COLLEGE OF ARTS AND SCIENCES

PHYTOCHEMICAL ANALYSIS AND MICROBIOLOGICAL ASSAY OF MAMMA

CONCEPCION, PAUL JAMES B. (MA Chemistry, April 2008)
LOUISA P. PLADIO, M.S., Adviser

This study was conducted to determine some physico-chemical properties of mamma, the phytochemical constituents and antimicrobial activities of mamma and its ingredients (boa, gawed, and apog) against Streptococcus pyogenes. The antimicrobial constituents of boa and gawed were also partially isolated.

Mamma is a combination of three ingredients: boa (betel nut, Areca catechu) wrapped in gawed (piper betel leaves, Piper betel Linn) chewed with a dash of apog (burnt shell, calcium oxide). The ingredients boa and gawed were acidic (pH 5.60 and 5.47, respectively) while apog and mamma were basic (pH 12.78 and 12.52, respectively). The red color of mamma suggests the probable presence of a component from boa and gawed that changes color in a basic environment. The preparation of mamma is exothermic as indicated by the 4°C temperature increase observed. This suggests that oral burning can possibly occur during mamma chewing. Precautionary measures then should be observed in chewing mamma. Phytochemical tests suggest the presence of the following class of compounds from the crude EtOH extract of boa: alkaloid, steroid, anthraquinone, flavonoid, saponin and polyphenol. In the crude EtOH extract of gawed; alkaloid, steroid, saponin and polyphenols are the possible class of compounds present.

Following a bioassay-guided extraction scheme, the antimicrobial constituents from boa and gawed were partially isolated from the hexane fractions BF3, BF4, GF2, GF3, GF4, and GF5. Thin layer chromatography revealed the possible presence of the same constituents in fractions BF3 and BF4. The chromatograms showed single red spots (Rf values 0.52 and 0.527, respectively) when sprayed with vanillin sulfuric acid. The fractions tested positive to antimony (III) chloride and potassium ferricyanide-ferric chloride tests indicating the presence of flavonoid compounds. In gawed, phytochemical test suggests the possible presence of flavonoids and alkaloids in the four active fractions. Spots in GF2 (Rf 0.07 and 0.94) and in GF3 (Rf 0.93 and 0.89) indicate the presence of flavonoids. In fractions GF4 and GF5, the spots with Rf values 0.68 and 0.81 are indicative of alkaloids. The flavonoids are colored violet when sprayed with vanillin-sulfuric acid while the alkaloids are orange.

MODIFIED REFRACTOMETER METHOD FOR ALCOHOL ANALYSIS OF FRUIT WINES

LEE, JASMIN A. (MA Chemistry, April 2008)
LOUISA P. PLADIO, M.S., Adviser

The study was conducted to lessen time, energy, and money in alcohol analysis as well as to provide fruit wine makers with a readily available method. Three methods were compared: the Standard Method (Method A), the Semi-Modified Method (Method B), and the Modified Refractometer Method (Method C). The methods vary in the distillation step, and in the determination of alcohol and methanol contents. The methods were validated according to the parameters; distillation time, alcohol content, methanol content, limit of detection, limit of quantitation, and linearity.

Based on the results, both Methods B and C are acceptable as alternative methods for the determination of alcohol content. Methods B and C can be used to determine methanol but the limit of
quantitation is 0.38% methanol. Considering distillation time, methanol content, and linearity, Method C is better than Method B.

WRITING PROFICIENCY LEVEL OF FRESHMAN STUDENTS AT BSBT COLLEGE, BAGUIO CITY

ALIWENG, LETTY I. (MA English as a Second Language, October 2008)
DIMAS P. WANDIT, M.A., Adviser

This study dealt with finding the common errors committed and the writing proficiency level of freshman students at BSBT College on grammar, sentence structure and mechanics. Further, it determined the variables affecting their proficiency level. The descriptive method was used to interpret the errors and level of writing proficiency of the students. Data were treated statistically using F-test and Chi-square.

