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DNHS

PROJECT ZENITH

Zealous Enhancement and Nurturing of Individuals through Technology and
Hands-on *

Zealous Enhancement and Nurturing of Individuals through Technology and Hands-on (ZENITH) Project : A Key in Enhancing Teachers' Professional Growth

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Rationale:

Teaching entails a constant search for professional growth as this unveils current pedagogy on how to make learning fun, meaningful and relevant to the students. Once teachers are engrossed on activities that enhance their professional development, their process, leadership and task skills are enriched. It is through proficiency that educators are able to respond to the demands of time and take on a paradigm shift in the strategies they utilize in teaching.

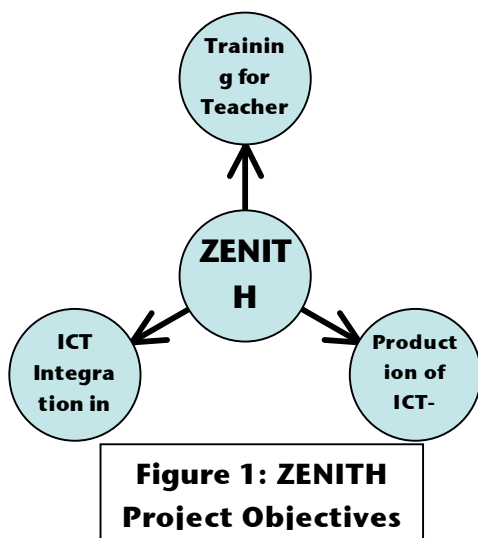
In the advent of the 21st century, Information and Communication Technology (ICT) has been introduced in the educational field as a means of producing highly motivated and competitive students. Through ICT, *the teachers are trained on how they can effectively integrate the use of computer technology into classroom curriculum to improve student learning and achievement.* (Intel portal) According to Liverpool (2002), while ICT has already invaded and dominated in the developed world, its invasion into the system in most developing countries has been painfully slow. But the fact is that ICT represents an opportunity to those who can respond to the new paradigm and a threat to those who cannot.

In its quest to respond to the challenges brought about by ICT, Dulag National High School (DNHS) has long been an advocate of computer integration as pedagogy since 1997 when the School of the Future (SOF) was introduced. In this regard, several teachers in DNHS have been trained on the basic skills of computers and its integration in the curriculum. A number of them have attended seminars on Faculty Technology Transfer Program (FTTP); School of the Future (SOF) Implementation; Intel-Teach to the Future; MOS (MS Office Specialist) ICT Literacy Training; Information Literacy and Telecollaborative Learning; e-Curricula; Fit-Ed Training. All of the said seminars were instrumental in enhancing the teachers' basic computer skills and nurturing their teaching strategy through the use of technology. As a consequence, some of these educators were tapped as trainers in the conduct of computer literacy training in the regional and divisional levels.

However, statistics show that only 22 out of 56 DNHS teachers or 39%, have been formally trained on how to integrate the use of computers in enriching classroom instructions. Out of the 22 ICT trained

teachers, only 18 or 82% have implemented the ICT strategy in their lessons. Talking about the totality of the teaching force, this signifies that only 32% are utilizing the ICT integration in teaching.

As a way of strengthening the DNHS ICT program, the ZENITH project was conceived anchored on the aim of helping DNHS teachers grow professionally. Specifically, the ZENITH aimed to train more teachers to be acquainted with the ICT pedagogy; develop the multiple intelligences of the learners through ICT-based projects; and strengthen the community out reach program to the Out-of-School Youth (OSY). The gist of the ZENITH Project is presented in Figure 1.



ZENITH Implementation Model

As a way of carrying out the objectives of ZENITH, certain models have been utilized classified as training, instructional support, content development and M & E models.

