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Revival, Rehabilitation, and Adaptation of Sugboanon Bisaya as Medium of Instruction in Mathematics and Science

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ABSTRACT

Abstract- The Sugbuanong Bisaya, the local native dialect of the Visayas provinces and the majority of the Mindanao provinces, is a highly developed language but not taught in the local schools. The study explored the revival, rehabilitation, and adaptation of Sugbuanong Bisaya as medium of instruction in Mathematics and Science. The study used the action research method to examine the prospects of the native language in instruction in a pilot case in Cordova, Cebu Province. Results showed that the use of Sugboanon native dialect produces higher learning achievement results in Mathematics and Science. The experiments in basic education in Cebu and the University of Bohol in the college and graduate levels showed that learners in the different levels responded effectively to the learning of concepts using the Sugbuanong Bisaya.

Keywords: Revival, rehabilitation, adaptation, *sugboanon bisaya*, mathematics, science

INTRODUCTION

During the 2nd National Research Conference on Education, Business and Management held at Brokenshire College, Davao City on November 26-27, 2008, I presented my research paper using the Sugboanon Bisaya language. It was possible during that time because I was in the "Culture Stream" and only four (4) could not understand Sugboanon.

Sugboanon Bisaya is one of the major languages in the Philippines. It is spoken in the Central Visayas region, a part of Negros Occidental, a part of Eastern Visayas region, a portion of the Bicol region, and a major part of the Island of Mindanao. About 20 million Filipinos use Sugboanon Bisaya as their mother language.

Sugboanon Bisaya is a well developed language. It has already an extensive vocabulary and a sophisticated grammar. Despite this situation, nobody has ever earned a college degree using Sugboanon as the medium of instruction for the simple reason that it is not allowed by the Philippines educational system.

Numerous studies, here and abroad, reveal that mathematics and science can be best taught and learned using the mother language of the student. The question is why do we insist in using English, a foreign language, as the medium of instruction in mathematics and science?

The inadequacy of this policy is shown by the result of the test conducted in 2003 by the National Education Testing and Research Center (NETRC). The result indicated a measly national average of 44.84% rating in mathematics and 43.98% in science, out of the possible 100%.

Meanwhile, numerous experiments have shown that the use of the mother language will result in a learning level in mathematics and science that will be about twice the learning level obtained through English instruction. Additionally the studies show that using the mother language as the medium of instruction in the primary grades will enhance the learning and understanding of English.

Since everybody desires to have a better learning in mathematics and science, we must endeavor to remedy the situation.

LITERATURE REVIEW

In 1998, Hong Kong implemented the policy of dividing their schools, up to High School, into different languages of instruction. Some schools use only the Chinese language, others use a mixture of Chinese and English, and selected students of higher abilities were enrolled in English only medium of instruction.

Three years later, Misters Din Yan Yip, Wing Kwong Tsang, and Sin Pui Cheung of the Chinese University of Hong Kong made a study as to the result of the policy in relation to science achievement for High School.[1]

In the study, those who were taught using the Chinese language were categorized into those of higher ability, medium, and low ability.

The results say, "The data indicate that the three strata of Chinese medium of instruction schools substantially outperformed the English medium of instruction stratum in the science achievement test." Even the low ability students taught using the Chinese language out performed the students taught using the English language.

Although the English medium of instruction students began with a higher initial academic ability, they were out performed by the lower ability students taught in the Chinese language. In fact the finding supports the implication that using English as a medium of instruction has a hindering effect on science learning.

In this matter of separate medium of instruction, we could not deny the fact that the Chinese language is already well developed that it has all the equivalent science terms vis-a-vis the English language. Thus, the Chinese medium of instruction students, who were able to communicate effectively in their mother tongue, may have an advantage over the English medium of instruction students in learning science.

In the Philippines we have the experiment conducted in the municipality of Libuagan, Kalinga in the Cordillera Region.[2]

According to studies, school drop out rate in the municipality

[1]"Evaluation of the Effects of Medium of Instruction on the Science Learning of Hong Kong Secondary Students on the Science Achievement Test". http://www.springerlink.com/content/d124160224820gn2/

[2]http://biklish.wordpress.com/2008/04/25/2008042501-2/

is high and one reason for this is the medium of instruction which is Filipino and English. These two languages are practically foreign languages to the local Libuagins. Since they could not understand anything, they might as well drop out.

The Summer Institute for Language (SIL) decided to help. In coordination with the Department of Education, it was decided to teach the pupils using the local Libuagin language. The teachers were trained in the local language and instructions were conducted in the local language with English and Filipino only taught as a subject. Nothing in the curriculum was changed.

When the students learned to read and write in their mother tongue before learning to read and write in a second or third language, they progress more quickly both in literacy skills and in second language acquisition.

When the students were tested in year 2006, the results indicated that the Libuagan District ranked number 1 in the Kalinga Division of the Cordillera Region. They scored 15-25% higher than all other Kalinga Division districts in the English and Filipino reading tests.

Spanish Era. When the Spaniards arrived in the Philippines, the priests decided that they will study and learn the local languages and proselytize using the local language. Due to this fortunate decision of the Spanish priests, the local languages were studied, preserved and grew abreast with the Spanish language.

The 1890 report of Governor Adolfo Martin de Baños of Bohol indicated that Sugboanon grammar was part of the school curriculum in Bohol for the elementary grades. Mathematics, science, literature, and other subjects were taught and studied using the Sugboanon Bisaya.[3] Spanish was studied as a separate subject.

American Era. The greatest debacle of the Sugboanon language occurred during the American era in the Philippines. The local languages were prohibited from being used in school. When a national language was instituted in the 1935 Constitution it was based on Tagalog. Today we are supposed to use a bilingual medium of

[3]"Memorias". A report of Politico-Military Governor Adolfo Martin De Baños to the Governor General of the Philippines dated December 26, 1890. (National Archives, MSS).

instruction in the Philippines. Unfortunately, both English and the invented Filipino are foreign languages to a Bisaya.

Today, after a lapse of more than a hundred years, most of the local mathematical and scientific terms are forgotten. However, the old terms still exist in the hinterlands and they are also found in old Spanish-Bisaya dictionaries and old literary works in Sugboanon. Since Sugboanon is a live spoken language, the grammar is still the same.

LEVEL OF MATHEMATICS IN SUGBOANON

Before the arrival of the Spaniards the Bisayans were already great sailors and ship builders. They already traveled as far as India, Indonesia, Thailand, China, and other faraway places. They could not have done it without the knowledge of mathematics.

The Sugboanon Bisaya can already count from *sip* (zero)[4] to *wakat* (billion). They already have native names for many of the stars and constellations like *lusóng* (big dipper), *butiti* (small dipper), *amupo* (Pleiades), *balátik* (Orion), *kapanúsan* (Venus), etc. The word *padalóman* means magnetic compass and *dálom* means magnetic bearing. The Bisayans have 12 terms for wind directions, 17 terms for describing the wind, and 9 terms for the scale of wind force. In fact the Bisayans have the word *hawa*[5] for air and *hangin* for wind.

[4]*Sip* – from Arabic *sifr* for zero. This word is still used by the Eskaya Tribe of Bohol.

[5]*Hawa* – from Arabic *hawa* for air. This word is not very common but we have *ginhawa* = breath.

Counting words in Sugboanon Bisaya:

Symbol	Sugboanon	English
0	Sip	Zero
10	Napulò	Ten
100	Gatos/ Lamak[6]	Hundred
1,000	Libo/ Man[7]	Thousand
10,000	Laksa	Ten thousand
1,000,000	Yukót	Million
10,000,000	Malalan	Ten million
1,000,000,000	Wakat	Billion

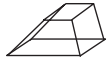
Mathematical operations:

+	Dugang; punô	Add; plus
-	Kuhà; iban	Subtract; deduct
x	Pilô	Multiply
/, ÷	Bahin	Divide
=	Tumbas	Equal
( )	Sal-ot	Parenthesis
{ }	Banting	Braces
[ ]	Sungkat	Bracket
A^x	Lab-a	Exponent; power
%	Sihâ	Percent
a/b	Sipak	Fraction
$\sqrt{}$	Gukat	Extract the root; square root
$\sqrt[3]{}$	Gukat-tulo	Cube root
$\propto$	Bágay	Proportionality sign

[6] Lamak is hundred as used in farm products and gatos is hundred for all other items.

[7] Man is thousand as used in farm products and libo is thousand for all other items.

Geometrical shapes *(Sukod-butan nga Hulagway)*:

•	Tuldok	Point, decimal
	Badlis	Line
	Hitad	Surface
	Giwang	Angle
	Bawog	Curve
	Likóg	Arc
	Halitok	Parabola
	Duhalitok	Hyperbola
	Gitlo	Triangle
	Gipat	Rectangle
	Lado	Square
	Alidong	Circle
	Tungatid	Radius
	Latastid	Diameter
	Libô-libô	Circumf erence
	Alibid	Oval
	Alipid	Ellipse
	Pihing	Oblong
	Hulikab	Trapezoid
	Bantiwâ	Rhombus
	Lilik	Cylinder
	Guhâ	Cube
	Undok	Pyramid
	Turutot	Cone
	Gangawon	Frustum
	Lingin	Sphere
	Gima	Pentagon

Example of other mathematical terms:

Abscissa --- *handaganós*
Altitude ----- *baróg*
Area --------- *langyab*
Asymptote – *ngílbit*
Azimuth ---- *dalom-líyok*
Bearing ----- *dálom*
Center ------- *taliwálà*
Chord ------- *talúdtod*
Coefficient – *pákas*
Compass ---- *padalóman*
Compute ---- *kalangkálang*
Coordinates – *tiganós*
Cosecant ---- *kaduhábok*
Cosine – *kalídpà*
Cotangent – *kalirás*
Couple force – *santáko*
Cubit --- *manikô*
Decelerate –*alusáos*
Decimal – *tinagnapúlò*
Degree measure –*katágì*
Denominator – *dagnayán*
Density – *alindúot*
Derive --- *pagsúhid*
Diagonal – *láktid*
Digit – *halítang*
Eccentricity – *bagsiwâ*
Electricity -- *dagítab*
Electronics -- *dagitábming*
Equation -- *taláid*
Equilateral -- *tumbaslid*
Equilateral triangle – *bíl-id*
Equilibrium -- *bitínan*
Even (exact pair) -- *pátas*
Exact -- *túkmà*
Experiment -- *basanbásan*
Factor – *sáb-oy*
Factoring – *pagsáb-oy*
Fast (speed) -- *paspas*
Fathom (measure) – *dupá*
Figure (drawing) – *lúdlis*
Focus – *tútok*
Force (energy) – *pulóg*
Force (strength) – *kusóg*
Formula – *sundanán*
Fraction – *sipák*
Frequency – *asód-asód*
Friction – *kánggit*
Function – *kapusbúhat*
Grade (angle) – *kupâ*
Helix – *kulód*
Heptagón – *gitó*
Hour – *táknà*
Hypotenuse – *handágpà*
Infinity – *ngilí*
Integrate – *tigmán*
Intersection – *ginsangáan*
Isosceles – *duhálid*
Level (horizontal) – *pátag*
Liquid – *labíyaw*
Locus (path) – *ági*
Ma'am -- *ána*
Mark (symbol) – *taíl*
Mass (quantity) – *bus-ók*
Mathematics -- *matimatika*
Measuring tape – *tadól*
Middle – *tungâ*
Minute (time; angle) – *gútlò*
Moment arm – *bántang*
Negative (value) – *dihág*

Neutral axis – *balintúngà*
Norm (standard) – *manulúngkad*
Number – *kaíphan*
Oblique – *kiwís*
Odd – *búngkig*
Opposite – *bángì*
Orbit (path) – *ás-as*
Ordinate (measure) – *baroganós*
Orient (find direction) – *tuhód*
Ovoid – *tiyapád*
Pace (step) – *lákang*
Parallel – *búyon*
Pentagon – *gimá*
Perimeter – *liyók*
Perpendicular – *túnton*
Piece – *buók*
Pivot – *liyokánan*
Plain (flat) – *bunayág*
Polygon – *dagíway*
Polynomial – *dagbuók*
Positive (value) – *dayág*
Principle (theory) – *kabtáng*
Problem (emotion) – *sulirán*
Problem (mental) – *gumónhap*
Product – *abót*
Proof – *badók*
Prove – *handahón*
Puzzle – *tanghágà*
Quadrangle – *gipátway*
Quadrilateral – *gipatlíd*
Quiz; test – *túkso*
Quotient – *lápà*
Ratio – *páhat*
Reaction (force) -- *sumbalík*
Remainder (of division) -- *puwákì*
Result -- *sángpot*
Right angle -- *iskína*
Science -- *alámdag*
Secant -- *duhábok*
Second (time; angle) -- *gútling*
Sector (of circle) – *síp-ak*
Series -- *suhíl*
Shape (form) -- *húlma*
Similar -- *ámgid*
Sine -- *lídpà*
Sir -- *ámba*
Sketch – *mantamánta*
Slope (angle) -- *kupâ*
Solution -- *húsay*
Square (exponent 2) -- *buád*
Strain (force) -- *santíng*
Stress (force) -- *úgnat*
Substitute -- *húlip*
Sum -- *tingób*
Surface (facet) – *hítad*
Tangent -- *lirás*
Temperature -- *alinsúob*
Test (long exam) -- *pasúlit*
Test (quiz) -- *túkso*
Theorem -- *aghamíng*
Theory -- *ágham*
Total -- *kábat*
Truss -- *sagúnting*
Try -- *suláy*
Underline -- *bádlos*
University -- *kinatumhaan*
Value (worth) -- *nahót*
Vertex -- *tumóy*
Vertical -- *tíndog*
Volume -- *gántong*

Calendar Terms:

English	Binisayâ	Spanish
Days of the Week	Mga adlaw sa pítlaw	Dias del semana
Monday	*Tigburukád*	*Lunes*
Tuesday	*Dumason*	*Martes*
Wednesday	*Dukutdúkot*	*Miercoles*
Thursday	*Baylubáylo*	*Jueves*
Friday	*Dánghos*	*Viernes*
Saturday	*Hinguthíngot*	*Sabado*
Sunday	*Ligidlígid*	*Domingo*

Months of the Year	Mga Bulan sa Tuig	Mes del Año
January	*Ulalóng*	*Enero*
February	*Daghangkáhoy*	*Febrero*
March	*Daghangbúlan*	*Marzo*
April	*Kiling*	*Abril*
May	*Himaboyan*	*Mayo*
June	*Kábay*	*Junio*
July	*Hidapdapón*	*Julio*
August	*Lubadlúbad*	*Agosto*
September	*Kangurúlsol*	*Septiembre*
October	*Bagyubágyo*	*Octubre*
November	*Panglot Nga Diyútay*	*Noviembre*
December	*Panglot Nga Dakô*	*Diciembre*

Example names of colors:

Amber	*Samálà*
Black	*Itom*
Blond	*Bulagáw*
Blue	*Búghaw*
Brown	*Tabúnon*
Gray	*Abuhón*
Green	*Lúnhaw*

Indigo	*Tagóm*
Ocher color	*Alaangaláw*
Orange	*Pulagáw*
Pink	*Limba*
Purple	*Tapól*
Red (for fruits)	*Magáng*
Red	*Pulá*
Tan	*Suílom*
Violet	*Lila*
White	*Putî; ugís* (for animals)
Yellow	*Dag; dalág*

TERMS FOR SCIENCE AND GEOGRAPHY

The Sugboanon language has already plenty of terms for science, health, geography, atmospheric condition, sea, land, and vegetation. It was at par with the Spanish language that was in use during the Spanish era. Unfortunately it made little progress during the American era due to the fact that Sugboanon Bisaya was not included in the school system.

However, for the elementary grade level, the Sugboanon Bisaya has equivalent terms for English science words.

I found out that the Grade 2 textbook for the subject "Science and Health" published by Vibal Publishing House in Manila (1997) can be fully translated into Sugboanon Bisaya. From this book alone I supplied the school teachers of Cordova, Cebu with 1,218 Sugboanon words equivalent to the English science words. I also supplied the school teachers of Cordova, Cebu with 1,120 words for health, sickness, and parts of the body terms in Sugboanon Bisaya. This is the same word equivalents that I prepared for the Nursing Department of the University of Bohol. I also supplied them with a 2,800 word equivalents for engineering, physics, geography, astronomy and mathematics that I also prepared for the college of engineering. I also supplied them with 1,300 Sugboanon words for culture and manners and also 500 Sugboanon words for parliamentary procedures.

For all intents and purposes we can say that any school teacher can be equipped with the proper Sugboanon mathematics and science terms and the strategy how to use and teach using those terms.

As an aside, let me tell you that teaching with the use of Sugboanon Bisaya needs a different strategy compared to the use of English. Whereas in English you tend to focus on the question "what", in Sugboanon you must first endeavor to answer the question "why". If you could not answer the question "why", the pupils will lose interest in their lessons.

This is one of the major problems of the school teachers of Cordova, Cebu because English textbooks deal only with what, how, when, where, etc. Nowhere can you find a presentation geared to answer the question "why". In fact, of the thousands of Master's Theses and Doctoral Dissertations, none ask and answer the question "why".

Sample terms in Geography:

North = *Amihanán;* South = *Habagatán;* East = *Subangán;* Orient= *Silangán, Sidlakán;*

West = *Kasádpan;* Occident = *Kalúndan;* Northeast = *Amihanáng-silangán;* Northwest = *Amihanáng-kasádpan;* Southeast = *Habagatáng-silangán;* Southwest = *Habagatáng-kasádpan.*

Earth = *Kalibútan;* Continent = *Kanáypan;* Archipelago = *Kapupódan;* Island = *Púlò;* Cape of land = *Lawís;* Peninsula = *Dáwis;* Isthmus = *Hitos.*

Country = *Nasod;* State = *Bansâ;* Region = *Búngto;* Province = *Lalawígan;* City = *Dakbayán;* Town = *Lúngsod;* Barrio = *Balangay;* District = *Purok;* Sitio = *Binábоy.*

Sample terms for Clouds:

Atmoshere = *wantág;* Cloud = *Pangánod;* Moving cloud = *Gánod;* Rain Cloud = *Dág-om;* Cirrus cloud = *Dampogón;* Cumulus cloud = *Pisón;* Nimbus cloud = *Ulumúom;* Stratus cloud = *Lapíon;* Horizon = *Gindaílan.*

Phases of the Moon:

No moon shining = *Dúlom;* New moon = *Subáng; Bag-ong subáng;* Waxing moon = *Tíkang;* First quarter moon = *Udtong kátin;* Full moon = *Tákdol;* Waning moon = *Himatayón;* Last three nights before the moon disappear = *Bitáy.*

LANGUAGE DIFFERENCES

English is an inflectional language. It relies on the verb and inflection of the verb to indicate number, tense, and etc. Sugboanon Bisaya is an agglutinative language. It relies on its affixes to indicate number, tense, etc.

Both languages have different classifications and both are already well developed in their grammars. In fact most of the time their grammatical rules are opposite and therefore the grammatical rules of one could not be applied to the other.

In English, the meaning is to be found in the sentence itself. In Sugboanon Bisaya, the real meaning is to be found in the intention of the speaker or writer.

After you master the grammar and learn sufficient vocabulary in Sugboanon Bisaya, the next important aspect is to learn the nuances of the language. This is important because the nuances convey the intended meaning of the sentence.

A DEFECTIVE EXPERIMENT

A Japanese researcher named Yumiko Yanagihara recently made a bilingual education experiment at Guadalupe Elementary school, Cebu City.® Yanagihara found out that those who solve the mathematical problems in Sugboanon had a better result than those who solve in English. However, it was true only for the lower grades.

Yanagihara said, *"The differences in means in the math tests between before and after learning for the English and Cebuano groups in Grade III indicate that although both groups demonstrated a low level of understanding, the use of Cebuano for the language of instruction resulted in a degree of understanding more than twice as high as that in the case of using English."*

In Grade 6, the students who solved in English were better. The reason put forth by the Japanese researcher was that for 6 years the students were taught mathematics in English and already forgot the Sugboanon language.

The result and reasoning for Grade 6 came as a surprise to me. It differed from other studies regarding bilingual education. Fortunately the sample Sugboanon problem is given in the publication. It says in English;

"Today's question. How long is the perimeter when we place together twenty equilateral triangles?"

The Sugboanon translation is:

"Ang pangutana karon. Unsay gitas-on sa daplin kung sumpayon ang baynte ka triangulo nga may managsama ang daplin?"

After studying the experiment procedures, I found nothing wrong in it. The problem was in the awkward translation and lack of consideration of the nuances of words used. In the first place the word "perimeter" which is *"liyok"* in Sugboanon is not found in the Sugboanon problem. What will really stymie the Sugboanon reader is the use of the word *"daplin"*. Like *"tungâ* (middle)", the word *daplin* conveys a meaning of location and therefore has no measurable distance. The Sugboanon words *daplin, kilid,* and *ngilit* can be used to translate the word "side" of English. However, only *kilid* can convey a meaning of measurable distance. The *ngilit* has a connotation of edge when viewed downward. A Grade 6 student has already enough experience to distinguish the nuance of these words therefore he could not understand how a *daplin* could be measured.

In the lower grades the pupils could not yet understand English. However, they could not also solve properly the Sugboanon problem because the problem was wrongly stated; so all of them got low ratings. Nonetheless, since in Sugboanon the meaning is to be found in the intention, those who solved in Sugboanon still got the better of the situation because they somehow guessed correctly the intended problem.

Therefore the result of the experiment was not valid in the Sugboanon portion because it asked for the measure of something that could not be measured. You can only imagine how high would have been the results when the problem was presented in understandable Sugboanon language. A simple change of the word *"daplin"* to *"kilid"* would have made a great difference.

We could not give the fault to the Japanese researcher but to the Sugboanon translator who did not know the nuances of his language. At present the greatest deficiency of our school teachers is to think that only English has a grammar and that English grammar is also applicable to Sugboanon Bisaya. The truth of the matter is that Sugboanon has a very intricate grammar that must be studied properly.

UNIVERSITY OF BOHOL EXPERIENCE

The Commission on Higher Education (CHED) allows the teaching of local literature in college using the regional language. Utilizing this permission, the Engineering Department of the University of Bohol started offering the subject "*Alamsulát I*" or "Literature I" using the Sugboanon Bisaya as the medium of instruction. Since I have a recognition from LUDABI (*Lubas Sa Dagang Bisaya)* as an authority in the Sugboanon Bisaya language, I became the teacher in the subject *Alamsulat I.* Incidentally in year 2006, a Sugboanon Bisaya subject was started in the Graduate School entitled. "Metalingual, Social, Cultural, and Educational Aspects of the Sugboanon Bisaya Language".

The *Alamsulat* subject was first offered during the first semester of School Year 1998-1999. At first I immediately dealt with literature topics. I found out that the students could not understand. Their vocabulary level was only equivalent to a 7-year old child.

So I returned to the basic grammar of Sugboanon Bisaya and gradually built up their vocabulary up to 7,000-word level within the first half of the semester. Along the way I have to teach the engineering students basic grammar, mathematics, science, parliamentary procedures, argumentation and debate, and writing letters. The deeper understanding of Sugboanon literature was done only in the second half of the semester. This includes chapters in the *Noli Mi Tangere* and *El Filibusterismo* in Sugboanon Bisaya.

My method of instruction is not purist in the "words" used but I am purist in the grammar. However, if the equivalent Sugboanon word is available, we will use it.

It may seem that my pace of the lessons is very fast. It could be done because the students were already familiar with the words but only they could not synthesize or arrange them properly.

After ten (10) years of teaching *Alamsulat I*, here are my observations: Those who are good in Sugboanon Bisaya become good in English or vice versa. Those who are bad speakers in Binisayâ are bad speakers in English or vice versa.

Teaching mathematics, even up to trigonometry, using Sugboanon Bisaya makes the students better in analysis when solving mathematics problems in English.

Those who were non-native speakers of Sugboanon like Tagalogs, Bikolanos, etc. become better grammatical speakers in Sugboanon Bisaya than the native speakers. This is because the native Sugboanon speakers will relapse to the colloquial Sugboanon when they go out of the classroom. The non-native speakers have no other recourse but to follow the grammatical rules, hence they speak grammatical Binisaya.

CORDOVA, CEBU PROCEDURE

When Atty. Adelino Sitoy, a stalwart of LUDABI, became Municipal Mayor of Cordova, Cebu in 2007, he immediately endeavored to have Sugboanon Bisaya as the medium of instruction in the elementary grades from Grades I to III. He immediately contacted me at the University of Bohol.

My advice was first to train the teachers in Sugboanon Bisaya before they should start teaching. How and what would they teach if they do not know proper Binisaya?

So for the whole of SY 2007-2008, I have to go to Cordova, Cebu every weekend to teach the subject "Metalingual, Social, Cultural, and Educational Aspects of the Sugboanon Language", which I translate into "*Kabalisong sa Katilingbanon, Halaman, ug Kabangkaaganong Hulagway sa Binisaya"*. During the second semester, the subject was "Teaching Strategic Design in Sugboanon Bisaya" or *"Laraw sa Tayada sa Pagtudlò sa Binisaya"*.

Both subjects are 3-unit subjects in the Master of Education curriculum at the University of Bohol. Since I taught these subjects at the University of Bohol Graduate School, the teachers have the option to enroll and have their training credited as a subject obtained in their Masteral Degree.

After the teachers have been trained for one year equivalent to two 3-units subjects in the graduate school, they started teaching in Grades I to III using the Sugboanon Bisaya starting school year 2008-2009. The DepEd Cebu Province Division approved the use of Binisaya as a "Bridge Language".

A demonstration mathematics class of Grade III pupils was presented during the "First Sugboanon Bisaya Summit" held at Cordova, Cebu last October 24, 2008. The smooth flow of the lessons

indicated that the process of teaching was going well. The pupils can already handle 3-digit numbers in the place-value system, all the while interacting in Binisaya sans any English word. In fact the lessons in mathematics were somewhat ahead compared to the lesson schedule for mathematics in English.

The effectiveness of the procedure compared to other schools using English language instruction can be determined after the year-end evaluation of schools in the Province of Cebu Schools Division.

CONCLUSIONS

The pedagogy in the use of Sugbuanong Bisaya in the basic education , college and graduate levels is effective in making students learn more effectively than when they are taught using English as medium of instruction. The sophistication and mature development of Sugbuanong Bisaya as medium of instruction has greater potential to educating Filipinos in Mindanao and Visayas provinces.

RECOMMENDATIONS

After 10 years of teaching Sugboanon Bisaya in College and two years in the Graduate School, the following are some of my recommendations:

1. Teach Sugboanon Bisaya from Grade I to College because it carries with it the culture, tradition, history and the identity of the Bisayans.
2. Encourage everybody to use grammatical Sugboanon when speaking Binisayâ and grammatical English when speaking English. Avoid mixing the language as a "Bisaylish", it will be damaging to both languages. This is very relevant to those who are in the mass media.
3. Use Sugboanon Bisaya as the medium of instruction from Grades I to III while studying English and Filipino as subjects.
4. Use English as a medium of instruction only when the students have already gained some knowledge of English. This could be done starting from Grade IV.
5. For every Grade or Year level from Grade IV to High School,

include at least one Sugboanon Bisaya subject as a "coordination *(súhay)*" venue of the lessons taught in English. This subject will synthesize all lessons in the other subjects in the grade level using Sugboanon Bisaya as the medium of interaction. This is important because if ever the student will drop out of school his academic knowledge can be brought back to his community because he knows already how to say it in Binisayâ.

6. Offer a degree course in college using Sugboanon Bisaya as the medium of instruction. It could be a separate degree or an option to select what language to use in a particular college degree. For example, a student can have his option to obtain his Nursing Degree in English or Sugboanon Bisaya. Other Asian countries are doing it already.
7. Develop a degree course in the Graduate and Post Graduate level to help in the development of intellectualized Sugboanon Bisaya and as a source of teachers in the language.

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