government was given emphasis. This was also the time when the government immediately addressed the urgent need to harmonize and make the country's approach to ICT development more coherent and efficient, and there was the merging of the Telecommunications Office (formerly under DOTC), NTC, and NCC (formerly under DOST).

Chapter 18 of the Philippine Medium-term Development Plan 2004-2010, item 6 entitled "Providing and Connecting Computers in Every Public High School for Teaching and Learning" clearly

states the provision. "To enhance school learning environment and minimize the digital divide, wider computer use in schools to support teaching-learning processes shall be encouraged." The program between the DTI and DepEd in providing computer laboratories in every public secondary school will be continued. At present, about 80 percent of public secondary schools have computer under the DepEd Computerization Program. The private sector's Adopt-a-School Program is also expected to assist in providing all public secondary schools with at least a computer.

By 2010, one hundred percent (100%) of public secondary schools shall have computers. The DOST-SEI, shall: (a) provide one server and connectivity to 20 schools, which can solicit from 10 to 15 functioning computers annually; and (b) provide one server and 10 to 15 client computers with connectivity to 10 schools also annually. The Commission on Information and Communications Technology shall also lead in connecting computers and in providing internet services to the public high schools (MTPDP, 2004).

The Department of Science and Technology (DOST) has its own plans. ICT, being one of its priority areas, bears this thrust to serve as guide in the allocation of science and technology resources and the provision of assistance whenever available. It says that ICT is an area in which the Philippines has already built some competitive advantage or edge. Its development is one of the top priorities under the MTPDP and the administration of President Macapagal-Arroyo. The aim of S&T intervention is to further build the country's capabilities in ICT and make the country a world-class provider of ICT services and products.

CICT is mandated 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 communication facilities and services. It envisions an *e*Philippines, an electronically enabled society where the citizens live in an environment that will encourage and promote access to technologies by providing quality education, efficient government service, greater sources of livelihood, and, ultimately, a better way of life. Its mission is to develop the country as a world-class ICT services provider, provide government

services to stakeholders online, provide affordable Internet access to all segments of the population, develop an ICT-enabled workforce, and create an enabling legal and regulatory environment.

ISSUES

To have an effective and functional project, there is a need for the implementers to be aware of the issues and concerns, challenges and priorities of the educators. The project implementers through the CICT conducted the Training Needs Assessment (TNA) from the different schools in the regions of the country. The results of the TNA is the basis for the training design relevant to the teachers and school administrators being the prime movers in the integration of CICT in education. Training design for the capacity building of public secondary school teachers was finalized after assessing the felt need in their respective schools.

Improving the quality of education and training is a critical issue, particularly at a time of educational expansion. ICTs can enhance the quality of education in several ways: 1) by increasing learner motivation and engagement, 2) by facilitating the acquisition of basic skills, and 3) by enhancing teaching training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner-centered environment.

ICT is believed to enhance access to education though it is very difficult to quantify the degree to which it helps expand access to basic education. This is because most of the interventions for this purpose have been small-scale and were not reported. In higher education, there is some evidence that educational opportunities are being opened to individuals and groups who are constrained from attending traditional universities.

There have also been many studies that seem to support the claim that the use of computers enhances and amplifies existing curricula, as measured through classroom testing. Specifically, research shows that the use of computers in Computer Assisted Instruction (CAI), for drill and practice, and for instructional delivery, combined with traditional instruction, increase learning in the traditional curriculum and basic skills areas, as well as higher test scores in some subjects compared

to traditional instruction alone. Students also learn more quickly, demonstrate greater retention, and are better motivated to learn when they work with computers.

Research likewise suggests that the use of computers, the Internet, the related technologies, given adequate teacher training support, can indeed facilitate the transformation of learning environment into a learner-centered one. But these studies are criticized for being mostly exploratory and descriptive in nature and lacking in empirical rigor. There is as yet no strong evidence that this new learning environment fosters improved learning outcomes. With these issues and concerns, the iSchools project was conceived.

THE TRAINING

To address the digital divide in the country, an educational partnership among the concerned agencies have been established through the Memorandum of Agreement (MOA). These agencies are CICT, SUCs, House of Representatives, DepEd, the Recipient National High School through the principal, the Local Government Units (LGUs) and the Parent Teacher and Community Association (PTCA). Collaborative efforts among these institutions is done to ensure meaningful, life-long and maximum implementation of the flagship project of HCDG, the iSchools Project.

Through the CICT programs and projects, one of which is the ICT Literacy Training Program, aims to train public secondary school teachers on basic ICT literacy skills so that they will be able to effectively use ICT technology in their classes, lesson preparation, assessment activities/instruments, and record updates. The teachers have to immerse themselves in the age of information revolution since society is surrounded by rapid changes, media, knowledge workers, technology and research and development (CICT,2006).

The training design was formulated by the CICT based on the identified issues and concerns in the Philippine educational system. The TNA results revealed that the country needs teachers who know computers and the Internet to make ICT accessible to all public school children. That is, many teachers in the far-flung areas are computer illiterate which implies that integration of ICT in the subjects is

impossible. During the interview with the teachers and students, they claimed that digital divide has to be addressed in the country.

To address this emerging problem, the Philippine Government through the CICT initiated a reform for public secondary schools in the country. This is in line with the education department's vision which seeks to have an ICT enabled education system that will transform students into "dynamic learners, values-centered and responsible citizens." To realize this, teachers have to be ready and well-equip in facing the situation. Thus, the eQuality Program was introduced.

This program aims to enhance the capabilities of state universities and colleges (SUCs) in delivering standards-based ICT education in their areas; facilitating the development of their digital schools, and providing technical assistance in other ICT initiatives. This program includes the following components: 1) Dynamic Faculty Development Program – this component includes the conduct of training, seminars, conferences and workshops for faculty and non-teaching personnel of members SUCs in an effort to continually build the capability of key personnel. 2) Curriculum Enhancement – this component includes the pre-graduation assessment using the "National ICT Literacy Standards" and the "IT Proficiency exam in programming" developed by CICT Human Capital Development Group, which is referred to as "CICT-HCDG".

3) Infrastructure development – this component includes assistance in the development of SUC websites, connection to the internet, and construction of their internet and computer laboratories. 4) Outreach Services - this component includes the assistance of member SUCs in the iSchool project of CICT-HCDG, the conduct of training in their respective localities, and the taking on the role of ICT consultants for the local SMEs.

In this capacity building project, both parties, the CICT-HCDG have the following duties and responsibilities. First was the creation of a Project Management Office (PMO) that will oversee the implementation of projects and activities under the eQuality Program for SUCs Project. A project coordinator was designated to liaise with SUC regarding all aspects of SUC. Its objective is to build the capability of SUC faculty members and their key personnel by conducting relevant training, seminar, conferences and workshops, as deemed applicable.

After building the capabilities of SUCs, the implementation of the iSchools Project was done for the public secondary schools. The iSchools project is one of the flagship projects of HCDG. It supports the efforts of the Philippine Government and the Department of Education to incorporate ICT in the education in the Public High Schools. Its long-term goal is to contribute to the efforts of the Philippine government in bridging the digital divide by developing an Educational Digital Network. This will give all Public High School teachers and students with ICT literacy skills, as well as, provide them access to relevant digital content and applications in education that they can use to enhance effective learning.

iShools focuses on strengthening classroom learning and instruction by expanding access to various sources of information. In so doing, the project hopes to enhance the capability of public high school students throughout the Philippines, to successfully compete with their peers the country (as well as in the rest of the world) for jobs and other opportunities in the expanding global knowledge economy.

The project aims to provide computer access (16 units per lab) and broadband Internet connectivity to all public high schools throughout the country by 2010. It also intends to establish Regional HelpDesk (for both hardware and software assistance) and Maintenance Shops to support beneficiary schools. Possible partnership with Local Government Units and private sector groups will be looked into towards this end.

ICT Project is in response to one of the UN Millennium Development Goals, particularly, developing a global partnership for development. In cooperation with private sector, the benefits of new technologies, particularly ICTs are made available. The term ICT reflects the seamless convergence of digital processing and telecommunication including all hardware, software processes and systems for storing, managing, communicating and sharing of information. ICT serves as tools for planning, development, and operation of all sectors of economy and improve their efficiency, productivity and management. Information opens up more possibilities and opportunities for people. Information and knowledge empower people to become more self-sufficient. ICT make information acquisition and management easier and more efficient, and open up possibilities across all sectors for global access

to information, knowledge, and markets.

The implementation started in 2007 with SUCs - CICT coordinators who conducted an ocular inspection on the school site with the consideration that the recipient school has zero computer but with electricity. The selection of the school site is through the recommendation of the local policy makers and DepEd administrators in the locality. The schools in the remote places are given top priority. The socio-economic condition of the students and people in the community where the school is located is low. Another consideration is that internet connection must be feasible in the school. Once the school qualifies the set criteria, deployment of computer units followed. These computers have to be installed by the computer technicians and SUCs-CICT coordinators and staff. The inauguration is done with the presence of the people involved in the partnerships.

Hundreds of public secondary school teachers all over the country have been trained since 2007. The training is done by batch and by project. The teacher trainees are recommended by their principals considering the subjects they are handling, e.i., they must be handling subjects which integrate the use of technology like Technology and Livelihood Education (TLE), Mathematics, Science and English.

The methodology was participative and collaborative in nature ensuring active involvement and participation of trainees. Focus group discussions (FGD) and Focus Group interviews (FGI) with the trainees and their principals were done. The same methods were also done with the LGUs, city and municipal officials to validate the issues raised by the trainees during the training. Inputs from the trainers were considered. One thing advantageous about the training is the use of the Free Open Source Software (FOSS) where trainees really enjoyed much. This is using the Linux operating system where teachers do not have problem on the licensing aside from not being easily contaminated with virus.

Travel expenses, lodging and accommodation and other training-related expenses are provided. Usually the training ranges from 5 to 6 days. The activities are rigid and every minute is valued. Trainers consider that the venue of the training where the computers are installed is conducive and they see to it that every trainee is ready, physically and mentally fit for a week-long activities. Challenging

activities were integrated in the training. Ice breakers are given when trainees looked tired and overloaded with technological activities to keep them always active and alive so that they will be able to internalize the lessons during the training.

During the training, active participation/involvement is encouraged from every trainee rather than passive observations. Trainers tried their best to engage all the trainees during the actual training. Queries, clarifications and questions are encouraged from the trainees. All these were addressed and answered by the trainers properly if not excellently. This is done to make sure that everyone is well-equip when they go back to their respective schools. ICT Literacy training topics include tools to communicate and express ideas effectively, how to facilitate analysis and problem solving, how to sort through resources for research and information synthesis, and how to manage time and tasks effectively --- including technological literacy and information literacy.

Evaluation of trainees is done every after each training. This is to find and solicit feedback from the trainees so that next training, their feedbacks and concerns will be addressed. The results are amazing and overwhelming. Some trainees revealed that it was their first time to touch the computer yet very exciting to acquire knowledge and skills so that they can impart the same to their students. They feel proud and happy learning "how to learn" and "how to do" with the machines with overflowing information of all sorts. Those trainees who are quite familiar with other operating systems indicated that Open Source (OS) like Linux has more features and user friendly. Majority said that their students will have very meaningful and life-long learning when they integrate computer technology in their lessons using the Linux operating system.

Observations reveal that trainees explore a lot using the OS which imply that they are seriously considering the training as an avenue to enhance teaching-learning processes. In addition, during the interviews, trainees said that the multimedia presentation for classroom instruction is very useful since it will contribute greatly in the effectiveness of imparting knowledge to the students. Trainees are very much impressed on how the computer does the computation of grades and even process the data. They even said that this time they

will have a more precise and accurate mathematical computations. They will not encounter difficulties in the computation of students' grades.

CHALLENGES

One of the challenges posed here is the eradication of the digital divide. This means that the introduction and integration of ICTs at different levels and in various types of education, will be a most challenging undertaking. Failure to meet the challenge would mean further widening of the knowledge gap and the deepening of existing economic and social inequalities. It is believed that the readiness of secondary school teachers has a direct impact on the development of education, particularly in Mindanao where most government owned schools still use the traditional method of instruction. Some high school teachers have zero background on ICT, so much so, that difficulties during the training was felt and encountered. Teachers face a great challenge to learn and acquire computer skills despite their apprehension as they work in areas where people in general and students in particular are not technologically savvy.

Teachers consider it a great challenge integrating ICT in their educational curricula, school activities and programs. Lack of systematic coordination between the various groups involved in implementing ICT projects is evident. In addition, negative attitudes of the principals and inadequacy of facilities needed to maintain ICT sources pose another challenge. However, teacher trainers are anticipating and excited to implement in their classes what they learned during the training. Indeed this is a good start to address the concept of the digital divide in the country.

Tinio (2002) emphasized the crucial importance of these ICTs in developing three foundation skills of the learners, namely, 1) how to find information 2) how to determine if what is found is relevant to the task at hand; and 3) how to determine if the relevant information is accurate. This is also affirmed by the OECD book "Learning to Change: ICT in Schools", (2001) which describes the "pervasive use of ICT in schools to be motivating" that succinctly justifies the economic, social and pedagogical implication and rationale for ICT integration in the classroom.

One of the challenges in bringing ICT into education however has been the teachers' lack of skills necessary to integrate technology into the classroom, and the professional development to understand how to make the best use of ICT for the benefit of students. Similarly, curriculum and training providers lack a clear set of internationally recognized guidelines on what constitutes appropriate ICT professional development for educators. Despite the reported rapid adoption of ICT into secondary schools, the challenge still remains in the education in several sectors of the economy. How can ICTs be demystified to the majority of the local population when they still view them as tools designed for the minority elite.

Capacity-building for public secondary school teachers on ICT is indeed very relevant. Students have high regard on the capacity of their teachers. It is a fact that many students can afford to have ICT gadgets at home, hence, they are advanced in terms of knowledge and skills on ICT. It is a great challenge for teachers to learn and internalize the use computers in the subjects they are teaching, integrating ICT in the classroom instruction. Teachers will also be trained in the trouble shooting in coordination with private service providers.

LESSONS LEARNED

Learning is a continuing process. It is never too late to learn something new like ICT and modern technologies of teaching. Gone are those days when computers in the classroom are seen as tutors. After the trainings, computers are used as tools towards engaging students in critical and interactive learning. Moreover, adequate basic infrastructure, continuing connectivity, hardware and software and internet availability need to be sustained. Technical support funds for operations and maintenance and even space to accommodate computers are made available for ICT use.

Trainers and facilitators learned that different trainings is NOT simply a transfer of content but a transfer of cognitive, affective and psychomotor skills to the teachers in the field. Teachers can use the ICT in the lessons if resources are given and if they are well-motivated. Computers can facilitate teaching and learning processes. It makes work simple and easy. The use of the Free Open Source Software (FOSS)

is very advantageous to all participants and beneficial to all schools. However, patience of trainers should be strectched to maximum tolerance, since many trainees have inadequate knowledge and skills.

In addition, public secondary school teachers identified the lessons learned which include the a) implementation of teaching-learning strategies that integrate a range of information and communication technologies to promote and enhance students learning; b) establishment of cooperative and collaborative technology-supported and learner-centered environments that engage all students in focused learning experience; c) enrichment in curriculum lessons with students effectively evaluating and using relevant and appropriate software for specific educational use.

OPPORTUNITIES

The training made use of the FOSS which is not quite familiar with the teachers in the Department of Education. It is indeed a rare opportunity to learning the use of computer applications using FOSS. The meeting of intelligent minds between teachers and trainers who share ideas on ICT integration in the classroom is indeed a great opportunity for learning that they can share with their students. Networking and collaboration with other institutions is a great opportunity.

Linkages with the ICT-enabled community and stakeholders to have a more closer outlook in developing strong partnership between the school and community. It is a chance to hone the trainers technical knowledge and skills. Teachers who are better equipped with the knowledge and skills in word processing are better equipped in the preparation of their notes, exams and other school-related documents. There are exercises related to the computation of grades and creating presentation of the lessons, hence, the opportunity to use these computers can facilitate the computation of students' grades.

The important lessons learned include the a) implementation of teaching-learning strategies that integrate a range of information and communication technologies to promote and enhance students' learning; b) establishment of cooperative and collaborative technology-supported and learner-centered environments that engage all students

in focused learning experience; c) enrichment of lessons with students effectively evaluating and using relevant and appropriate software for specific educational use; and d) identification and application of social, ethical, legal and human issues surrounding the use of technology in education.

POLICY RECOMMENDATIONS

The Philippines has begun to re-conceptualize the policies and strategies of ICT in education towards life-long learning, in its Information and Communication Technology Plan. With IT involved in education as an enabling and productivity tool that will enhance learner performance, educational efforts are being re-focused on the requirement of the learners and the job market through ICT. The participation of other stakeholders in education is also sought in the upgrading and modernization of the public schools especially those in the underserved provinces. The Local Government Units (LGUs) shall be continuously tapped to ensure the sustainability of the ICT programme. LGUs have the responsibilities in financing, maintaining, and operating the ICT laboratories.

The training would be much effective if all public high schools are already connected to the Internet so that maximum learning will be observed during the training. DepEd should already consider the wide use of Free and Open Source Software (FOSS) in the high school curricula. Levelling of expectations from the trainees has to be done before the specified date of the training so that the trainer could develop a more challenging number of activities based on the skills level of the trainees.

Content of the training should be reviewed together with the CICT Staff to enhance if not modify/revise topics based on the previous experiences. Revisions of content should be approved by the Project Manager before implementation. A thorough needs assessment survey should be done before the training to have a frame of reference as to which topics should be emphasized. Follow through activities of the recipient schools and trainees must be done by the CICT group. There must be close monitoring of the classes, facilities, activities in the recipient schools. More trainings and seminars like iSchools should

be done to all public secondary school teachers to update the services rendered by the use of the Linux.

Administrators must motivate the teachers to use ICT in their classroom. The trainee must re-echo the training to their co-teachers because only a few teachers are trained. Computer Internet Literacy Training (CILT) trainers must have a clear understanding and a good background in the foundation of education. School university officials must be informed of the duties and responsibilities of the CILT team so that they can understand the bulk of task assigned to the BSU-CICT.

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