A. The Training Model

The training model utilized was the EMAR (Echo, Mentoring, Appreciation and Refresher). A core of trainers was identified who have attended seminars on FTTP, SOF, MOS, Intel and Fit-Ed training. A total of 9 teachers were identified as ZENITH trainers who worked on the training design for each seminar-workshop held. The springboard in the determination of ICT skills to be honed among the participants in the training was the result of the survey entitled “Assessing Teachers’ Computer Skills.” From this, two (2) phases of the training were devised which were as follows:

- (a) **Phase 1 - Basic Computer Literacy Training** that focused on MS Word, MS Excel, MS Power Point , MS Publisher and the Internet. The participants were taught on how to finalize their lesson plans in MS Word, how to compute grades in MS Excel, how to present graphs and test results in MS Excel, how to prepare instructional materials in MS Power Point and how to prepare a newsletter using MS Publisher.
- (b) **Phase 2 - ICT Integration Training** that focused on Web Quest, Scavenger Hunt and ICT IMs Construction. This was a higher level of training since the participants were required to complete the portfolio of instructional materials which they will use in teaching their subject areas through ICT integration.

The set of teachers who have attended the first phase were required to attend the second phase to prepare them for the ICT integration in their respective subject taught. Since there were **10 computer** units available, at most 10 teachers were only trained per seminar. Considering the few number of teachers trained, the ICT **Mentoring** was devised.

In the ICT Mentoring, the core of ZENITH trainers trained at least 2 teachers during their vacant periods. The mentor and mentee met once a week for one (1) hour within one semester covering the topics in the 1st and 2nd phases of the training model. At the end of the mentoring stage, the mentees were then assigned to hold ICT classes on their respective subject areas.

As a way of motivating the teachers to continue with their quest for professional development through ICT training, service credits were given to them through the approval of the Division Superintendent; Certificates were given – Participation for the attendance in Seminars, Completion for the successful Mentees, Recognition for teachers who have conducted the ICT classes; USB flash drives were likewise provided to the trainers and teachers who implemented ICT classes. This was the **Appreciation stage** of the training model.

A **refresher** workshop was also conducted geared at refreshing and enriching the ICT integration of teachers whose attendance in ICT seminars was several years back. The refresher workshop was instrumental in giving the teachers a fresher view of the techniques they will carry out.

B. Instructional Support Model

The instructional support model was characterized with **MOF** defined as **Mentoring, Observing and Feed backing**. The teachers who were assigned to hold ICT classes were given Office Orders by the Principal. The ICT Coordinator then talked with the teacher with regards to the strategy he proposed to utilize in carrying out the ICT integration in consonance with his lesson. Inputs were given by the coordinator to the teacher assigned to enrich the contents of the lesson plan and enhance the ICT strategy. This was the mentoring phase.

During the ICT classes, selected ZENITH master trainers then observed how the teacher facilitated their ICT sessions with the students. Notes were taken with regards to the way the teacher administered the completion of ICT outputs, whether individual or by group. After which, feed backing at the end of the day was done in order to give the teacher time to improve his ICT pedagogy and discuss solutions to problems encountered during the holding of ICT classes.

C. Content Development Model

The content development model utilized was **DVSE** technique (**Develop, Validate, Enhance and Share**). Each ICT teacher was required to submit a plan and construct IMs in consonance with his ICT lesson. The dry-run of the said materials was carried out in the actual use and implementation of the plans and IMS during the ICT classes. With the help of the master trainers who observed classes, the strengths and weaknesses of the IMs were then identified. These materials were improved to enhance its contents as well as the ICT method used. During the conduct of Community of Practice (Cop) for ICT teachers, these materials were presented for sharing to other teachers to serve as their models. The teachers then adopted the IMs which they can use in their subject areas.

Further, in the content development phase, during CoPs, teachers from different subject areas collaborated to form *Community Based Adventures for Lifelong Learners (CALL)* projects that aimed to put into one project, specific learning objectives in various subject areas such as Math, Science, English, TLE and Values Education. The said CALL projects were geared at enhancing the multiple intelligences and entrepreneurial skills of the learners

D. Monitoring and Evaluation (M & E) Model

As the ZENITH Project was implemented, an M & E strategy was devised based on the activities carried out.

