

PROJECT CARING (Collegial Assistance in the Reinforcement of Instructional Growth)

ABSTRACT

This presentation will showcase the Muntinlupa Division's Project CARING (Collegial Assistance in the Reinforcement of Instructional Growth) in Science and Technology conducted at Muntinlupa Science High School from July 2007 to February 2008. The project focused on how to influence Science teachers' teaching practices by creating a community of practice at the Division of Muntinlupa. The project also focused on mentoring and collaboration among the four (4) public secondary school teachers in Science in order to improve their teaching practices through effective use of Information and Communication Technology (ICT). PROJECT CARING was conducted every Tuesday at Muntinlupa Science High School Library and Internet Laboratory in opposite sessions. Teachers teaching in the morning attended the afternoon Project CARING sessions while Science teachers teaching in the afternoon attended the Morning Project CARING session. All Science teachers from the four public schools participated. Based on the least mastered skills (LMS) of the NAT Results of 2006-2007, the content and demonstration teaching topics were identified and the development of ICT enriched strategic intervention materials enhanced these LMS in Biology. To upgrade the instructional needs of the participants, ICT integration on their output was made part of the presentation. The Science teachers from the four public secondary schools were encouraged to participate and were mentored to finally understand that as the field of international relations expands, so too must the students through the teachers, developed the power of bringing the minds in each session to achieve excellent results. A CARING Plan of activities and topics agreed upon by the four (4) schools with detailed schedule and assigned master teacher or mentor as discussant in the training. The convergence of the different points of view of the teachers during the CARING sessions truly enlightened each participant's perspective while at the same time generated a resolve to improve the results of the NAT 2007-2008 in Science and Technology.

There were three parts of the CARING session. **The first part** consisted of a lecture portion by an assigned Master teacher who served as mentor/speaker. The topics were based on the Teachers Needs Analysis and LMS. **The second part** consisted of a peer teaching demonstration with ICT Integration. **The final part** involved an evaluation and reflection on peer teaching. Quality Circle Assessment Forms after each CARING Session were filled up by the participants to assess and make feedback on training's preparedness, group dynamics, and application of Learning Insights, Record Keeping and Evaluation.

For the whole duration of the CARING Sessions conducted from July 2007 to February 2008, different mentors showcased varied teaching strategies in presenting mitosis, meiosis, chromosomal aberrations, dihybrid cross using chromosomal aberrations, karyotyping, biomes and cell structures using interactive CDs from DOST and unit plans from INTEL Teach Seminar. During peer teaching, the participants were able to log on to websites where science activities, interactive games and quizzes can be downloaded. The use of laptop, OHP, LCD, and video camera were extensive. There were instances that the peer teaching was documented on digital camera and was observed "online" by the Division supervisors and Dr. Fe L. Faz, the Schools Division Superintendent. Post conference session by the SDS was done "online" too.

Reflections journals written by participants after each CARING sessions revealed their appreciation of the lesson presented and their interest in learning more innovative strategies in presenting the least mastered skills in Science. The sharing of best practices as well as ICT enhanced materials exposed them to new teaching models and enhanced their teaching strategies which redound to enhanced and improved learning of students in Science. Thus, Muntinlupa Science High School increased MPS in the 2007-2008 National Achievement Test in Biology from 64.07 to 68.05. The average of the four high schools in the Division of Muntinlupa in Biology in the National Achievement Test increased from 37.19 to 41.98. With an increment of 4.79, the Muntinlupa Division rank in Science & Technology II moved up from rank 5 to rank 2 in the National Capital Region.

In conclusion, Project CARING had made Science teachers at Muntinlupa Division **WORK collaboratively** to **ADAPT and ADOPT** the change. Through CARING, we were able to **REFLECT and REACH** out to our students to learn and live a life enhanced and empowered by Science and Technology through ICT.

Background and Information

Much had been written about the dismal results of tests conducted to elementary and secondary students especially in Science and Technology. The NAT Results for SY 2006-2007 in Science and Technology II of the Division of Muntinlupa is at 43.6 which is the lowest among the five core subjects tested. Muntinlupa Division ranked 5 in Science and Technology in NCR for SY 2006-2007. Pressures on school performance are attracting a lot of attention for all the public secondary schools in Muntinlupa. Close tracking of performance makes the stress more intense in schools. Teachers coped with this by “catching up” based on the requirements of past year’s performance.