Findings showed that the common errors on grammar are on the past form of the verb, subject-verb agreement, misuse/omission of conjunctions and prepositions, and order of words. Under sentence structure, the data showed that the students wrote incorrect or overload sentences as well as fragments. The greatest errors on mechanics are end punctuation, use of apostrophe in contracted words, capitalizing the beginning of a sentence, the pronoun I at the middle of a sentence, spelling errors caused by mispronunciation particularly on scrambling the sounds, errors due to confused meanings, and adding unnecessary consonants. There is no significant difference in the errors on grammar, sentence structure, and mechanics committed by the students. The analysis of the data revealed that the proficiency level of the respondents in grammar is very poor. Furthermore, the factors gender, ethnic background, educational attainment of parents, exposure to mass media and computer do not have a significant effect on the respondents' writing proficiency level. In grammar, the highlanders have a very poor performance while the lowlanders have poor performance. The students who always used the computer have satisfactory performance on sentence structure and on grammar as compared to those who sometimes, seldom or never used the computer with poor performance.

It is suggested that to improve the writing proficiency of students, there should be more writing activities or composition writing where grammar, sentence structure and mechanics are stressed. The current number of hours or units for English Communication subjects offered to technical and vocational courses should be increased for the students to have enough time for language use.

ENGLISH PROFICIENCY OF THE SENIOR STUDENTS OF BENGUET STATE UNIVERSITY–SECONDARY LABORATORY SCHOOL

ALLAY, BRENDA B. (MA English as a Second Language, October 2008)
MYRNA B. SISON, M.A., Adviser

The study determined the level of English proficiency of the senior students of BSU-SLS along the aspects of synonyms and grammar, the extent of effect of the teacher, student, and school factors on their English proficiency, and the difference on their English proficiency when the type of material used in the test, curriculum and socio-economic status are considered.

A total of 125 senior students answered the vocabulary and grammar test and survey questionnaire. Results show that there is no significant difference in the English proficiency of the senior students of BSU-SLS along the aspects of synonyms and grammar. Meanwhile, teacher factors were found to have significant effects on their English proficiency as compared to student and school factors which have moderate effects. On the other hand, there exists a significant difference in the English proficiency of the senior students between unauthentic and authentic materials used in the test. However, for type of curriculum and socio-economic status of the respondents, there are no significant differences found.

With these findings, it is recommended that teachers should take into consideration their kind of teaching strategy. They are encouraged to use the eclectic method or diverse teaching styles. Aside from using the common unauthentic materials in test construction and material preparation, the use of authentic materials like newspapers, magazines and ads are advisable because they replicate real-life situations.
students, through their initiatives should improve themselves in English through having positive attitude towards English. Parents, regardless of their socio-economic conditions, are also encouraged to take proactive role towards the development of the English proficiency of their children, even in their own simple ways. Sufficient supply of textbooks and reference materials, adequate school facilities and audio visual resources, quality teacher’s training/seminars and the implementation of the English Only Policy inside the classroom during subjects using English as medium of instruction should be considered by school authorities.

GRAMMATICAL COMPETENCE OF FRESHMAN COLLEGE STUDENTS AT BAGUIO CENTRAL UNIVERSITY

BANIAGA, HANKY MAE L. (MA English as a Second Language, May 2008)
DIMAS P. WANDIT, M.A., Adviser

This research focused on determining the competence of the subjects in English grammar as to the aspects of contextual clues, punctuations, subject-verb agreement, verb tenses, adjectives, adverbs and prepositions. A pre-tested English grammar test was used to determine the subjects’ grammatical competence. The subjects are first year college students from selected colleges of Baguio Central University. The descriptive method was used to interpret the level of competence of the students. Data were treated statistically using mean, t-test, F-test and Pearson Product Moment Correlation.

Findings showed that the subjects have a poor grammatical competence in the aspects of punctuations and subject-verb agreement. They are grammatically competent in the aspects of contextual clues, verb tenses, adjectives, adverbs, and prepositions. Their overall grammatical competence falls under competent level. The type of high school graduated from, first language, and educational attainment of parents of the subjects did not affect the subjects’ grammatical competence. However, the educational attainment of their English teachers and their years of teaching experience affected the subjects’ grammatical competence. Students whose teachers have Master’s Degree have higher competence compared to those whose teachers are still Bachelor’s Degree holders. Also, students of teachers who have a longer teaching experience have higher competence than those whose teachers have a shorter teaching experience. It was also found out that learning activities that are always used in their classrooms are intensive and extensive reading, oral reading, story grammar showing components, doing debates, sitcoms or panel discussions, literary analysis, campus journalism, delivering speeches, composition writings and reporting. The chalkboard is also the instructional device which is always used.

It is recommended that for the subjects to improve their grammatical competence, they should strive more. The teachers should make use of varied learning activities and instructional materials and the administration of the institution should support the teaching and learning needs of the teachers and students.