- (a) *For teachers implementing ICT Classes* – Lesson Plans and IMs such as Webquests, Scavenger Hunts, CALL Projects, etc., were collected; attendance of the teachers in their assigned date for ICT classes was monitored; the list of classes as well as the number of hours on ICT classes held for each section was determined; Students' outputs were checked and saved in the CDs for future reference; Rubrics were required in rating the students' outputs; Success stories from the students were collected.
- (b) *ICT Mentoring* – Mentors and mentees were always required to sign in the logbook completing the following data: Mentor, mentee, time of mentoring, topic discussed, and outputs required from the mentee. The mentees printed the outputs in each mentoring session. Such was checked by the ZENITH implementer. The required school reports which the mentees have not yet submitted were determined by the ZENITH implementer and were considered as one of the outputs to be submitted.
- (c) *Conducts of ICT Training* – the outputs required in each training session were all educational materials which the teachers polished along the way in their ICT implementation. These outputs were saved in the electronic folders and were checked by the trainers in the duration of the training. No certificate of Participation was given unless the outputs have all been submitted. These IMs were presented at the end of the seminar for critiquing and feedback. The computer skills which the participants have acquired before and after the training were determined through a checklist of skills.
- (d) *Conduct of Basic Computer Literacy Training for the OSY* – the attendance of teachers who have willingly devoted their time in facilitating the training was identified. Their assistance provided to the OSY participants was determined through the quality of outputs submitted by the latter.

Figure 2 shows the summary of the ZENITH Implementation Model which revolved around four aspects: Training, Instructional Support, Content Development and Monitoring and Evaluation. The utilization of the four (4) models of ZENITH impacted the attainment of Teachers' Professional Development.