Despite curriculum content support and modifications, the teachers often complained of not having enough time to study and learn new content & teaching techniques, of having passive learners and the like. For effective test scores many educators still claimed that the lectures, worksheets, drills and tests are still the most reliable and efficient means to achieve results that can put a school at the top of the league.

The above situations led the School Division Superintendent of Muntinlupa, Dr. Fe L. Faz to challenge teachers to collaborate in an interschool CARING.(Collegial Assistance in the Reinforcement of Instructional Growth.). The primary concern was to engage teachers to support each other to make each school in Muntinlupa, a true learning community. **Muntinlupa Science High School** being a special science high school was tasked to host and facilitate the weekly PROJECT CARING IN SCIENCE among Science teachers of the four secondary schools in the Division of Muntinlupa.

Five Salient Features of Project CARING as per Division Memo dated June 25, 2007

1. Underlying Philosophy of Project CARING

- 1.1 Teachers whether experienced or new are learning institutions in themselves. Each has something to contribute to the practice of the teaching profession.
- 1.2 Regular collaboration between and among teachers make the school a true learning community.
- 1.3 On-going reflection on effective classroom practices become a natural part of a steady thoughtful process of professional growth and development that build passion and commitment towards effective teaching.

2. Goals

- 2.1 Shape the professional growth of teachers, the culture of the school and the development of instructional practice.
- 2.2 Influence local teaching practices by creating professional learning environments rooted in a vision of the teaching profession with:
 - new norms of collaboration, * equity, and
 - high expectations, * reflection and practices

3. Concept of CARING

Partners (2 teachers) or groups (up to 4 teachers) work together to mentor and collaborate with one another in order to improve their teaching practice.

4. Areas of Focus of Mentoring and Collaboration

The following seven (7) domains of the National Competency-Based Teachers Standards shall be the Area or Focus of Mentoring and Collaboration for CARING.

- 4.1 Social Regard for Learning
- 4.2 Learning Environment
- 4.3 Diversity of Learners
- 4.4 Curriculum
- 4.5 Planning, Assessing and Reporting
- 4.6 Community Linkages
- 4.7 Personal Growth and Development

5. Suggested Strategies /Activities

- 5.1 Big and medium-sized schools shall choose groups as a mode of collaboration while small school may opt for partners.
- 5.2 Each group or partner shall meet regularly for discussion, feedbacking and reflection on the goals and activities they set for themselves for the year.
- 5.3 The partners/groups shall follow a Formative Assessment System (FAS) follows:

CARING SCHEDULE OF ACTIVITIES

Time Frame	Goal	Activity	Formative Assessment System
1. Beginning of the School Year	1.1 Understanding the teaching-learning context of each teacher-member's class or classes	1.1.1 Explore school, class and community resources 1.1.2 Assemble class profile 1.1.3 Look into one's professional and teaching strengths and growth needs. 1.1.4 Set professional goals	<ul style="list-style-type: none"> * Conduct an inventory check of resources needed for effective teaching in one's class, school, community. *.Administer pre-tests in the academic subject. *. Prepare individual class profile * Do a self-assessment of one's level of competence in the seven (7) domains based on the NCBTS Self-Assessment Tool for Teachers *Accomplish the Teacher Professional Development Plan * Accomplish Worksheets for Teachers' Class Performance Targets and Accomplishment (Div. Memo 128 s. 2007)
2. Every Grading Period	2.1 Examining Practice	2.1.1 Conduct of informal collegial classroom observations, feed backing and sharing of reflections 2.1.2 Plan lessons collaboratively (Your group may agree to observe each other execute the lesson)	<ul style="list-style-type: none"> * Schedule of collegial visitations * Conduct of feed backing sessions using the CRISS * Make agreements on how to assist one another * Begin using individual or collaboration assessment logs (CALS) where each colleague's growth needs are noted and where goals and activities for collaboration are recorded. * Start having a journal of reflections * Share one's reflections during CARING Group sessions or during Quality Learning Circles

