

## **Strengthening Basic Education**

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Science and Technology are integral to our capacity—as individuals and as one nation—to move ahead in this fast-paced technology-based world. They are, without doubt, integral to our daily lives.

Our ability to improve our capabilities in Science and Technology begins with improving science and mathematics at the basic education levels.

These two key areas have long been a concern for us in the Department of Education. This stems from decades of underinvestment in education—something that we are now beginning to address with unprecedented increases in the budget of the education department, and of both Technical Education and Skills Development Authority (TESDA) and Commission on Higher Education (CHED).

And we have noticed some significant improvements in some areas, providing us with some ray of hope that the dire situation can be addressed in due time. For us at DepEd, we find solace in the fact that some of the best performers in these key subjects come from our public schools. As was earlier mentioned, the individual topnotcher in last year's NAT with a perfect score in mathematics, 100, comes from a small islet in the province of Bohol. That boy had to take a banca everyday of his life just to go to school and back to his home in that islet where there is not even electricity, besting more than one million students from both public and private school students.

When I was asked by media saying, “Now you know who did well, can you not replicate that in Manila?” I said, we will try. Let me talk to the mayors, let me ask them to close all arcades, video game arcades, maybe get to parents at home all the time and approximate the situation in Bohol.

But as was earlier mentioned a common characteristic of all the topnotchers and the best schools in the NAT consistently, number one is

very strong family and community participation in education. There is even one if I am not mistaken, in Catbalogan, perfect attendance, perfect retention, no dropout public school. But a school bus given by the LGU picks up the students everyday and takes them home. Most of the schools have benefactors. Most of the schools have local government unit (LGU) or private sector benefactors. And therefore class sizes are about 30 students to a classroom.

Still on the recent math challenge of the Mathematics Teachers Association of the Philippines, majority of the winners come from the public school system. This of course, we can say that the public school system in the elementary education accounts for 92% of the entire population. This is not to say that the private schools are not in the winning circles.

However, this is a testament of our effort to improve science and math teaching in all our 42,722 public elementary and secondary schools nationwide. But why do we have various success stories in many localities and while we continue to pursue proactive programs in improving student performance in these subject areas, we are still a long way in raising achievement levels on a nationwide scale. The average NAT remains to be dismal including the National Career Assessment Examination (NCAE) since we instituted this test for graduating students in January of this year. This can be attributed also to the fact that many of our science and math teachers are not specialists in the subjects they are teaching.

As of the last measure, for instance, 66% of chemistry teachers and 73% of physics teachers are not majors in chemistry or physics. Mercifully, only 20% of our math teachers are not majors. But as you know, the ideal situation requires us to have all our teachers to be experts in their respective fields.

Needless to say, we have spared no expense to provide extensive and expensive in-service training for these non-majors. But frankly, I wonder how many summers and how many years it will take us to retrain the thousands of teachers who are not majors? And how many more millions of student-casualties in the school system must suffer, must we incur before we get into that level?

So I venture to define in one simple sentence the main challenge in basic education. The challenge to my mind is "How to deliver the same high quality education to all the schools or to the 43,000 schools spread all over the archipelago at the soonest, earliest possible time?" In one sentence—that is the Herculean task that all nations are constantly trying to solve, trying to meet, because it is hard to explain that we have teachers and students who are among the best in the world, yet on the average, we are number 23 out of 25 in science and math. So the challenge is to

improve the scale to make the best teachers benefit the most number of students, start to make all students even those in the remotest barangays receive the same quality education, materials, instruction, methodology, and content nationwide.

We are at least trying to streamline the curriculum and developing standards to provide focus and improve mastery. We are pilot testing the standards based on the curriculum in 23 secondary schools nationwide. We are constantly engaging the private sector to invest in ICT for education through our adopt-a-school program. As you know, the likes of Intel, Microsoft, and Knowledge Channel have been actively involved in the public schools. Among their efforts, of course, is the annual national science fair sponsored by Intel Corporation.