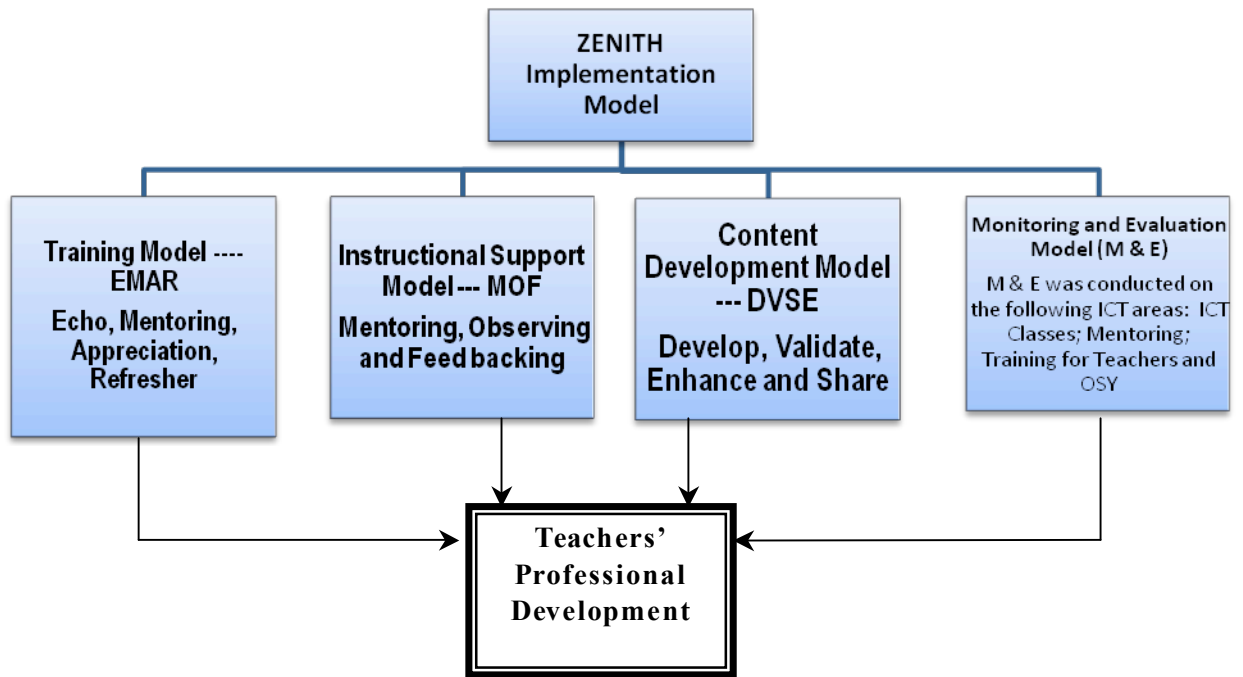


Figure 2: The ZENITH Implementation Model

ZENITH Implementation Highlights

At the heart of Dulag, Leyte is situated Dulag National High School (DNHS) which renders services to 2,359 students. DNHS continuously seeks to offer quality services to the community through the implementation of novel programs and projects collaboratively conceived and employed by 56 teachers and 5 school administrators.

As a way of responding to the demands of time on technological development, the ZENITH project was implemented in DNHS geared at honing the professional development of teachers and in molding the multiple intelligences of the learners. With the birth of ZENITH, various ICT training blossomed in the school instrumental in increasing the number of computer literate teachers from 22 to 40. As a consequence, a paradigm shift on teachers' pedagogy became remarkable ... from the Contextualized Teaching and Learning (CTL) approach; the ICT integration was additionally utilized which enriched the

teaching and learning process. Furthermore, the conduct of several ICT training has created a stronger linkage between DNHS and its stakeholders such as the Local Government Unit (LGU) and the Parents, Teachers and Community Association (PTCA).

At the start of the Basic Computer Literacy training, the teacher-participants were diagnosed to be techno phobic. However, as the ZENITH trainers and facilitators guided them in accomplishing their respective outputs, enjoyment became remarkable. Outputs such as Lesson Plans, Posters, Diagrams, Newsletters, Grade sheets, Graphs, Web Quests, Scavenger Hunts, Activity Sheets and Rubrics were created by the teacher-participants. As what one of the participants stressed: ***“It’s difficult to manipulate the mouse. It’s challenging...but with this training, I can create more instructional materials in the future.”***

Certainly, the topics covered in the training became the springboard in the production of more novel IMs and aided the teachers in complying school reports.

As incentives to teacher-participants, service credits were requested from the Division Office for the teachers’ attendance in the seminars conducted during Saturdays and Sundays as well as during vacations. This motivated the teachers to be engaged more on ICT activities. Such motivation was further strengthened with the inspiring words given to them by the School Principal as well as the Dulag Town Mayor who were great supporters in the conduct of the training. The Mayor shouldered the snacks of the participants in the duration of the seminar. These activities lasted for at least five days.

As an effect of the various ICT seminars conducted (Phase I and Phase II), the carrying out of ICT integration classes was maximized. The insufficient number of computer units did not become a hindrance in allowing all the students of DNHS to use the computers for their ICT integration classes in various subject areas. From the 10 computer units, a variety of students’ outputs came into existence in the form of Power Point Presentations, Posters, Diagrams and Newsletters. With proper planning and coordination, 10 computers made technology accessible to at least 2,000 learners who hailed from 42 sections.

In the advent of the ICT integration, those teachers assigned to hold classes using technology were confronted with a great challenge. However, as they engrossed themselves in the process, they realized that such was helpful in ***enriching their knowledge on basic computer operations especially on Word Processing and Power Point Presentation.*** As what one ICT teacher stressed, “With ICT, I was

The ICT training enhanced my skills on research and was helpful in improving my communication skills. Likewise, my time management has improved. I am now able to update student records and submit school reports on time. With ICT, I became a well-informed individual on the updates on recent occurrences in the world. Thanks to ZENITH, ICT trainings became more organized.

S Pabro, MT – I in Science

able to adopt a variation in my teaching style. Likewise, holding ICT classes boosted my self-confidence since my students thought that I could teach better with the Internet. With ICT, I became more patient.”

To encourage more the teachers in enhancing their ICT skills, the school Principal gave USB flash drives to the ZENITH trainers and ICT teachers. The financial source utilized in the purchase was from the ICT fund taken from the twenty-five-peso contribution per student annually as agreed upon by the DNHS PTCA Officers and members. This strong support of the parents has been the result of the ICT classes offered to all students.

With the flash drives given to the teachers, the percentage of teachers’ attendance using computers during their vacant periods became remarkable. From the usual chatting and e-mailing practices, teachers worked on their school reports and prepared IMs for their ICT classes.

The distribution of flash drives through ICT catered a very significant change for us teachers – a change geared towards a more systematic, accurate and timeless safekeeping of data with lesser time and efforts.
A.
Moslares

Since there were only 10 computer units available in the

The ICT mentoring lightened the burdens in my schedule of work and enhanced my teacher’s competence as well. ICT pacified the pressures in my work because it guided me on how to use different programs in the computer. I say Ahh!!, after I have passed my paper works.

L. Calvadores, Math Teacher

computer laboratory, at most 10 teachers were trained per seminar workshop; hence, the ZENITH ICT mentoring was implemented. As stressed by one of the mentees, “If not because of this mentoring, I would not be able to submit my Professional Development Plan (PDPT).” For each semester, at least six (6) teachers were mentored which covered the topics in the first and second phases of the ZENITH training design. The mentoring session was held once a week.

Through ZENITH, the ICT CoPs became better organized that paved the way for the implementation of CALL projects geared at enhancing the multiple intelligences and the entrepreneurial skills of the students through the conception of a single project that integrates several competencies in various subject areas. Among the CALL projects conceived and implemented were as follows:

Beads of Love	
Students created jewelry using beads which combined the following objectives:	
Mathematics (Use of MS Power Point and the Internet)	TLE
a. Describe the ideas of points, lines and planes.	a. Apply the entrepreneurial skills In selling accessories.
Science (Use of the Internet)	
a. Prepare useful mixtures from easily available resources in the community.	

InnerVisions: Newsletter towards Excellence

The output was a community newsletter that incorporated the following objectives:

Mathematics:

- a. Collect statistical data and organize in a table through MS Excel.
- b. Analyze, interpret accurately and draw conclusions from graphic and tabular presentation of statistical data using MS Excel.

Science:

- a. Disseminate updates in science and technology.
- b. Publish students' research beneficial to the community using MS Publisher.

TLE:

- a. Develop skills in selling and advertising.
- b. Apply the knowledge gained in business planning.

English:

- a. Expand ideas in well-constructed paragraphs observing cohesion, coherence and the appropriate modes of paragraph development through MS Word.

Values Education:

Develop social responsibility through freedom of expression, respect and concerns for others.

Hallow Cards

Output was a Halloween Card that integrated the following competencies:

Mathematics (Use of MS Word)

1. Draw examples of perpendicular lines .
2. Identify objects that represent right angles.

Science (Use of the Internet)

1. Identify examples of colloids.
2. Use colloids in real life situations.

Technology and Livelihood Economics (Use of the Internet)

1. Apply the skills in preparing cards.
2. Utilize the enterprising skills in marketing own product

The teachers created a CALL Project plan template for each project conceived which followed the following format:

- I. Project Identification
- II. Project Description (Rationale)
- III. Objectives
 - a. General Objectives
 - b. Specific Objectives
- IV. Workplace and Duration
- V. Resources
 - a. Materials and Equipment
 - b. Manpower
- VI. Procedure
 - a. Pre-Production Phase
 - b. Production
 - c. Post-Production
- VII. Recommendation
- VIII. Attachments
 - a. Guide Questions
 - b. Project Development and Implementation Reflection Questions

c. Post Project Reflection Questions
IX. References

The ZENITH trainers did not only focus on seminars for teachers but also for the underserved groups in the community just like the OSY. A total of 30 OSY have been trained on basic computer skills through the efforts of the ZENITH trainers, school principal and the Municipal Mayor. Each session, excitement was manifested by the participants since majority of them were first timers in using the computers. Every time they were able to submit an output, they were elated. For the OSY, it was a great accomplishment and a memorable experience especially when they presented their outputs to the whole

As a trainer, I have shared my knowledge and skills in ICT to my co teachers and to the out-of school youth as well. Despite the fact that there are times of hardships encountered by trainees such as mouse and keyboard manipulation, still I have to put into practice the utmost patience in teaching them. Furthermore, good relations were developed among comrades and other trainees because of the boundless sharing of knowledge and skills in Information and Communication Technology. With these, I feel fulfilled upon looking at their varied outputs.

L. Cabello, ZENITH Trainer

group. The OSY participants became more excited when they received their certificates of participation. However, the trainers themselves were also happy when they engaged in training the OSY. According to one of the trainers, ***“It is a great honor to be a part of the ICT training team for the OSY. To be with them was a momentous day as we saw the OSY participants learning and doing well with their outputs.”***

Such community extension activity for the OSY did not only help the trainers grow professionally but was also instrumental in developing the value of patience and perseverance in them. As emphasized by one of the trainers, ***“ICT training helped me control my temper. When participants were sometimes difficult to teach, when sometimes they could not follow the instructions given to them, I learned to smile. I have considered our greatest purpose in carrying out the activity... that was to share and impart our knowledge to the OSY.”***

This was the ZENITH implementation in DNHS... how it impacted the professional growth of the teachers from the conduct of training, to the holding of ICT classes, then to the development of CALL Projects and ICT IMs going beyond the borders of the school towards community immersion for the OSY... This is ZENITH... the key which unveiled the curtains for teachers' growth and development.

ZENITH Implementation Reflections

For ZENITH to be replicated and implemented by other learning institutions it is good to look at the key success factors in its implementation and these were as follows:

- a. Strong support from the administration and stakeholders
- b. Commitment and sense of responsibilities of the teachers
- c. Cooperation and Collaboration among teachers
- d. Teachers' good time management
- e. Open discussion among teachers and between teachers and students.

The biggest challenge that confronted the implementers of the ZENITH Project was the creation of the paradigm shift on the pedagogy among their colleagues. At first, they were hesitant to undergo ICT training because of their notion that such would be a burden on their teaching career. Likewise, since the training sessions were conducted during summer vacations, semester breaks or even during Saturdays and Sundays, getting a perfect attendance in the seminar was not that remarkable. However, when teachers have seen how the ICT teachers impacted a shift in the learning styles of the students, their perceptions on ICT training have changed. Likewise, with provision of service credits and USB flash drives to teachers implementing ICT, DNHS teachers have been motivated to carry out ICT classes in their respective subject areas.

The small number of computers and the maintenance aspects of these units have served as a barricade in the implementation of ICT classes. With only 10 units, only 10 teachers were trained per session. Also, in cases wherein ICT classes were conducted, some computer units bugged down that hampered the smooth flow of ICT activities. Looking for funds in the maintenance of the computer units has been one of the primary concerns of the school and with the assistance of the DNHS General PTCA; an ICT fee has been collected from the students that was used primarily in the maintenance of computer units.

In carrying out again the program, it would be better to tap retired educational expert(s) from the community who would help in the evaluation of ICT materials produced by the ICT teachers. In this way, the materials would be further enhanced and enriched. Likewise, it would be good to submit the project proposal to the Superintendent and the Mayor in order to reach out more teachers from other schools in Dulag, especially in the elementary levels, so that these educators would also be equipped with current trends in teaching with ICT.