		<p>2.1.3 Analyze student works and outputs..</p> <p>2.1.4 Prepare practice tests and instructional materials collaboratively.</p> <p>2.1.5 Communicate with parents and seek parent collaboration</p> <p>2.1.6 Conduct self-assessment/group assessment</p>	<p>* Identify difficult lessons, prepare LPs collaboratively, execute LPs and share findings and results. * Record findings in the CALs and include as part of your reflection journal.</p> <p>* Use test item files during remedial work</p> <p>* Present achievement during GPTCAi Parent Teacher-Conference</p> <p>* Sel-rate one's performance using NCBTS Form * Discuss rating with CARING Group for Validation * Share Learning and Insights.</p>
Mid-Year	<p>3.1 Review Progress Toward Professional Goals</p> <p>3..2 Principal to conduct School-based INSET for Mid-Year Break</p>	<p>3.1.1 Invite Principal to the CARING group mid-year assessment of progress</p> <p>3.1.2 Each CARING group's findings/ results shall be made as basis for planning Mid-year INSET</p> <p>3.1.3 Identify topics and resource speaker</p>	<p>* Prepare report card to principal on: -issues and concerns and solutions to resolve it -findings /results -agreements -highlights of reflections</p> <p>* School Mid-Year Evaluation</p>
End of the Year	<p>4.1 Reflect on Professional Growth</p>	<p>4.1.1 Celebrate success stories of outstanding CARING groups</p> <p>4.1.2 Plan next year's Project CARING</p>	<p>* Establish school colloquim for teachers to listen and appreciate success stories * Give school plaques of recognition</p>

RATIONALE

Fullan (2002) identified the heart of school capacity as the principal's focus on the development of teachers' knowledge and skills. Walters et. al., (2004) in their study of effective school leadership identified key areas which, if successfully demonstrated, could raise student achievement. These include focus, curriculum, input and resources.

At the Division of Muntinlupa , the school leaderships introduced changes in these key areas for successful curriculum innovation.

Focus 1- A CARING Thinking School Environment

An interschool teacher development structure within the Division of Muntinlupa was put in place where teachers learn together, discover together and support each other in their learning through Project CARING. The **first three domains of the NCBTS**

(**Social Regard for Learning, Learning Environment and Diversity of Learners**) were considered under Focus 1. At various levels like staff meetings, department level meetings, the four principals of the four public secondary schools shared the need for the cultivation of collaboration and community of practice that would raise the school academic performance in the NAT by providing focus for the teaching staff in demonstrating the first three NCBTS Domain. Teachers had to learn new concepts, share best lessons or best practices, translate what they have learned into classroom practice and then reflect and refine lessons learned.

Every Tuesday in opposite sessions (morning and afternoon), Science teachers met in a cluster by subject level. The weekly CARING cycle consisted of lectures and reading of a selected topic in Science identified as the least mastered by the students in the NAT of SY 2006-2007. Discussions of demonstrated lessons and collaboration efforts on applying the skills in the classroom when they go back to their respective schools were made.. The final cycle consisted of getting together again to reflect and refine their classroom practices. The professional development is a 2 hour weekly activity in a cycle of learning together, discovering together, applying it in practice and refining the practice.

Developing a collaboratively shared vision and values was the primary focus of Project CARING. The teachers during staff meetings were engaged in the visioning process where the key element is trust.

Our Vision:

CARING FOR L.I.F.E.: Leadership, Integrity, Faith and Excellence

Our Mission:

We are committed to provide a culture of excellence in the delivery of quality Science instruction in order to develop students to their full potential and prepare him for LIFE.

Our Values

- Leadership** - We value each individual, seeking to lead to the best that he can be
- Integrity** - We demonstrate moral courage and uprightness, being consistent in word and deed.
- Faith** - We have faith in GOD and trust each other to work for His greater glory.
- Excellence** - We will work and share to raise the culture of excellence in the delivery of quality education in the Division of Muntinlupa through technology integration and innovations in teaching

Focus 2 - Curriculum- Innovation Through ICT. This portion considered the 4th Domain of NCBTS – the Curriculum.

The teacher mentor modeled the application of his/her written unit plans through peer demonstration lesson activities designed with technology integration. During the peer teaching demonstrations, the teacher-trainees were exposed hands-on interactive CDs, visited reviewer portals and viewed other lessons adapted from authentic texts. Through the cooperative learning activities, teachers learned parts of a good lesson. The strategies for writing their own unit plans were modeled and supported by more ICT exposures during the CARING sessions.

