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Southeast Asia

Curt Gabrielson, a science teacher and an Institute Fellow, is observing the re-establishment of education in East Timor.

Barely Afloat on High Seas: Education in East Timor, Part 3

By Curt Gabrielson

MARCH 1, 2002

BAUCAU, East Timor—The door to the restroom at the East Timor Teacher Training Center in Dili has problems. Recently, I noticed someone calling meekly from the small slatted window above the door. Someone standing near the door responded and found the person was stuck in the tiny room, unable to open the door. The person on the outside was quite amused by the situation and, after a good laugh, he raised his leg and swiftly kicked the door open. The trapped person emerged and scurried off red-faced.

I witnessed this while on my way to see Maneula Gusmao, director of the Center, and a queen of metaphor. It is not uncommon to hear four or five unrelated metaphors in the course of a short conversation with her. Though I have found none to be particularly memorable, Manuela has provided me with metaphors for education, teaching, teacher training, development, administration, curriculum development as well as for life in general. Actually, I am sometimes confused by these metaphors, and often they seem to mask instead of illuminate what she is saying.

At any rate, my mind was in a metaphoric state as I climbed the stairs to her office. It struck me that the captive I had just witnessed in the restroom could be seen as a metaphor for the state of education here. Education in East Timor is trapped in the crapper. There seems to be little hope of release from the inside, and so calls for help are going out. Outsiders are listening, and some



Our neighbors on their way to school.

are coming to the rescue. Those inside are at the mercy of the methods and attitudes of the foreign rescuers.

In case that metaphor does not satisfy, let me offer another one I came up with a few days later. I was going into the UN-agency building to check on the status of a UNICEF project to develop locally relevant curriculum for teaching science and math in primary schools. A large truck was parked at the door with an enormous wooden box on its flat bed. A hefty forklift was poised alongside the truck and a small mob of men were feverishly arguing and trying to direct the forklift driver. Suddenly the forklift lurched forward and rammed one fork prong into the box. A cheer rose up from the men and I saw that the box lid had opened a bit. I then noticed that the men had only one small hammer amongst them. They were using the forklift to open the box.

I recalled the sage words of my father back on the farm: "You have to have the right tools for the job. But if you don't have the right tools, you have to do the job anyway." In many ways, this illustrates education in East Timor as it is happening today.

I described in my previous two newsletters on this subject (#2, February 2001, and #7, July 2001) the sad state of education here in East Timor.¹ Problems are big and plentiful, and these problems set huge limitations on what can be done. Solutions are being dealt fast and furiously, mostly crafted and funded from outside the country. And East Timorese players in the education game are coping with the chaotic situation in whatever ways they can with whatever tools they find at their disposal.

I teach physics, and found out early on that I was in high demand in East Timor. Although physics occurs as a subject in all six grades of middle and high school here, there is only one other teacher in all of East Timor with a bachelor's degree in physics. Some physics teachers have a degree in some sort of technical field, or agriculture. Many have done some course work toward a degree, hopefully related to physics. Some have only finished high school, but liked physics.

Not to worry, you may say, the kids can always learn it from the book with the teacher on hand to guide their self-study. There are three problems with this theory. First, the books stink. I have seen plenty of high-quality physics texts from Indonesia, but the ones chosen for use in East Timor simply do not fall into that category. One can spot mistakes just by looking at the pictures. The pages are full of mysterious equations, poor explanations and very little connection to life in East Timor. Second, many schools do not distribute the books to students because those in charge do not have enough books, or because they fear that the students will ruin or steal the books(!).

Finally, the students' level of Bahasa Indonesia, the language in which the books are written, is generally not high enough to glean much of what little knowledge there may be within the pages.

Thus, thousands of students go to their physics classes each week and listen to teachers that have little to no preparation, and can only fall back on bad books that are too hard to read and often not even available. This same situation exists in other subjects, although physics may be in the most severe state.

This enormous shortage of qualified teachers in the middle and high schools of East Timor stems from the fact that less than 10 percent of all middle and high school teachers of any subject under Indonesia were East Timorese (a total of 61 teachers, according to Rui Belo, the head of curriculum for East Timor's Ministry of Education). People tell me few East Timorese made it to higher education in Indonesian times, and a tiny percentage of those that did were interested in returning to middle and high school to become teachers. The Indonesian occupiers filled the middle and high schools with teachers from other parts of Indonesia. These teachers received incentive pay just to come to East Timor and often didn't give a fig for the East-Timorese students they taught. Just before the referendum on independence 1999, these teachers went home, leaving the schools empty and effectively creating great job security for upper-level teachers in East Timor today.

In primary schools the problem is more numbers and money than lack of qualifications. Many primary teachers I know teach over 60 students in one classroom. National leaders say there is just not enough money to hire more teachers. I have yet to hear this analysis from anyone else involved in education, be they parent, student or teacher.

How does one teach a class of 60-plus primary students? Not very well. It is difficult just to keep them in a room for very long, and I have noticed many teachers are not currently doing even that. The Catholic primary schools of Baucau district have asked for parents' money to hire teachers beyond those public money will salary. They have had some success, but it is a real gamble whether families will continue to give month by month. When the money does not come in, the teacher does not receive pay. I have heard of other schools, both public and private, using this technique throughout East Timor.

At university level, I am seeing the result of poor middle- and high-school education during Indonesian times. I teach laboratory physics at the new physics department at Universidade Timor Lorosae (UNTL – Lorosae means east, literally "sun rise" in Tetum, East Timor's lingua franca), which is the one national univer-

¹ In previous newsletters, I have also described the brutal 24-year Indonesian occupation of East Timor, the UN sponsored referendum for independence in 1999 and the terrible destruction of East Timor by Indonesian military supported militia immediately following the referendum.

sity. The academic level of my students is similar to the level of middle-school students on a college-prep track in the US. For example, they are just learning to put numbers into equations and manipulate them, and that equations in physics relate to real-life situations. They all do, however, know the equations; the one thing those Indonesian teachers seemed to require was memorization of equations.

At teacher trainings I have given, I have noticed the teacher's level of knowledge to be at or below that of my university students.' Unlike my university students, however, every last teacher I have worked with has been extremely motivated to learn their subject. This makes trainings go very well.

Many middle- and high-school physics teachers are still finishing their degrees from UNTL. Some are attending classes in the afternoons and teaching in the morning. Others are working on their theses as they teach. None of them, however, is studying physics as such. They are getting degrees in math, biology or agriculture, and doing theses related to these subjects. One teacher I know, Nelson, is doing research on egg incubation and has stopped teaching until his eggs hatch. He spends night and day with his fowl, and has asked a friend to cover his classes. Another teacher named Nuno spent nearly a year raising pigs on certain plants and grains, but now lacks the chemical laboratory needed to analyze the energy and nutrient content of the feed he fed the animals. His thesis is thus stalled indefinitely. Yet another teacher currently in his final stages at UNTL lives far from Dili and is planning an elaborate lie to pass off as his thesis, supposedly on the breeding of pigs.

As could have been predicted, when education runs so roughly, good pedagogy is an early casualty. I walk the halls of the Ministry of Education regularly, and have yet to see or meet anyone working on improving teaching methods or teachers' understanding of the learning process. The curriculum department is exactly the same size as the department for national examinations, a situation that begs the question of which is leading and which



is following. And, in each of the dozens of schools of all levels that I have visited, teachers are teaching with nothing more than chalk and a book. Voices are stern and dictatorial, and student input is rarely invited.

And so, with this laundry list of problems, the East-Timor education community strives to move forward toward a better tomorrow. Let's look at some of the attempts being made to improve the quality of education in the schools of East Timor.

New, qualified teachers will come primarily from two sources: the national university, UNTL, and students studying abroad, mostly in Indonesia. Approximately 3,000 students are currently studying in Indonesia. The UN was able to work out a deal to get reduced fees for these students, and to secure scholarships from the Ford Foundation and the Japanese Government, among others, to support many of them. Now Indonesia's education officials are noting East Timor's coming indepen-



This is what I generally find when I look for Miguel Maia, Director of the Faculty of Education, UNTL. He has no cell phone and no secretary, so catching him is quite a trick. He is juggling hard and fast to keep his three new departments running with contented professors.

dence declaration on May 20, and are warning that they could raise East Timorese student fees to standard international levels: US\$8,000 per semester. The donors providing scholarships are not willing to pay this increased rate to Indonesia, so it is unclear what will happen to these students.

In physics it is moot. Out of 1,500 students, exactly one is studying physics, and he is reputed to be uninterested in teaching. Chemistry is hardly better, with three students studying at present.

It is understandable then that much effort is being put into the Education Faculty at UNTL. Three new departments have recently been started in this faculty — Portuguese, chemistry and physics — to join with the already existing departments of English, Math, and Biology. Housed in a beautifully renovated wing of UNTL called the Liceu,² the Education Faculty is a high priority for the university. At the same time, teaching quality there varies widely and administration is often haphazard.

For example, early in the semester last

year I asked several fellow teachers for a calendar of the school year. None could produce a calendar nor tell me when the semester would end, so I went to a vice-dean. He had a calendar taped to his desk, but could find no others, nor could he guarantee his to be correct. I copied the information I needed and walked away, pondering all of the other teachers teaching without even the basic knowledge of the end date of the semester. Clearly they were just lecturing a bit, and then the next day lecturing a bit more, slowly working their way through some book or another.

Speaking of books, hardly any students have them. Teachers teach using whatever texts they find and consider appropriate. Standard texts are simply not available. It is very common to see students with tattered books they stole from their high school back in Indonesian times. Due to this lack of books and the high price of photocopies, an enormous amount of class time is spent copying from the board.³

Another ominous factor in poor teaching quality at UNTL is the two new, private universities that have opened in Dili within the last year. One, named Cristal, was opened with support from the Catholic Salesian organization. Cristal has tight connections in Indonesia through the Church, and some of the teachers there were



University students doing a lesson on center of gravity.

² As noted in my newsletter #7, the Liceu renovation was funded by the city government of Lisbon, Portugal. The Liceu architecture comes straight from Portugal, all the way down to the toilet-paper holders. East Timorese don't generally use toilet paper; they use water. However, there is no water available in the Liceu toilet stalls. This leads to all manner of cruddy clandestine containers being left in the stall by people desperate to defecate. Lisbon still maintains its office in the Liceu, and in fact controls the water and electrical systems, landscaping, cleaning crews, and even room schedules. Once when I was trying to find a site to hold a meeting, the vice-dean shook his head, rolled his eyes and told me Lisbon holds all the room keys and all scheduling must be done through the Lisbon office.

³ At first I pooh-poohed all this copying. Then I realized that if students don't get the information from me, and they can't scrounge a book somewhere, they won't have it. Since that time, I have improved my board technique and give ample time for them to copy what I have written.

imported from Java. Cristal uses the campus of a Catholic high school in Dili during afternoons and evenings. The other private university, Jupiter, has its own small campus and was opened by the principal of a local high school. I was surprised to learn that he is now president of his new university as well as principal of the high school. It is hard to imagine him doing both jobs well. At the same time, his teachers are in the same boat: most of the teachers at Jupiter also teach at local high schools and/or UNTL.

Herein lies the problem: Both Cristal and Jupiter pay \$5 per hour to teachers. UNTL pays part-time teachers \$2 per hour. Full-time teachers get \$200 per month at UNTL, *but* full-time teachers can still teach at another school if they wish. Nearly all math and science teachers currently teach at UNTL half the day and at a local high school the other half. Now many of them also teach for money at Cristal and Jupiter whenever they can work in the time. Again, it is hard to imagine any of their students getting a decent education with this sort of running about.

The Ministry of Education fully supports these two new universities. You see, over 2,000 students were turned away from UNTL last October, and the government promised to create more education opportunities for them (after the students protested loudly and continuously for weeks). Private universities fill that bill nicely. As for the universities themselves, the logic is impeccable: some high percentage of those 2,000 UNTL rejects have money to spend (after all, their families had the means to support them all through high school), and they will spend it on a college education if given the chance. Set up a school, and money will start to flow in.

Flowing it is. Jupiter costs \$200 per semester, Cristal \$90 per semester, and each have plenty of students. (UNTL costs \$50 per semester.) Since most students who can pass the entrance test will attend UNTL, these private universities are and will be full of lower achievers with a lot of money. At least for the near future, they'll offer low-quality education while leeching the life-blood out of UNTL's teaching staff.⁴

Graduates from Jupiter and Cristal may become



Vice-Dean Francisco Martines lays down UNTL's financial situation for visitors from three Australian Universities at a recent conference on cooperation and collaboration. UNTL is trying hard to develop its linguistics institute as a way to bring in foreign money, but as of yet has little to offer. It was hard not to see the conference as a formalization of begging.

teachers, but probably not many will. Anyone with enough money to attend these universities can probably find a better position. Getting a good job here is a matter of connections, and connections are mostly a matter of money.

Back at UNTL, the new physics department has around 60 students. It is a three-year program, so this surge of newly qualified teachers will hit the nation's middle and high schools in October 2004. Teaching here is not considered especially honorable, and while the pay is average, it is the same dead-end job it is in many parts of the world: the longer you are a teacher, the less chance you have of doing anything else. The only positions to move up into are head master, resident district bureaucrat, or possibly teacher-trainer. When I asked my students at UNTL how many truly wanted to become teachers, three or four hands went up. Many of these students will find jobs elsewhere, especially if they get good grades and understand the concepts well.

It could easily be argued that the best strategy for increasing teacher quality in schools is to give copious trainings to under-qualified teachers who are currently struggling in the classrooms. Manuela at the East Timor Teacher Training Center is in charge of such training. When I asked her last year what the plan was for teacher training in physics, she gave me the following reply: "We'll work with anyone who wants to give training. The Portuguese are giving trainings in Portuguese-language

⁴ Minimum wage in East Timor comes out to about \$1,000 per year, although very few people make even that.

instruction, the Brazilians are promoting their video-based “Tele-sala” [“TV-room”] courses, and UNICEF works with a wide variety of elementary teachers. We turn no one away.”

It was not what you would call a pro-active response. Yet, it is understandable. In the end, the local government has no money for anything beyond the most essential, basic operations. Any sort of enrichment or special training must be funded from the outside, and the funder of course has a large amount of say in the content and manner of the project. The East-Timorese administrators within the Ministry of Education, nearly all of whom are also wet behind their professional ears, flutter in the whirlwind of proposals from donor organizations and foreign governments. It is hard to turn such money down, but many are realizing that refusal is sometimes the only way to maintain control.

Most things, however, are not refused, like the thousands of educational items provided by UNICEF for math and science teaching in elementary schools. Elegant, colored-plastic forms in the shape of the platonic solids, ornate pan balances imported from somewhere far away and, most dubious, enormous ready-made science kits with dozens of small parts. UNICEF assures that complete training will be given on each of these items (all still in storage), but they are still looking for a qualified and available trainer and a program plan, as well as a group of teachers to use as guinea pigs.

Interim UNICEF East Timor director Joao Pereira, an East Timorese, told me that thousands of dollars wait to be spent on primary education in East Timor, but that UNICEF must receive coherent proposals and plans from the Ministry before spending this money, and that he rarely sees such proposals and plans. Manuela confirmed that she did not pursue various projects UNICEF had offered because they seemed to have little connection with local culture or current needs in the schools. She, for her part, has made no counter-proposals.

Mr. George, described in my newsletter #7 as the wonder-consultant from Australia, has been working with groups of teachers to solidify lists of concepts and sub-concepts to be called the national curriculum for science and math. I dropped in on him one day and he told me how much the teachers had enjoyed his impromptu lesson on how to take the square root of a number manually, and how weak they all were in their subjects. He did this right in front of them. He told me of his ultimate goal of making a yearly plan for teachers so that each of them would know what to teach and how to teach it on each day of the year. Mr. George said that teachers with such low abilities need to be led step by step, and so a very comprehensive curriculum needs to be written. Ideally, each teacher should be moving in lockstep with the others, slowly grinding their way through the national curriculum.

There is very little criticism of Mr. George among

higher-ups in the Ministry of Education. He comes off jovial and competent, professor-like in his self-presentation, and none of the Ministry people know much about science or math or the pedagogies used to teach them. AusAID, the Australian international-aid organization, pays him well and will probably continue to pay him until his goal has been achieved. While I find his pedagogy deplorable, it is heartening to think that most teachers will probably never follow his methods: his technique is so bad that he will never successfully train them.

Outside of the auspices of the Ministry of Education, the Marist Brothers have opened a “Catholic College” here in Baucau. The Marists are an international Catholic organization devoted to educational development across the globe. Their college is, to date, completely devoted to teacher development. They conduct teacher training in English, Portuguese, physics and school administration. The Marists put a high value on quality education, and get funding from abroad to pay for these courses. Both UNTL and the Ministry of Education think highly of the Marist Brothers’ College.

I have given a few training sessions through the Marist Brothers. They strive to put local teachers beside each foreign teacher-trainer so that mentoring occurs in the process of the training. For my training, they pro-



Brother Mark, right, director of the Catholic College of Baucau, with assistant director Jose

vided each participating school with a sizable pile of materials — magnifying glasses, magnets, scales, rulers, prisms, scissors, etc — as well as a set of quality books as reference for the teachers. The teachers were thrilled to be attending our trainings, which went off very successfully. I foresee the Marists making a great and lasting contribution to education in Easy Timor.

At the same time, when I am among the good Brothers, I often get the sense that I am standing far back in history. I fear that while they have altruism and empowerment as a driving force, paternalism and classic Catholic colonialism are also lurking in the background. Their lifestyle here in Baucau is not so different from what it would be in Australia, where most of them are from, and I see evidence that they are not so well connected to or rooted in the local culture. To their credit, they make long commitments: ten years is a standard stay for one of the Brothers.

In addition to my work with the Marists and the University, I work on developing physics curriculum with the Ministry of Education. My specialty is hands-on activities that can be carried out with simple materials common to life in East Timor. A group of local teachers works together with me to develop lessons, write and edit them, and the Ministry will include them as part of the national curriculum. Fortunately, my group of teachers and I also



Rui Belo, head of curriculum in the Ministry of Education, talking to a colleague

asked to be in charge of the national physics curriculum before Mr. George got the chance. For middle-school level, we are going through lists of topics and subtopics and extracting only those that have some relevance to life on this island. At the high-school level, we try to give a basic introduction to each of the major areas of physics without sacrificing connection to local life experience.

I see many educators around me spinning their wheels or even back-sliding, and often question whether I am doing any good. There is every chance my group's lessons will be abandoned as "peripheral" or "non-critical." I try to remain positive, but problems are so ever-present and insistent that frustration often wins out.

Those working in the Ministry are well aware of the hard situation — each can list the present problems eloquently, and enjoys doing so, I might add. Two weeks ago I gave the most successful teacher-training I had given to date, and went raving about it to Rui in the curriculum department. The teachers were gung-ho: more than ready to try each of the hands-on lessons we showed them when they got back to their schools. They were also hungry for conceptual understanding. They were so motivated we



Students from the High School in Emera learning about pressure and density.

didn't have a coffee break all week, and they were always reluctant to break for lunch. I figured Rui would be excited, but he just shook his head. He told me one teacher had showed up at *his office* for the training, which I had given in the district of Ermera. He lamented that the district education office is unable to get good information to teachers of its own district, and that the teachers are not bright enough to ask around and find out where a training will be held. Try as I would, Rui could not be led to see the bright side.

Of course, Rui doesn't work directly with kids, a perennial problem with administrators. As usual, kids are the primary inspiration I have here. Sappy as it sounds, I absolutely do see them as the hope and future of education in East Timor. When I enter a classroom with something only moderately interesting like a handful of tape measures or a bag of plastic bottles, they are on the edge of their seats with excitement. They seem to radiate the message that things can only get better, and that they'll do their part.

My final message to these knowledge-famished youth I work with is always that they should not wait. If they really want to learn, they should push their teachers, principals, parents and anyone else they find who can assist them to learn. If they wait, it just may be that no one will ever teach them what they want to know. The word for learn in Tetum is "*buka-hatene*," literally, "seek-understanding." This word embodies good education: only students who are looking will truly gain understanding. I never miss the chance to remind students that in the current educational environment in East Timor, they'll have to seek even harder if they expect to find anything.

When one sees a classroom packed with eager students, anxious to learn from the simplest little experiment, it is hard not to believe that they *will* learn, Ministry of Education and blundering foreign agencies notwithstanding. This is where my hope still lies. Ultimately, I have no doubts these students will get their job done, proper tools or not, and bust their way out of the toilet, so to speak. □



Students at this elementary school near our home told me that the teachers told them to just play this morning. All doors were closed when I took the photo at 10:00 am.

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