We are providing our teachers and students the opportunity to compete in international competitions and we have won many including the recent Math and Science Olympiad in Jakarta, the World Robot Olympiad in China, the Intel Excellence in Teaching Award, and the Microsoft Innovative Teachers Leadership Award.

We are now banking on our ability to move forward on a nationwide scale through the flagship initiative—the Cyber Education Project.

The CyberEd Project shall provide us the ability to bring various excellent interventions in education to state. Using satellite technology, each project will create one national network for education: 12 independent television channels linking to 38,000 or 90% of public elementary and secondary schools and providing them with teaching and learning resources that will enable each one to be at par with the rest of the world.

While we continue to retrain our teachers through extensive in-service training, CyberEd will enable our students to benefit from our best teachers. Through CyberEd, our world-class master teachers will teach in virtual classrooms and their classes will be beamed via live satellite in real time to most of the classrooms that require their expertise the most. And this will be an interactive system.

And while we continue to provide computer laboratories and libraries for schools, CyberEd will connect our students to the worldwide web as well as the rich menu of resource materials currently unavailable in the public schools. Through CyberEd high-speed satellite transmissions will provide our remote schools with the same information on demand that are accessed only by the best private schools. Of course this technology is not without precedence. We have seen excellent models of satellite-based education technology in many parts of the globe in such countries as the United States, Canada, Mexico, Chile, India, Indonesia, Thailand, China, and many more.

Our own CyberEd model is patterned after the e-education project in China currently being managed by Xinhua University, which most of you know is China's number one technology university and ranks number 17 in the world, and is a world pioneer in distance learning. As our major partner in CyberEd, Xinhua University is providing us with the expertise to successfully implement this project in our shores.

Ladies and gentlemen, CyberEd is the most effective and inexpensive way to narrow the economic divide. It is the best way to realize our dream of quality education for all Filipinos. And by all, we also mean the out-of-school youth, the indigenous people, and the technical-vocational objectives of DepEd.

CyberEd is an all-out campaign to fast track much needed improvements on the ground. As firmly presented by Fr. Ben Nebres, we have to move on from implementing one good pilot project after another with no hope of ever going to scale considering the massive requirements of the ground. Several pilot success stories such as the Primary Education Development Program (PEDP), Secondary Education Development and Improvement Program (SEDIP), Basic Education Assistance for Mindanao (BEAM), and various private sector initiatives on reading, teacher training, Math, Science and English, ICT, TechVoc and many more now have the chance of being put to scale.

We can ill afford to continue doing the same way and we refuse to accept that we cannot do better. For we want results, dramatic results in most if not all of the 42,000 schools. We have 19 million Filipino students now in our basic education system. Our dream of a science-oriented Philippines can become an absolute reality in the very near future through the CyberEd and the various initiatives I have mentioned as well as other efforts both in and outside of the Department of Education to create a science and technology culture among our young.

As I was reminded, for example, of the very comprehensive presentation of Fr. Nebres. If that particular presentation is stored in multimedia and made available in all 40,000 schools, not only will the participants of this annual meeting be benefited by resource speakers but the same can now be viewed on demand by the math and science teachers of all the schools nationwide. The potential for e-communication in our archipelago is only limited by our imagination and creativity.

With your support and with the support of all other stakeholders throughout the country we can expect to succeed in this effort.

Rest assured my dear friends from the Academy, DepEd is prepared and anxious to try to think out of the box for this we must do now in order to reverse a trend of a nationwide drop in achievement while showing

pockets of global excellence. We must now fill that gap and I ask everybody to work with government, work with the community so that we can create a bright future for our country and for our children.

Thank you very much.

**About the Author:** Hon. Jesli A. Lapus is the Secretary of the Department of Education. A certified public accountant and MBM graduate of the Asian Institute of Management, Mr. Lapus was a top professional manager in private sector, a three-term member of the Philippine House of Representatives and has served the executive arm of government under three presidents. More information on the programs of the Department of Education is available at: [www.deped.gov.ph](http://www.deped.gov.ph)