Focus 3- Input - Valuing Teachers' Contribution . This portion considered the 5th Domain of Planning, Assessment and Reporting

All the CARING Professional Development meetings were collaborative in nature. Teachers of the same Science subjects met and discussed the application and teaching of ICT enhanced lessons involving least mastered skills. Teachers felt accountable of the outcome of the prototype lessons they developed. They were able to self-select their own models of good writing and were aware of the need to self-verbalize their thinking processes to manage the demands of lesson plan writing and designing. Teachers were involved and engaged in critiquing and improving the lesson plan which generated a better understanding of the concepts useful to the students.

Focus 4- Resources - Provisions for Success in the Classroom. This portion considered the 6th Domain which is Community Linkages

1. Amkor Anam Technology Philippines adopted Muntinlupa Science High School and Pedro E. Diaz High School by giving a reviewer online cards which students and teachers can access online. The reviewer card is a portal that post questions in Science pre-selected by the students and checked the students performance right away. The other two schools were not given these online reviewer cards.
2. There were Intel Teach prototype lesson plans shared during the CARING sessions as outputs in previous INTEL Teach Teacher Trainings.
3. The support from the school heads included allowing the ICT Equipment and Facilities available for use by the teachers whenever needed. ICT custodian was also deployed to give technical support to teachers during the implementation of the unit plans at the classroom level.. **On line** demonstration of an INTEL prototype unit plan were observed by the supervisor and the SDS. The online evaluation of the lessons presented was given afterwards by the supervisor and ASDS respectively without them having to leave their offices. Their contributions facilitated the evaluation of teachers' work in the classroom As a multiplier effect, the teachers involved in a prototype unit plan implementation was able to assist other science teachers to upgrade their teaching styles using technology enriched lessons to enhance learning.

EVALUATION - Evidence of Professional Development and Professional Growth as the 7th Domain of NCBTS were considered under this portion as well as Students' Achievement in the NAT.

The data presented in this paper as evidenced of improved school outcomes have been drawn from the following sources:

1. The Comparative NAT Results in Science and Technology
SY 2006-2007 vs. SY 2007-2008 Division Level and Regional Level
2. An Interschool End of CARING Project Evaluation Form Survey
3. Written Journals of Teacher

**Table 1 - The Comparative NAT Results in Science and Technology
SY 2006-2007 vs. SY 2007-2008 Division Level**

Schools	Enrolment	MPS in Science SY 2006-2007	MPS in Science SY 2007-2008	Increase/ Decrease
MHS *	180	63.11	68.06	4.95
PEDHS *	2273	34.89	48.58	13.69
MNHS	2365	36.84	35.81	-1.03
MBHS	960	38.6	36.8	-1.8
Division	5778	37.19	41.98	4.79

* With AMKOR Online Reviewer Cards

**Table 1 - The Comparative NAT Results in Science and Technology
SY 2006-2007 vs. SY 2007-2008 National Capital Region
MEAN PERCENTAGE SCORES BY DIVISION**

	DIVISION	MPS in Science SY 2006-2007 (W/o Proj. CARING)	RANK	MPS in Science SY 2007-2008 (With Proj. CARING)	RANK
1	Division A	34.31	11	38.04	10
2	Division B	42.72	1	40.22	5
3	Division C	40.67	2	40.70	3
4	Division D	33.64	13	40.43	4
5	Division E	37.02	6	36.69	12
6	Division F	36.86	7	38.78	9
7	Division G	35.80	9	37.60	11
8	MUNTINLUPA	37.19	5	41.98	2
9	Division I	36.64	8	39.73	6
10	Division J	34.01	12	36.68	13
11	Division K	35.21	10	35.36	14
12	Division L	33.44	14	39.04	8
13	Division M	37.79	4	39.29	7
14	Division N	39.98	3	43.20	1