STRATEGIES OF ESL TEACHERS IN TEACHING KOREAN STUDENTS IN BAGUIO CITY

JOSEFINA A. DACANAY, M.A., Adviser

The study determined the different strategies used by ESL teachers in teaching Korean students in Baguio City and the differences of these strategies when compared among the three levels of students.

Results show that strategies differ significantly in teaching each different level of students. Teachers tend to use variations of strategies in dealing with each of the levels, which are beginner, intermediate and advance students in teaching the four macro skills namely; listening, speaking, reading and writing. As supported by the Chi-square, all the computed value in each level of students are higher than the tabulated value of .05, which means that teachers are creative and innovative in using different strategies. Moreover, there is a significant difference in the strategies used in teaching listening and reading when compared to the three levels of Korean students as confirmed by the F-test. Thus, teachers used
different tactics in dealing with the different levels of students in teaching listening and reading. In addition, there is no significant difference in teaching speaking and writing when compared to the three levels of students. Hence, teachers tend to use the same strategies, which are already tested in teaching the three levels of students.

It is recommended that teachers vary their strategies to adapt to the learning styles of the students. To make the selection of strategies easier, teachers may classify their students according to the same level of proficiency. ESL teachers in Baguio City who teach Korean students should use different strategies in teaching listening, speaking, reading and writing to make their teaching more effective.

THE ETYMOLOGY, MEANINGS AND METHODS
USED IN GAY JARGON

BOLISLIS, STACY HAYNIE W. (MA English as a Second Language, April 2008)
JOSEFINA A. DACANAY, M.A., Adviser

The study analyzed the gay jargon on three perspectives: etymology, meaning and method. Specifically, it determined the different sources of the gay language, the variations in the four dimensions of meaning and the methods utilized in forming the language. The respondents of the study were selected teachers, students and hairstylists, all certified gays. A voice recorder was used to tape natural conversations within these groups. The data were then transcribed and analyzed. Interviews were also conducted to supplement the data gathered.

Findings showed that the gay jargon has several sources: words from different languages, coinages and existing words with new meanings. Further analysis of the jargon necessitates the study of the four dimensions of meaning: denotative vs. connotative and structural vs. contextual. Connotative meanings are given to words with primary meanings. The structure of existing words is changed mainly through affixation. Many retained the original meaning but others have connotations, which are largely based on the process of association. Context also played an important role in the interpretation of meaning. For this study, the methods used in the formulation of the gay jargon are Affixation, Metathesis, Reduction, Language Blending and Coining.

GRAMMATICAL COMPETENCE OF COLLEGE FRESHMEN
OF BENGUET STATE UNIVERSITY

BUASEN, YVONNE P. (MA English as a Second Language, April 2008)
JOSEFINA A. DACANAY, M.A., Adviser

The study was conducted to analyze the grammatical competence of college freshmen with the following specific objectives: (1) to determine the competence of freshmen along subject-verb agreement, pronoun-antecedent agreement, tense consistency, and functions of words as used in sentences; and (2) to determine how variables namely gender, type of high school graduated from, academic course and first language affect the competence of freshmen on the selected areas of grammar. A 100-item teacher made test was administered to 437 BSU college freshmen. To determine the effect of some selected variables in the competence of the subjects, a questionnaire was administered as the first part of the test. For the interpretation of the subjects’ competence, a five-point scale was also used. Data were treated statistically by using mean scores, Chi-square, percentage, t-test and F-test.

The over-all level of grammatical competence of the subjects was incompetent. The subjects were found to be fairly competent along subject–verb agreement and pronoun–antecedent agreement, and incompetent along tense consistency and functions of words as used in sentences. As to gender, both male and female subjects were fairly competent along subject–verb agreement and pronoun–antecedent agreement and incompetent along tense consistency, functions of words as used in sentences. However, the females performed better than the males in all the areas of grammar. There was also a significant effect of gender to the subjects’ competence along subject–verb agreement, pronoun–antecedent agreement, and in the overall competence. There was none, however, along tense consistency and functions of words as used.
in sentences. For the type of high school graduated from, the subjects were fairly competent along subject–verb agreement and pronoun–antecedent agreement, for both private and public. However, along tense consistency and in the overall competence, the private graduates were fairly competent and the public graduates, incompetent. The type of high school the subjects graduated from significantly affected the subjects’ overall competence and their competence along tense consistency, and functions of words as used in sentences. On the other hand, it did not significantly affect the subjects’ competence along subject–verb agreement and pronoun–antecedent agreement.

With regard to academic course, the subjects’ overall grammatical competence was as follows: fairly competent for BSDC, BSAS, BSIT, BSAEng, BSET, BSND, and BSN; and incompetent for BSA, BSAB, BSES, BSHE, BEE, BSE, and DVM. The most competent was BSN and the least competent was BSA. For the level of competence along subject–verb agreement, the following results were manifested: competent for BSDC, BSAS, BSIT, BSAEng, BSET, and BSN; and fairly competent for BSA, BSAB, BSES, BSHE, BEE, BSE, and DVM. Along pronoun–antecedent agreement, the BSN subjects were competent, and all the rest were fairly competent. For tense consistency, the subjects were fairly competent for BSIT, BSAEng, BSET, BSND, BSE, BSN and DVM courses; and incompetent for BSA, BSAB, BSDC, BSAS, BSES, BSHE, and BEE. Along functions of words as used in sentences, the subjects under BSDC, BSAS, BSIT, BSAEng, BSET, BSND, and BSN were fairly competent, and the subjects under BSA, BSAB, BSES, BSHE, BEE, BSE, and DVM were incompetent. It was drawn from these results that the academic course of the subjects significantly affected their overall competence and their competence along each of the areas of grammar.

On first language, the subjects were fairly competent along subject–verb agreement and pronoun–antecedent agreement for Ilocano, Kankana–ey, Ibaloi, Kalanguya, and Tagalog; and incompetent along tense consistency and functions of words as used in sentences for all the first languages. The subjects were incompetent in their overall competence under all the first languages. There was no significant effect of first language to the subjects’ grammatical competence.

From the findings, these conclusions were drawn: 1) The overall grammatical competence of the BSU college freshmen is incompetent; and 2) gender, type of high school graduated from and academic course significantly affected grammatical competence, but first language did not. These recommendations are also forwarded: 1) Language teachers need to develop more effective workbooks on grammar exercises that will cater to both structure and meaning since the students were found to be generally incompetent; 2) The English plus program should be implemented this 2008 before students take the first English course “Study and Thinking Skills” because other state colleges, universities and private schools already implemented it as mandated by CHED; 3) Since BSA showed the least competent level among the academic courses, consistently followed by BEE, emphasis should be given to these courses; and 4) Further research along tense consistency and functions of words as used in sentences should be conducted.

MUSIC AS A VEHICLE IN LANGUAGE TEACHING AMONG THIRD AND FOURTH YEAR HIGH SCHOOL STUDENTS OF THE UNIVERSITY OF BAGUIO

COPILING, GENEVIEVE B. (MA English as a Second Language, October 2008)
JOSEFINA A. DACANAY, M.A., Adviser

This study was conducted to determine the level of effectiveness of the use of music in language teaching and learning among the third and fourth year high school students of the University of Baguio as to their class participation, class attention, and interest in the lesson. It is also to determine the significant differences in the effectiveness of music on teaching and learning of language along the following variables: gender, age, and ethnic origin. This was conducted during the first semester of school year 2008-2009. The respondents of the study were 419 students from the third and fourth year departments of UBHS. A structured questionnaire was used to gather data and information. Data were tallied, summarized in tables and analyzed through a Likert-type scale and through weighted means. The null hypothesis was tested using the t-test and F-test. The 0.05 level of significance was the criterion point in rejecting or accepting the stated hypothesis.
Results revealed that the level of effectiveness of music on the teaching and learning of language with regard to the students’ class participation, class attention, and students’ interest on the lesson is agree as indicated by the weighted means of 3.93, 3.83, and 3.85 respectively. This means that the respondents generally agree that music has a positive effect on their class participation; music positively influences the students’ attention to their learning activities. Furthermore, the interest of the students is positively enhanced by the use of music and songs in the varied learning activities. In terms of the effect of music on students’ learning of language according to gender, the analysis of variance shows that the computed F-ratio of 0.75 is less than the tabled F-ratio of 7.71 at .05 level of significance. This means that there are no significant differences in the perceived effect of music on students’ learning according to gender which implies that both male and female groups agree that music has a positive effect on students’ class participation, class attention, and students’ interest on the lesson.

According to age, the computed F-ratio of 0.011 is less than the tabled F-value of 4.07 at .05 level of significance. In other words, there are no significant differences in the perceived effect of music on students’ learning according to age. This implies that the four age groups concur as regards to the influence of music on students’ class participation, attention, and interest. According to ethnic origin, the computed F-ratio of 0.80 is less than the tabled F-value of 7.71 at .05 level of significance. In other words, there are no significant differences in the perceived effect of music on student learning according to ethnic group. This implies that both ethnic groups, cordilleran and non-cordilleran, are in agreement as regards to the positive effect of music on class participation, attention, and interest. There are no significant differences in the effectiveness of music on teaching and learning of language according to the following variables: gender, age, and ethnic origin.

LISTENING COMPREHENSION OF FOURTH YEAR HIGH SCHOOL STUDENTS IN THE PUBLIC AND PRIVATE SCHOOLS OF SABLAN

DUMAWOR, GRACE M. (MA English as a Second Language, April 2008)
DIMAS P. WANDIT, M.A., Adviser

The study focused on the level of listening comprehension of the subjects from the public and private schools of Sablan along the three micro-skills of listening. There are 52 subjects from the public school and 48 subjects from the private school. The research employed the descriptive method. It made use of a 60 item questionnaire: 20 items for understanding and identifying accent or pronunciation; 20 items for recognizing vocabulary or meaning; and 20 items for deriving meaning or idea from text or selection listened to. Data were collected using a 60-item teacher-made test, which was pre-tested to improve its reliability and validity. The data were then statistically treated using mean and t-tests. A five-point scale was used to describe the level of listening comprehension of the respondents.

Results shows that the over-all listening comprehension of the subjects from the public school and private school in understanding and identifying accent or pronunciation, recognizing vocabulary or meaning and deriving meaning or idea from text or selection listened to is very competent. There is a significant difference in the level of listening comprehension of students in the three micro-skills of listening in both and between public and private schools. The listening comprehension of the students was not affected by the following variables: gender, ethnic affiliation, educational background of parents and type of school enrolled in.

Recommendations include exposing language learners to constant listening activities and different language materials and emphasizing to them the complexity of listening particularly in the three micro-skills; incorporating the four macro-skills (listening, speaking, reading and writing) in the teaching and learning process and school administrators working together with language teachers in sustaining listening materials for students’ growth and improving currently used methods and techniques.
LINGUISTIC INNOVATIONS IN PRINT ADVERTISEMENTS
OF PHILIPPINE NATIONAL DAILIES

KILLY, RACQUEL D. (MA English as a Second Language, October 2008)
MYRNA B. SISON, M.A., Adviser

This study aimed to discuss a syntactic and pragmatic analysis of linguistic innovations in print advertisements of Philippine national dailies. It focused on the linguistic forms, sentential and sub-sentential, explicating the different speech functions and pragmatic meanings expressed. To determine the sentential and sub-sentential forms used in print ads, frequency tabulation and ranking was used. Only advertisements with innovations from the three national dailies, from the months of March-May 2008 were analyzed. The language functions postulated by Halliday and Searle were used to determine how are these ads used in context and through it, the pragmatic meanings were inferred. The linguistic innovations were identified by using the concepts of language change, communicative competence, stylistics, and linguistics.

Results revealed that print advertisements in Philippine national dailies are expressed in both sentential forms and sub-sentential forms. These sentential forms were declaratives, interrogatives, imperatives and exclamatory sentences. Sub-sentential forms are clauses (elliptical, coordinate and subordinate), phrases (noun, adverb, prepositional) and words (noun, adjective, adverb). Said forms conveyed different speech functions which are directives, commissives, expressives, declaratives, and representational. They also reveal different Pragmatic meanings of the advertisement messages. Linguistic innovations in the lexical level and syntactical level are manifested. Lexical level are presented through the use of symbolical and numerical representations, use of colloquial terms, use of preferred spelling, use of dashes to form compound adjectives, use of word formation which includes: acronym, clipping, compounding, coinage and contextualization. Innovations in the syntactic level include non capitalization of words beginning the sentence, capitalization of initial words, use of period to separate words and phrases, use of rhetorical patterning which includes: use of ellipsis, use of coordinators at the beginning of the sentence, subject and verb deletion in questions, omission of content words (shortening words in sentences) and usage of new words in a sentence.

READING COMPREHENSION LEVEL OF FRESHMEN AND SOPHOMORES
OF BAGUIO PATRIOTIC HIGH SCHOOL

JOSEFINA A. DACANAY, M.A., