1. INTRODUCTION

Bilingualism and the educational problems of bilingual students have been the subjects of much research. Some of these deal with the effects of bilingualism on the measurement of children's intelligence; age factor of beginning a second language; the methods used to teach it; the degree of bilinguality and the socio-economic/cultural background of bilingual students.

In the Philippines, the Department of Education, Culture and Sports mandated the use of English and Filipino as media of instruction in both primary and secondary schools (Department Order no. 25, Series 1974). Known as the Bilingual Education Policy it aimed at making the Filipino competent in both Filipino and English languages. Under this policy, Filipino language learning was therefore supposed to have 'functioned in a wider educational context' (Van Ek and Alexander 1975). Nonetheless, Gonzalez and Sibayan (1988) reported a common complaint among teachers of their grade school students' inability to communicate satisfactorily in Filipino. In their analysis of achievement scores by subject areas under bilingual schooling, they indicated that students in grades 4 and 6 were able to correctly answer only 51-52% of the questions. They claimed further that few students at all grade levels reached a point of being able to handle questions calling for higher cognitive functions. This complaint was supported by the 1976 Survey of Outcomes of Elementary Education of the Philippines (SOUTELE), which revealed that grades 5 and 6 students could answer only fifty percent (50%) of the test items correctly. This confirmation of the observation by the data should be a cause for concern if Filipinos are expected to use the Filipino language for intellectual pursuits.

The intellectualization of Filipino (Gonzalez 1988) is the building of registers in the language for the different intellectual disciplines or fields of specialization. The building process is expected to make available the knowledge of the world through the language.

The intellectualization of Filipino, Sibayan claims, is still far from being achieved; some baseline data must also be gathered. For example, the Filipino level of proficiency of our students in the grade schools, high schools, and colleges has not been fully investigated.

Few studies have been done on the threshold level here in the Philippines. One is an unpublished doctoral dissertation (Lingan 1981) that estimates the threshold level of Filipino as a second language in grades 3, 4, and 5 for Region II. Her findings show that a non-Tagalog child needed a three-year schooling under the present curriculum to
In education and the intellectualization of a language, the written form of the language is primary. As Sibayan (1991) opines, the task of education is primarily concerned with the printed form. It is the written form that is used in school which all students have to study. Nonetheless, there has been no report on any study done on establishing the threshold level in the cognitive processing in Filipino of young learners.

Although Coronel (1990) did a thorough secondary analysis of the cognitive outcomes of elementary schooling in the Philippines, still no research has been reported to have tied up Bloom's (1956) taxonomy of cognitive skills and Cummins' (1979, 1981) second threshold of competence called CALP (Cognitive Academic Language Proficiency).

At this point in our bid for the intellectualization of Filipino, we find the need to determine the proficiency of our grade school students in Filipino so that their cognitive ability to use the language to learn other subject matter can subsequently be determined as well.

2. THEORETICAL AND CONCEPTUAL FRAMEWORK

The study is basically guided by two related frameworks—Cummins' (1979, 1991) CALP with its beginnings from Van Ek's (1976) threshold level and Bloom's taxonomy of cognitive skills. In 1978, Cummins proposed that there may be threshold levels of linguistic competence which bilingual children must attain in order to influence their cognitive and academic functioning. These are Basic Interpersonal Communicative Skills (BICS) and Cognitive/Academic Language Proficiency (CALP). He defined BICS as the surface skills which are nearly universal among native speakers of a language. In the construct of language proficiency, this is the language used in face-to-face interaction. BICS refers to the different surface manifestations of a language which are easily automatized. These are pronunciation, control of syntax, and memorized formulaic expressions which according to Cummins are all cognitively undemanding tasks. CALP, on the other hand, is the deeper component of language competence closely related to literacy skills like argumentation, logical reasoning or other similar rhetorical functions. It refers to skills beneath the linguistic facade and are cognitively more demanding. Thus, CALP is the language used in academic settings.

The present study has proposed to elaborate CALP with Bloom's taxonomy in the cognitive domain. Figure 1 shows the conceptualization of language proficiency.

![Figure 1: Levels of Cognitive/Academic Language Proficiency in Filipino](#)
The six levels are known as knowledge—remembering something learned previously; comprehension—grasp of meaning, without necessarily relating it to other material; application—use of abstraction in particular and concrete situations. The higher levels of cognitive processing involve analysis—breaking down a whole into its parts so that the organization of elements is clear; synthesis—putting elements into a coherent whole; and evaluation—judging the adequacy of ideas or material for a given purpose.

The major points embodied in CALP are some aspects of language proficiency considerably more relevant for students' cognitive and academic progress than are the manifestations of proficiency which have been frequently focused on. Thus, Figure 2 shows the researcher's perception of the framework for the present study.
In the context of the Philippine situation and for purposes of this study, the correlates of CALP (see Figure 3) are hereby presented.

Correlating these factors with the test results will lead the present study to the identification of the best predictors of Filipino CALP. The framework proposed allows us to view the relationships between language proficiency and academic achievements of students specifically in Filipino and social studies.

On the basis therefore of the presented framework, an attempt to elucidate aspects of the relationship between language proficiency and academic development of students enrolled in the private/public schools located either in the city of Manila or in the outlying towns of Manila, this study will investigate the Filipino cognitive academic language proficiency (CALP) of grade school students.

The present study attempts to find out the extent to which Filipino grade school students are capable of carrying out complex cognitive operations through the Filipino language and the extent to which the Filipino language facilitates these students' general cognitive and academic progress. It further identifies the threshold level of cognitive academic Filipino language competence that grade school children have attained.

Specifically, this study seeks to answer the following questions:

1. What is the threshold level in Filipino CALP of the grade school students sampled?

2. Is there a significant difference in the CALP threshold level in Filipino of grade school students in

   2.1 the city and outlying towns of Metro Manila?
2.2 private and public schools?
2.3 high and low socio-economic status schools?

3. Is there a significant relationship between the students' CALP threshold level and their academic performance in subjects taught in Filipino?

4. Does home language use relate to the students' CALP level in Filipino?

5. Which of the following is the best predictor of CALP?
   5.1 school type
   5.2 academic subjects taught in Filipino
   5.3 home language

3. METHODOLOGY

The study covers a sample size of 400 grade school students in the city of Manila and three outlying towns east of Metro Manila based on an error margin of .10 standard deviation and a level of confidence of .05. Selection of school was based on the following categories: linguistic area (Tagalog); geographical area (city and outlying towns of Metro Manila); type of school (private and public); socio-economic status (low and high).

This study is made up of three phases: Phase 1 - the instrument development stage which further subdivides into developing the content domain, validating the test items, and refining the test. Phase 2 - identification of the CALP threshold level in Filipino; and Phase 3 - determination of existence of a significant difference in the Filipino CALP of grade school students in the City and in the outlying towns of Metro Manila, in private and public schools, and in high/low socio-economic schools. Phase 3 also includes relating students' CALP threshold level with selected variables such as their academic performance in Filipino language and Araling Panlipunan/social studies and their home language use.

Multiple correlation through step-wise regression was used to test whether significant differences in the Filipino CALP threshold levels of students exist due to school location, type of school, and socio-economic status. The same statistical tool was used to determine whether the CALP threshold level is significantly related to their academic grades in Filipino language and Araling Panlipunan/social studies and with their home language use.

4. RESULTS AND DISCUSSION

The CALP test developed and validated in the present study was a criterion-referenced one. It was specifically designed to classify the grade school student sample according to whether or not they were able to perform satisfactorily on the different levels of cognition. As such it was meant to test the functional use of the language and not their subject language proficiency of Filipino. The students' ability to use Filipino was measured through the test based on Bloom's taxonomy in the cognitive domain.
4.1. RELIABILITY, VALIDITY AND ITEM ANALYSIS

After content validation by four experts on content (subject-matter) and test construction, the number of test items was reduced from the original number of 120 to 106. Fourteen items were discarded following the suggestions of the test experts. These 14 items, according to them, needed long answers on the sentential level.

The resulting test was administered to 50 grade five students of Rafael Palma Elementary School and the results were submitted to STAR (Statistical Assistance for Research) at De La Salle University for item analysis. Through item and factor analyses, items which had low item-total correlation coefficients and which did not significantly add to the overall reliability of the instrument were discarded.

4.2. THRESHOLD LEVEL IN FILIPINO CALP OF GRADE SCHOOL STUDENTS

The final form of the CALP test was administered to 400 grade six student respondents. The students overall mean in the CALP test was 33.40695. This computed mean also indicated that the students' ability to use Filipino lay in the lower cognitive processes of learning and thinking. Moreover, for these students, Filipino CALP was at the application level in Bloom's taxonomy. This finding, therefore, means that the grade school students in this study had not reached the analysis stage which Cummins hypothesized as the CALP threshold for other bilingual learners.

The criterion performance of 75% attainment of correct answers in the CALP test has been adapted. Applied to this study, a grade six student who took the CALP test and got at least 75% is said to have reached the CALP threshold which Cummins identified as analysis. In other words, this student must have the necessary linguistic competence in the Filipino language to avoid cognitive disadvantage.

More importantly, the data show that students were weak on tasks that would require active cognitive involvement for them to give appropriate answers in the test.

4.3. DIFFERENCE DUE TO TYPE OF SCHOOL

The difference in the CALP threshold levels of students in the private and the public schools is low. The highest achieved mean score of both school types is at application level. The finding disproves the popular claim that public school children are more proficient in using Filipino than their private school counterparts. Over the past decade, the private schools have gradually relaxed their resistance towards the use of Filipino as a medium of instruction. Both types of schools have gradually implemented the Bilingual Education Policy, thereby improving and widening the scope of instruction in Filipino. Nonetheless, means (34.054773 and 32.76238) are far below the criterion of 75% mark set for this study. This shows that Filipino grade 6 students included in the present study have not reached the equivalent of the criterion which is analysis.

The search for a possible explanation brought to the researcher's attention the materials used at present in the public schools. All materials in Araling Panlipunan or Filipino are teacher-prepared ones done outside class hours. The materials given the researcher reflect
skills in the three domains of cognitive, affective, and psychomotor. The cognitive domain in social studies, for instance, included only illustrated educational objectives under knowledge and comprehension. The list contained a generalized description of comprehension objectives without detailing the three types of comprehension behavior, namely, translation, interpretation, and extrapolation. If ever there were activities on translation, they were similar to simple recall of knowledge. This is not to discount the teachers' dedication to the teaching profession but the very minimal listing could have sprung either from the lack of knowledge that there are three types of comprehension behavior or from the lack of knowledge of formulating objectives for each type. Neither can it be claimed that educational objectives on the more complex cognitive skills were for higher levels of education.

For almost a decade now, private schools have patronized books written by Filipino authors. These books have a format of presenting texts followed by comprehension questions at times preceded by new words for vocabulary building. In many books for elementary school gone over by the researcher, there was a considerable emphasis on comprehension questions for full understanding of the text. However, the comprehension questions asked were not varied enough to cover the three types of comprehension behavior mentioned above. After these general comprehension questions come situations where students were to apply abstractions supposedly learned in that particular lesson. Exercises on cognitive skills generally ended in application questions. For variety, one or two questions on analysis, synthesis, and evaluation were included. But these were not regularly featured as part of the whole exercise. Many exercises in these books did not pose enough challenge for the young students to use Filipino in their thinking process.

4.4. DIFFERENCE DUE TO SOCIO-ECONOMIC STATUS

The high socio-economic status schools have a slightly higher mean in their CALP scores over the LSES. Nonetheless, the difference in the results of the present study is not significant. Based on the findings, the level of functional language proficiency in Filipino cuts across economic status. Poor or rich schools, their students' CALP level is the same, i.e. on the application level, though with insufficient mastery in that specific skill. This finding is similar to the results of Mercado-Surot (1987) who reported that socio-economic status has no significant predictive value on the college students' Filipino language proficiency, in contrast is Maminta's (1991) study which proved the strength of socio-psychological variables over the linguistic in influencing academic and cognitive outcomes of bilingual education. In that study, subjects coming from middle-class background were motivated to maintain the first language while those from the depressed socio-economic areas had difficulty identifying with and maintaining their first language.

The results of the present study show the students' minimal use of Filipino in their thinking process. The overall mean of the students is a sign that the language processing in Filipino by our students has been concentrated on grammar and that the parallel processes of semantic and functional meaning in language with analysis, synthesis, and evaluation in the cognitive domain have received less emphasis. The overall mean of the test is 33.40695 which against the threshold level and the taxonomy in the cognitive domain, can be paralleled with the lower
cognitive processes. This finding shows that the great majority of our grade school students are only at the application level where, as native speakers of Filipino, the students are able to handle only the forms and notions of the language.

The inadequate library resource in the Filipino language limits both teachers and students to maximize its use. There are simple library exercises contained in the syllabus, but they are unrealistic when one considers that the library collection in the Filipino language is not able to answer the present needs of the school clientele.

4.5. DIFFERENCE DUE TO SCHOOL LOCATION

There is a significant difference (p = .0000213) in the mean scores of students favoring those studying in the outlying towns of Manila. Based on Lingan's findings, it was hypothesized that for this present study, those in the city would have reached the CALP threshold level at analysis or would have performed better than those in the outlying towns. However, present findings show no similarity with those of Lingan (1981) whose study found lowlanders to have reached Van Ek's threshold earlier in their grade 3 than those in the highlands.

Bourne (1986) said a language (L1) used in all cognitive processes more than any other language (L2 or L3) will manifest itself. The result shows that those in the outlying towns use Filipino (L1) more often in their thinking process. Although the difference is low, students from these towns are more linguistically proficient in Filipino. Thinking and language move beyond analysis. They make entirely different demands on the linguistic forms for meaning rather than on intentions (Donaldson 1978; Cummins 1983).

The outlying towns of Metro Manila included in the present study lie within the 50 kilometer radius of Manila. All types of land transportation ply the route (going through these three towns) to Manila. In spite of the easy access to the three neighboring cities/metropolitan town (Manila, Quezon City, and Makati), students in these areas have not been influenced by the pervading code-switching that occurs in many Manila campuses (Bautista 1991). Also to the students' advantage, teachers speak fluent Filipino. Grade school teachers are more fluent and therefore have less resistance to the use of Filipino in the classrooms unlike among tertiary teachers as reported by Bautista and Gonzalez (1981).

4.6. RELATIONSHIP BETWEEN CALP THRESHOLD LEVEL AND ITS CORRELATES

Academic performance in Filipino and Araling Panlipunan. The two elementary school subjects — Filipino and Araling Panlipunan — both taught in the Filipino language have significant positive correlation with the CALP score. This means that performance grade in Filipino relates favorably with the CALP score \( r = .284, p < .01 \), grades in a Filipino subject tend to be good in the cognitive processing of/in Filipino. In other words, the subject language proficiency of the students appear to have a direct bearing on their functional language proficiency in Filipino. Similarly, grades in Araling Panlipunan have a significant relationship with CALP score \( (r = .317, p < .01) \). The higher the grade in social studies, the higher the CALP score. It could be that many of the
situations in the test are familiar to the students because it is in social studies where they are asked to role play and simulate games.

Relation of Home language use to Students' CALP level in Filipino. The relationship between the students' home language use and their CALP score is low at \( r = -0.003, \ p > .05 \). The results prove that oral proficiency in Filipino, the language functions learners perform, and the notions they handle in any communicative event do not have any direct bearing on the attainment of higher cognitive skills. In a similar manner, in any language learning, BICS mastery does not guarantee levelling with higher cognitive skills.

It seems that nowadays language at home is no longer used to encourage exchanges among members of the family. Young as they are, the students included in this study grew up before a television set. Parents who are busy improving their economic status employ nurse maids to take care of their little ones. Most of the time, these househelpers bring their charges in front of the TV set so that they can watch their own favorite programs. Although these programs are interesting to adults, these may not necessarily be educational (unlike those earlier mentioned) for children and are not intended to develop their cognitive skills. In other households, the young ones are similarly parked in front of their TV sets so the mothers can get on with their other chores.

Many children grow up in this kind of home environment characterized by very minimal language interaction. There is less time for growing children to practice their language skills in conversation with other family members. Instead, they react to the TV shows which cannot give them feedback to stimulate their thinking. The majority of the parents are simply too busy to help in the development of the children's cognitive skills; hence, language growth for many has been fixed at the lower cognitive skills.

While only three of the hypothesized predictors correlated significantly with the variable (CALP), based on single correlational analysis, multiple regression through stepwise regression revealed four significant predictors. Based on the results presented, they are academic achievement in social studies, school location, school type, and Filipino. The best predictor, therefore, in the CALP threshold is the academic performance in social studies (or Araling Panlipunan/HEKASI) followed by academic performance in Filipino \( r = .284 \) against \( r = .243 \) for location of school. The other significant predictors are types of schools and academic performance in the Filipino language.

5. IMPLICATIONS OF THE RESULTS

According to Anastasi (1982), the reliability of criterion-referenced tests is usually based on evaluating performance in terms of mastery rather than degree of achievement. The CALP test was able to show that the performance of the students in each cognitive skill lacked mastery expected of those using Filipino as their first language. The mean scores in all cognitive skills ranged from a low 35.53 to a high of 49.10. It can be surmised that skills are developed simultaneously rather than developed sequentially as conceived. Performance based on figures (results) shows the probable simultaneous development of each cognitive skill. Not one skill excelled over the others to justify a claim that cognitive skills are developed sequentially.
Aspects of the grade school students' attitudes, i.e., 'it is only the Filipino language' and 'Moreover it is my first language, I already know it' towards the use of Filipino can also be inferred. Their overconfidence must have superseded the rationale and the motivation given to students before the test run. Many of them never thought of using Filipino in serious ways of thinking because it is Filipino. Higher levels of thinking imply for them using or switching to the English language.

The test was able to identify the schools/students who have and those who have not acquired the skills and knowledge required for each cognitive level. It appears that evaluation questions seemed easier for students more than analysis and synthesis. The mean score for evaluation is comparable with their performance in comprehension; nonetheless, performance is far below the mastery or the criterion level of 75%. Based on the mean scores, evaluation might not be the most complex in the hierarchy of cognitive skills as posted by Bloom.

This can be explained by our daily undertakings. For instance, in life, we cannot refrain from evaluating, judging, appraising, or valuing anything that comes within our purview. But we judge things as they relate to us. Thus, ideas and objects which are useful to us may be valued highly; while others are valued less highly though they may be useful to others. For the most part, these evaluations are quick decisions not preceded by very careful consideration of the various aspects of the object, idea, or activity being judged. Hence, the complexity of evaluation entails the involvement of other categories of behavior and not necessarily complexity in the thinking process.

Bloom (1956) claims that evaluation is placed at this point in the taxonomy because it is regarded as being at a relatively late stage in a complex process involving some combinations of all the other behaviors. Another reason forwarded by Bloom is that evaluation also represents a major link with the affective domain where values are the central processes involved. However, it is not the last step in the thinking process. As has been stated earlier in this text, evaluation in some cases is the prelude to the acquisition of new knowledge, a new attempt at comprehension, or application, or a new analysis, and synthesis. In this case, evaluation is perhaps misplaced and should not be at the top in the hierarchy of the cognitive domain.

Instead, synthesis might perhaps be the last in the taxonomy. The skill of synthesis is a cognitive process of working with elements and parts and then combining them to form a new whole not there before. This skill, involving a recombination of previous experiences with the new one to create an integrated new whole, applies not in communication alone but also in related subjects like social studies and elementary science. Synthesis is the category in the cognitive domain which most clearly provides for creative behavior on the part of the students. As can be deduced from the results and from the sample syllabus, synthesis is a skill that might not be given enough emphasis in Philippine classrooms. If this is so, then, it is no wonder that the country has very few Filipinos who are scientifically inventive or creatively inclined.

CALP underlies language proficiency in both first and second languages. Cummins claims that the first and second thresholds are manifestations of the same underlying dimension. Thus development in second language proficiency is initially a function of the level of the first language proficiency at the time when intensive exposure to the second language has begun. As native speakers of Filipino, these students are able to handle the forms and notions of the language but are invariably
weak in its use in the higher forms of communicative functions. Given that premise and the findings of the present study based on the grade school student sample, it can be inferred that our present generation of students is also weak in its cognitive/academic use of the English language.

The results clearly manifest the students' weak ability to synthesize, to see all the possibilities, or to conceive all of the possible combinatorial possibilities or systems for a given situation. In the sequential ordering of the cognitive skills by Bloom, analysis comes before synthesis (see Figure 2). These are two of the complex cognitive skills involved in hypothetical thinking, formal logic and scientific reasoning. Should educational authorities remain indifferent to the results of the study, our country will never become the scientifically sophisticated nation we in academe dream of. And, as in previous generations the Philippines will continually suffer from serious brain drain. We will lose the very few who excel in the use of their intellectual abilities and skills. Our nation will be where it was 50 years ago.

It can also be surmised that the training of our students at present does not prepare them for scientific reasoning that involves prepositional thought and hypothetical reasoning. The sample in this study shows weakness in analysis, which is a skill elementary and high school science requires for systematic reasoning. It is that kind of reasoning that is based on logical principles. If our students cannot break apart (analyze) a communication message and put it together again (synthesize), then truly we are far behind in any scientific endeavor. Acuña (1987:11) in her study said, 'The elegance of man's thinking is only evident in the higher cognitive level of thinking'.

Language is so deeply involved in many aspects of the thinking processes that intelligent people according to Chomsky (1980:23-54), 'use language much better than other people most of the time'. If, as Chomsky claims, a substantial part of what we call thinking is simply linguistic manipulation, where there is a severe deficit of language, there will be a severe deficit of thought, then, the population sample in this study suffers from this deficiency.

On the average, the grade 6 students in this study were able to answer less than 50% of the items under each cognitive skill. They were weakest in the higher cognitive skills or in CALP. Surprisingly, where a better performance was expected from the more privileged schools, findings reveal that their performance was not significantly different from less privileged ones. Like all others, their students were deficient in using the Filipino language at higher levels of thinking.

The results of the present study also imply that the teaching of higher cognitive skills in Filipino has not been enhanced because of the mistaken impression that everybody in class is a Filipino student whose first language is Filipino. The discouraging picture the results paint shows that Filipino is seldom taught to encourage its use at the higher levels of thinking.

The findings of two studies — SOUTELE (1976) and Home and School Matching Survey (1982) — show that students who took part in these investigations have a low mastery level. For instance, SOUTELE's mean percentage of items answered correctly in Pagbasa (Reading) was 44%; Wika (Language) 50%. Six years later the Home and School Matching Survey (1982) findings yielded a mastery level of 41% in Pagbasa, and 40% in Wika. Over the years nothing seems to have improved. It seems that our Filipino language program after all these
years corresponds only to what the Committee of the Council of Europe calls a minimum level of proficiency upon which communication is based on the exploitation of everyday real-life situations.

The concern of the present study where it used a CALP-type test is not to find out how well an individual student does when compared to her/his fellow students but whether or not he performs satisfactorily in the different aspects of the cognitive domain. The study, employing a criterion-referenced test, set the skills at the 75% criterion level of performance and then investigated whether or not students had attained it. Rather than compare a student with other students as in norm referencing, the study compared the students to a predetermined standard or used criterion referencing. It is through a CALP-type test that the ability of the students to use Filipino in more complex cognitive processing at a competent level was determined.

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