



The Coca-Cola ed.Venture Pilot Project

Project Background

The Foundation for Information Technology Education and Development (FIT-ED) was established in 1997 to increase IT awareness in the Philippines and to contribute to the effort to enable Philippine society for the Information Age. It provides a forum for discussions of issues, expectations and realizable goals, reviews current thinking and sponsors original research on issues relevant to an IT-enabled Philippines. The Foundation initiates projects that showcase the application of IT to encourage its wider use and to enable potential users to take the first leap into a connected world. FIT-ED has been involved in several projects with IT companies, educational institutions, government agencies and other stakeholders to further its efforts in increasing IT awareness and helping prepare Philippine society for the Information Age.

In early 2000, FIT-ED was developing a program called Pilipinas SchoolNet that was intended to help build a network of schools in the Philippines that used ICT as effective tools for teaching and learning. It joined forces with the Coca-Cola Export Corporation, who at that same time was brainstorming its own response to the global call for greater corporate participation in efforts to narrow the digital divide and was willing to finance the piloting of Pilipinas SchoolNet through what is now known as the Coke Ed.venture project.

The Coca-Cola ed.Venture Project was envisioned to be a four-year pilot project under the Pilipinas SchoolNet program of FIT-ED. Being such, it sought to pilot the integration of the use of information and communication technologies (ICTs), specifically the Internet and the World Wide Web, into the public secondary education curriculum. The Coke ed.Venture model of ICT integration was introduced to 15 public high schools in Metro Manila and the Visayas in 2001. These high schools are located in underserved peri-urban and urban areas, and come in a range of sizes, from the small, medium to large ones. After the establishment of computer laboratories in each of these schools, continuous professional development programs aimed at teachers, school administrators and technical support staff were



implemented throughout the next 4 school years, to ensure continuity of ICT integration at the school level.

Project Objectives

1. To test the viability of a specific model of ICT integration which puts emphasis on continuous professional development and support services for teachers, school administrators and technical support staff
2. To determine the drivers and barriers (or what works and what doesn't) in using this model of ICT integration in different local socio-political situations.
3. After testing the model, to influence national policy formulation with regard to the use of ICTs in basic education, specifically at the secondary level

Project Components and Milestones

1. Connectivity – Providing the necessary physical and technical infrastructure and resources to the 15 public high schools (July 2001-January 2002, October 2002)
2. Professional Development – Developing competencies in the effective uses of ICTs in education, with particular emphasis on matching technology use with curricular goals
 - a. Teachers
 - i. Phase 1: Basic Computer and Internet Literacy (Oct 2001-Mar 2002)
 - ii. Phase 2: Information Literacy and Telecollaboration (May 2002)
 - iii. Phase 3: ICTs and Curriculum Integration (Aug-Sep 2003) – introduction of specific web-enhanced learning activities, WebQuests and Treasure Hunts
 - iv. e-Learning Club workshops with students (Jul-Sep 2003, Jul-Sep 2004)
 - b. School Administrators
 - i. Phase 1: Optimizing ICT Use in School (Apr – May 2002)



- ii. Phase 2: Strategic Planning (Apr-May 2003)
- c. Technical Support Staff
 - i. Introductory Course to Workstation Maintenance and Network Administration
 - ii. Workstation Maintenance and Network Administration – one-on-one and on-site training for technical support staff
- 3. Support Services
 - a. Pedagogical or Teacher Support
 - b. ICT Planning and Management Support
 - c. Technical Support
- 4. Monitoring and Evaluation
 - a. Creation of appropriate monitoring tools and approaches
 - b. Documentation of issues focused on efficacy, sustainability and scalability

List of ed.Venture schools:

1. Quirino High School, Quezon City
2. Sagad High School (formerly Rizal HS – Sagad Annex), Pasig City
3. Bitoon National Vocational School, Dumanjug, Cebu
4. Cansojong National High School, Talisay City, Cebu
5. Tayud National High School, Consolacion, Cebu
6. San Roque National High School, Alburquerque, Bohol
7. Manga National High School, Tagbilaran City
8. Negros Oriental High School, Dumaguete City
9. Camanjac National High School, Dumaguete City
10. Bais City National High School, Bais City
11. Hilongos National Vocational School, Hilongos, Leyte
12. Ipil National High School, Ormoc City
13. Guimbal National High School, Guimbal, Iloilo
14. Passi City National High School, Passi City, Iloilo