Analysis

It should be noted in **Table 1** that of the four public secondary schools in the Division of Muntinlupa, only two schools, Muntinlupa Science High School increased its MPS by 4.95 in the National Achievement Test in Biology from 64.07 to 68.05, and Pedro E. Diaz increased MPS by 13.69. The two other high schools, MNHS and MBHS decreased however by almost 1 and 2 MPS respectively. MSHS and PEDHS which utilized the online cards have significant increase in MPS, while the two other high schools registered a minimal decrease. Without the impact of PROJECT CARING, the decrease might have been greater. The integration of more ICT Resources like the online reviewer cards and Intel Teach Prototype Unit Plans and Online Demonstration Teaching caused a significant MPS improvements in the NAT as exhibited by the 1st 2 schools MSHS and PEDHS. It can be seen that an increase of 13.69 is possible for a very big school like PEDHS

Table 2 showed that the average of the four high schools in the Division of Muntinlupa in the National Achievement Test increased from 37.19 to 41.98. With an increment of 4.79, the Muntinlupa Division rank in Science & Technology II moved up from rank 5 to rank 2 in the National Capital Region. Seven of the fourteen or 50% of the Divisions in NCR registered a drastic decrease in Science MPS. Therefore, intensifying ICT in the lessons and continuous PROJECT CARING sessions will enhance teachers' competence in teaching the least mastered skills and provide mastery of the lessons on the part of the students.

II. END OF PROJECT CARING INTERSCHOOL ASSESSMENT SURVEY

Focus of Assesment	Average Numerical Rating	Descriptive Rating
A.Preparedness 1. Punctuality of participants 2. Promptness in starting the session 3. Presence of ICT equipt. 4. Mastery of subject 5. Clean and conducive venue	4.63	Excellent
B.Group Dynamics 1.Active interaction of participants 2. Collaborative group activities 3. Respect for ideas 4. Warm learning climate 5. Agreements arrived at by consensus	4.84	Excellent
C. Application of Learning Insights 1. Opportunities for demo lessons provided 2. Written Reflection 3. Discussion brings forth 4.Application in classroom setting 5. Ways to monitor application in classroom practice explored	4.58	Excellent
D. Record Keeping Logbook is 1. complete 2. updated 3. available 4. adequate and 5. neat and presentable	4.66	Excellent
E.Evaluation of Quality Learning Circle (QLC) 1. Team leader(TL) conducts simple evaluation with the participants 2. TL solicits points for further improvement of QLC 3. TL comments participants' unique contributions to the success of the QLC 4. TL gives reminders for the next QLC 5. Rapporteur summarizes salient learning expressed by participants	4.68	Excellent
Average	4.68	Excellent

III. Written Journals of Teachers

The written journal of teachers recorded after each CARING session was surveyed. The purpose was to find out the impact of Project CARING on the work of teachers and the possible changes in teachers' morale. The teacher reported the following as the main impact.

a. The engagement in parallel leaderships, and in shared discussions fostered an understanding and bonding amongst themselves. This is necessary in working and leading towards a common alignment of teachers' vision with the school's and the division's vision. The school's teaching and learning practices sharing have created a positive atmosphere of shared responsibility to lead, experiment, and innovate pedagogies which greatly enhanced teachers' morale.

b. Gaining support through collaboration

I can take the lead in making an active learning environment especially in using technology in enhancing my lessons.

I can give advice and support to younger teachers.

I can practice and participate with confidence in professional dialogues

The above responses showed that teachers no longer work in isolation. The teachers have become innovative and adopted an array of effective teaching strategies from their colleagues. Professional support with each other has been evident as a result of collaboration through Project CARING and it was identified as the cause of improvement of teacher's professional development. Most teachers commented that they value most the professional support from colleagues.

c. Enhanced professionalism of teachers

The new concepts learned from various sharing of best practices and the support given by the top to middle management of schools, have made the teachers improve their confidence to:

1. Work together as a team
2. Participate in the seminars and conferences.
3. Conduct action researches to experiment and try out new pedagogies.

Conclusion

Project CARING engages the professional learning community in processes of teacher's renewal and gave a new meaning towards teaching. Project CARING through technology integration enhanced the capacity of teachers to improve school outcomes such as student learning relationships with the community, and the synchronicity of school operations. The use of ICT stretched to the limits of their confidence to face the challenges of the 21st century schools. The use of ICT throughout the CARING processes demonstrated the will to emerge with vigor new teachers, learners and a school of the future.