Highlights of the ed.Venture impact evaluation

I. Impact Evaluation Highlights

a. *On school selection and preparation*

1. The fifteen Coke ed.Venture schools were within the general area of Metro Manila and Visayas, endorsed by their respective regional and division offices and in some cases by FIT-ED program implementation partners, in need of ICT facilities, and capable of putting up the necessary physical requirements. The selection criteria and guidelines employed by the implementers in choosing the ed.Venture pilot schools are consistent with the criteria for choosing schools under the DepEd computerization program.
2. With the possible exception of Quirino HS in Quezon City, the schools were only able to put up computer laboratories or retrofit classrooms to serve as computer laboratories because of external funding sources, and pledges of support from the LGU, the private sector, the PTCAs and the community in general. The computer laboratories were put up following specifications prescribed by CITE, primarily to assure that they were put up based on safety and efficiency standards.
3. Prior to project implementation, ICT-related skills, and the use of ICT facilities in almost all of the schools were highly concentrated among TLE (Technology and Livelihood Education) teachers only. There also seemed to be no clear agenda or concrete plans for integrating ICT into the regular curriculum prior to project implementation.

b. *On the Teacher Professional Development Component*

1. Teachers who participated in the project's TPD (Teachers' Professional Development) component were chosen based on the following criteria: content mastery and with pedagogical competence, with a little or zero computer literacy, willingness to



attend and complete the training workshop, interested in learning the knowledge and skills offered by the training workshop.

2. The professional development component consists of the following phases: Phase I: Basic ICT Literacy Skills focusing on the fundamentals of computer operations, basic applications, accessing resources on the World Wide Web and electronic correspondence, Phase II which was built on the fundamentals learned in Phase I focused on information literacy and telecollaborative learning . Phase III focused on two web-enhanced learning activities—the online treasure hunts and WebQuests.
 3. Instead of conducting a skills assessment prior to entry to the TPD, program implementers opted that skills be assessed based on performance. Performance-based assessment was done in the course of the entire TPD program, at the end of each phase. As a result of these assessments, less than a third of the original teacher sample was invited to participate in Phase II, and only a little over half of these advanced to Phase III.
- c. *Putting in Place Support Services* - Three support services were put in place-- Technical Support, Pedagogical Support and Monitoring, and ICT Planning and Management Support.
1. *Technical Support*: Unlike the procedure for selecting teachers for the basic computer literacy training (which requires that trainees have “zero” computer knowledge), the schools' technical support staff were chosen for their computer knowledge and skills. The support services and the capability building for the technical support staff were put in place following the principle of “not intending or expecting to make technicians out of the teachers”. Instead of attempting to educate the schools' technical support staff on the entire system and logic of computer operations, program implementers provided technical

support staff with trouble-shooting procedures and solutions outlined in manuals designed to remedy a wide range of the more common problems in network administration and maintenance.

2. *The Pedagogical Support and Monitoring* component was designed to provide the teachers with continuous post-training support to successfully implement activities and projects in ICT and curriculum integration, including the E-Learning Club (ELC) projects and to monitor and evaluate the conduct of Phase III activities. The pedagogical support component was designed to address the training needs of the teachers and other issues not effectively covered during Phases I and II.
3. *ICT planning and management support* provision was delivered by FIT-ED staff to school administrators and teachers on a per need or per request basis primarily through telephone calls, text messages and e-mail. The ICT planning and support service had been designed to be flexible to cover a wide range of issues and concerns.

d. Effectiveness of Project Strategies

1. The “connectivity” component of the project had been very successful in terms of putting in place infrastructure and equipment, which would not have been possible if left to the schools and their respective divisions alone.
2. The professional development component of project had been successful in three ways. One, it familiarized the teacher participants with basic ICT skills in Phase I which aside from serving as the foundation for Phases II and III, enhanced their productivity in relation to performing their other duties as teachers (record keeping, computation of grades, etc.) and provided them skills for actually using ICT. Two, those who participated in Phase II and Phase III were also able to learn skills specific to integrating ICT into their teaching and learning



activities. Three, teachers were actually able to use ICT in the teaching-learning activities making use specific models of ICT integration.

3. Pedagogical Support was provided to the teachers through online (through e-mail) and off-line (school visits) consultations on matters of instructional design and curriculum integration. The teachers interviewed for this evaluation said that the pedagogical or teacher support was very helpful as they served as follow-ups to the trainings. During the pedagogical support visits, the pedagogical support team modeled and facilitated peer critiquing of the teachers' management of the ICT and curriculum integration activities. The visits also served as an extension of the training received and enabled the teachers to clarify implementation issues as they occurred.
4. The organization of E-Learning Clubs in the schools, for facilitating faster and more effective planning and implementation of ICT activities proved to be a good strategy to complement TPD activities. In the sample schools visited the able and willing participation of students in ICT activities are greatly valued by the teachers. Some teachers even noted the marked differences in conducting ICT-enriched activities between ELC and non-ELC members.
5. ICT Planning and Management Support. The provision of support to the ed.Venture schools was handled by FIT-ED staff usually through telephone consultations with school administrators and teacher participants of the program. Face to face consultations were done on a per need basis. The parameters of management support effectively taking into consideration the diverse management dynamics across the schools had been flexible enough to adequately address concerns that could neither be classified as pedagogical nor technical.

6. Technical Support which is part of the technical sub-component of the project was delivered on a per need basis. A system for monitoring and reporting requests for technical assistance was designed with FIT-ED coordinating the provision of services especially those which implied expenses. For the first year, technical assistance was provided for free. The technical support subcomponent of the project had been effective in providing for the needs of the schools during the first year of implementation. During the following years, the schools had established the necessary networks for autonomous technical maintenance of their computer laboratories.

e. *Appropriateness of Project Interventions*

1. There is not enough data to discuss its appropriateness to local cultures. Rather, aspects related to the use of ICT in education which should be given focus are: preparedness of the school for the technology, conduciveness of the environment for making use of ICT, readiness of the teachers and the students, and the need for ICT.
2. The takeoff point for discussing conduciveness of the environment for making use of ICT at the level of the school is the appropriateness of the school policies to the objectives of the project and to other circumstances in the school. During project implementation, the school administrators agreed to use their computer laboratories to serve the purposes of the project. After project implementation however, the schools implemented policies which resulted in either furthering or limiting the use of ICT in subject areas other than TLE.
3. Where there are numerous resource materials available such as e-CDs, films, “hot lists” of websites, teachers pick the ones they deem to be relevant and appropriate. This is commonly the case in most of the sample schools.

4. Although the teachers had demonstrated capability for using of ICT integration models taught them during the course of the project, most of the teachers find it difficult to veer away from the traditional instructional design (as used in lesson planning) they are more familiar with. In practice, they use ICT to address different needs in each part of a lesson such as motivation, lesson presentation, and application.
- f. *Achieving Project Objectives*
1. Analysis of the results of the evaluation suggests the following conclusions:
 - a. Given the necessary facilities, training and support systems, the schools can enrich the current curriculum through ICT integration;
 - b. With the necessary facilities in place, the more basic and simpler skills (skills necessary for enriching with ICT parts of the lesson plan) are learned and applied first, the more complicated skills (the skills necessary for using the models of ICT integration) and corresponding applications take time; and
 - c. “Need” is a clinching factor. Skills will be learned and applied on a priority order based on need.
 2. The program implementers during the course of the project were able to *determine barriers and drivers in promoting the objectives of the project.*
 - a. Analysis of the individual case studies (per school) shows that the local socio-political condition is definitely a factor when considering issues concerning the school’s capability to physically absorb the project, from having the basic technical requirements present in the area to harnessing and enlisting local support for maintaining and sustaining the facilities.
 - b. On the management side, collective management or participatory management of the project involving the



teachers themselves worked better than where management is done only by the school head or by a few. School and division policies may either be beneficial or detrimental to sustaining ICT use in teaching-learning activities.

- c. Time can be considered as a major “barrier”. The acquisition of necessary equipment and facilities for ICT integration may be fast-tracked; the same is true for training the teachers on ICT and ICT integration. However, teachers need to be knowledgeable and comfortable enough with ICT integration to be able to veer away from the more traditional instructional design they have grown accustomed to. This requires practice. Opportunities for teachers to practice their ICT integration skills are to some extent dependent on factors such as sufficiency and quality of facilities, conduciveness of school policies, and availability of support and resource materials, among others.
 - d. Cultures within the schools, administrative policies, and teachers’ individual initiatives can either be barriers or drivers depending on which way they go.
3. Influence on national and local policy formulation
- a. Project experiences from the ed.Venture project informed the National Strategic Planning Initiative (NSPI) of DepED, of which FIT-ED was the secretariat. FIT-ED’s project partners formed part of the technical working group or were among the resource persons consulted in the formulation of the National Framework Plan, specifically on issues pertaining to improving the quality of learning, enhancing the quality of teaching, and providing the necessary support services to sustain ICT-based efforts.
 - b. According to DepEd personnel interviewed “the national ICT integration policies as spelled out in various DepEd



issuances on the 2002 BEC (quality teaching and learning using ICTs) and optimization of ICT resources in schools (equitable access to ICTs, sustainability of ICT resources, and teacher productivity through ICTs) were based on documented reports from the field of programs on ICT including the ed.Venture project.

- c. The discussions below illustrate how the results of project interventions in some schools contributed to the development of ICT thrusts and agenda of individual division offices of DepED.

g. Project Gains and Benefits

1. There had been instances when the actual benefits gained exceeded the expectations. In Cansojong, Hilongos and San Roque, the schools had been centers of technology and learning not only for the teachers and students but also for the entire community, as barangay and LGU officials, parents and PTCA officials, out-of-school youth had been trained in the computer centers. Also in San Roque NHS, the teachers claim that the project interventions led to a higher achievement in Mathematics (in terms of Mean Percentage Score) by the school in the 2004 Regional Achievement Test (this however had not been verified).
2. Results of the evaluation study show that the participants are indeed better off than the non-participants. Benefits gained through the project are apparent at the levels of the schools, the teachers and the students. By receiving the equipment alone, the schools had already gained. In schools where learning resources are severely lacking, the on-line computers serve as better and richer substitute for an outdated library. While computers in other schools are being used solely for TLE instructions, those in the ed.Venture schools are being utilized for the enrichment of lessons and ICT integration in subject areas. In the case of San Roque NHS, Cansojong NHS and



Hilongos NVS, their experiences in actually integrating ICT into the curriculum place them at the forefront of their respective divisions' ICT thrust.

3. Within the schools, teacher participants to the TPD are better off than non-participants. Those who had undergone the trainings have more skills than those who had not: the more training they receive, the more ICT-competent they are considered.
4. While the benefits gained by the students are not readily apparent in terms of increased achievement levels in Division or National Achievement Tests, the improvements in student participation are readily appreciated at classroom level, as teachers attest to the students' enthusiasm for modern teaching-learning strategies, and enhanced quality of students' output. Students also report gaining ICT skills other students don't usually learn in school, through participation in the project. The students also believe the ICT skills they have gained to be good preparation for higher learning.

h. Towards Replication and Sustainability

- i. The experiences of the five ed.Venture sample schools illustrate the following to be crucial for the sustained use of ICT in instruction within the school:
 1. Supportive administrative policies at the school and the division levels
 2. Incorporation and consistency of ICT plans to the schools' and divisions' general agenda.
 3. Center use policies that take into consideration the circumstances of the students, teachers and the community in general.
 4. Institutional involvement of the entire school (and not just of a few teachers) in the operations and management of the center.
 5. Continuous professional development for teachers.

II. Highlights from Case Studies (excerpts)

a. Case Study: Negros Oriental High School

1. On how and when to integrate ICTs

“Teachers during the FGD claim that based on their experience, ICT can be used in any of the major subject areas but not all topics in the subjects can be enhanced through ICT integration. A lot still depends on the teachers’ mastery of the subject and their ICT competencies--mastery of the subject to be able to identify integration points, and ICT competencies to know which ICT tool to use and how. In this regard, training played a very crucial factor.”

2. On classroom management and cooperative learning

“The teachers claim that assessing the students’ individual ICT skills is important. This way, the teachers can do more balanced pairings. Students with greater ICT skills are partnered with those of less ability. The more adept students also assist their fellow students thereby also assisting the teachers in class management. Peer coaching among the students promotes confidence and better class cohesion. Also, they are able to contribute to the teacher by suggesting better site options aside from what was provided by their teachers. In this way, sessions in the computer center become venues for cooperative learning.”

3. On benefits and gains of the project

Building skills and self-esteem

“Although the other students in NOHS cannot be considered computer illiterate (the emphasis on computer education in TLE makes sure of that) those given the additional ICT exposure through the project have gained several advantages over the other students. Offhand, they have been given more time and more venues for honing their ICT skills. Also, having seen the practical applications of ICT in teaching and learning made them more appreciative of their lessons and their skills.”

Better student participation

“The student’s enthusiasm to use (the) computers is understandable. What is remarkable is the way they participate in class. The teachers are happy to note that after some time, the students are able to work on their own with very minimal supervision. Students are just too happy and willing to share skills, techniques and other bits of useful information to fellow students and teachers alike. Some teachers claim that on several occasions they learn from the students through suggestions during class or outside of classes.”

Better student outputs

“Teachers also note the improvement in the students’ output. Aside from having richer output in terms of data and information they are also able to make better presentations, as they are able to compare, modify their works and make presentations from the samples in the Internet. Seeing their work appreciated and having been given the chance to show off their ICT skills are reward enough for them.”

4. Good practices

- *Cooperative management of the Center*

- *Networking and linkages* - NOHS is aware of its financial and technical limitations. Linkages with the PTCA for financial, and STI and ACSAT for technical support are already in place.

- *Efficient diffusion of practice* - The ICT teachers see the importance of involving and educating the rest of the teachers for eventual institutionalization of ICT use in the school. With the support of the school administration, teachers are encouraged to learn and to take part in the school-based trainings. INSETs on ICT use are already institutionalized as part of the official school calendar. Aside from planned trainings, one-on-one mentoring and peer coaching among the teachers takes place often in the computer center.

- *Continuous ELC activities, continuous telecollaborative activities*

b. Case Study: San Roque National High School

1. On cooperative teaching

“The tasks and assignments of the students for the ICT lessons would be given by the teachers in the initial meetings, which would be accomplished during their set schedules in the laboratory. A teacher, not necessarily the teacher of the subject, would be in-charge of supervising the students when they are in the computer laboratory for the day. The System Administrator would also be there to assist.”

2. On what the students gained from the project

“According to the students, they enjoy their lessons and find them more interesting because there is more information that can be accessed through the Internet as compared to the limited books that they have in the school library. ICT activities also promote teamwork and cooperation because of group activities in ICT lessons.”

“The school gained recognition with the participation of the students in ICT competitions within their Division. Their recognition not only gave credit to SRNHS but to the whole town of Albuquerque.”

3. On good practices

“The sustainability of the project in the school is ensured with the strong support of the LGU, the parents and even the Barangay Council. The involvement of these sectors in the maintenance and in decision making on the use of the center strengthens their sense of ownership and involvement in the program.”

“The hiring of a full time Systems Administrator provided significant help in the smooth operation of the computer laboratory. Aside from having the time

to ensure the proper maintenance of center, the System Administrator's assistance in ICT activities is always sought out. The employment of the System Administrator by the LGU is another manifestation of the LGU's strong support of project."

c. Case Study: Cansojong National High School

1. On how and when to integrate ICTs

"According to respondent teachers, a lot of topics / lessons in the curriculum may be enriched with ICT in their respective subjects. Mastery of the curriculum will tell the teacher what entry points may be used for the integration and a high level of ICT knowledge will tell how."

2. On classroom management practices

"Of the nine teachers who facilitated telecollaborative projects, most stated that facilitative classroom management could have played crucial role in overall impact of ICT use in lessons. It is to be noted, they say, that without the skills or the plan that considers the various learning capability of each student, expected impact of ICT use to learning is reduced."

"The first adaptation in the way teachers hold classes utilizing the computer laboratory is by working on student pairs. Teachers managed the pairing so that the better students are paired with the slower ones. This facilitates cooperative learning among the students and leaves the teacher flexible to focus on students who need supervision."

"Another teaching technique employed is to divide the class into two workgroups and work on two sets of instruction – one workgroup is taught in a regular classroom-type instruction; the other workgroup is given instructions on accomplishing an ICT activity related to the lessons. On the next slated use of the facilities by the class, the workgroups switch and catch up with each other's learning."

3. On benefits and gains

Increasing student confidence

"According to their teachers, students who are more exposed to ICT facilities and resources tend to know more about more subjects. The experience of leading their individual workgroups may also have increased their confidence to speak out during class discussions."

Exposure to ICT

"According to the teachers, students who have gained experience with ICT through the program experience less anxiety over college education and perform well with their courses as well as other activities. This is relayed to the teachers through occasional visits to the school and their teachers by these students who are presently at college and occasionally encounters ICT related activities or subjects."

4. On good practices

“The school is among Talisay City division’s forerunners in development and innovation in secondary education. The experience of ICT practice in the school had the division and the rest of the schools in the city acknowledge the emergent need for integrating ICT into the education – as a way to complement and enhanced present teaching and learning practices.”

Tapping and strengthening existing linkages and fostering new ones for various school improvement projects – “Extending and sharing knowledge and skills acquired through capability building to the city employees and local council officials served the purpose of strengthening these linkages. The initiative advocated the school’s capacity on ICT and makes for reference for future endeavor to other stakeholders. It also earned some income for the school as well as cost-recovery scheme.”

Active and enthusiastic students – “The students of CNHS may have provided the further incentive for the teachers to implement ICT integration in the class. Their unabated interest in both learning and applying knowledge and skills gained through the program has motivated their teachers. Their eagerness to do the prepared ICT activities showed their readiness to learn with the new technology. This, in some form, complements and shows appreciation for the teachers’ efforts in the classroom.”

d. Case Study: Hilongos National Vocational School

1. On classroom management practices

“To accommodate the large number of students, a class is divided into workgroups; others work on ICT activities while the remaining groups learn theory through discussion in a separate classroom. The set-up however presents strain to teachers as they need to prepare two types of instructions. Monitoring on both groups also presents somewhat of a problem to one teacher attending two separate sessions. Over a period of time however, the practice becomes fairly easy as teachers are familiarized with the process.”

“The workgroup concept also fosters cooperative learning among students. With the right combination of students in a group, all students almost equally grasp the lessons and learn more in group discussions.”

2. On benefits and gains

“Respondent students, who were members of the original ELC in its first two years, stated that the club served like a honing ground for their budding ICT skills. Unlike in their TLE subjects where focus is on learning the technology, activities in the ELC require an application of these technology skills in accomplishing curriculum-related projects. Furthermore, these activities, such as WebQuests and Treasure Hunts, enhance their creativity through challenges encountered while accomplishing each objective.”

“During workgroup sessions, teachers group students with different learning capabilities. At the same time, each student performs different roles for each session grouping. This facilitates the students’ ability to adapt to the various roles in the group. This arrangement fosters camaraderie among the students

and increases the students' confidence in socializing with his/her peers. This increased confidence translates to active participation in class discussions, as claimed by the teachers of HNVS."

"Students' exposure to the large number of materials accessed through ICTs may have encouraged them to improve the creativity of their own outputs and have given them additional inputs in terms of background information on topics."

3. On good practice

Strong support from the school's stakeholders: "The school's stakeholders have not wavered in support of the school's development projects. This may have been facilitated by strong initiative of the school administration to inform and involve community stakeholders in most of its undertaking. In addition, the school's transparency in programs implemented in the school received support from the parents and made institutionalization of such support in the PTCA and LSB easier."

Facilitative teaching strategies:

- "- Center manager may take over facilitation / monitoring of computer classes where learners are more independent of teachers*
- Workgroups inspire collaborative working among students and develops independence from teacher-centered type of teaching learning. It also builds confidence among students assigned as leaders for the group.*
- Initiatives to advocate ICT integration to fellow teachers provide ease in culture of practice among HNVS' personnel."*

"Peer teaching among teachers and students in the school have been developed and are fostered through cooperative learning in the class."

"Center manager and other ICT teachers make aware of resources available at the center for use in computer-aided instruction. Individual teachers decide whether to utilize the facilities and the technology or not."

"Exchange and constructive criticism of ICT-integrating activities such as Treasure Hunts and WebQuests are advocated among teachers in the same subject."

e. Case Study: Quirino High School

1. On enhancing student participation

"According to the teachers, there is improvement in the participation of the students when ICT activities are involved. Improvement in the students' performance was more on attitudinal as shown in their excitement and alertness in the tasks assigned to them."

"Some students are even more technically competent with computers more than their teachers so they are asked to help in class through power point presentations and web site design. They are also expected to teach and lead their classmates. These activities promote self-confidence in the students and inspire them to further enhance their knowledge and abilities."

2. On the felt need (of students) for diffusion of practice

“Their only concern is the lack of teachers using ICT integrated lessons.

They feel privileged because of their opportunity to have ICT lessons but they think it better if the more teachers apply ICT so the other students (not under the existing ICT teachers) could also have the chance to have ICT integrated lessons.”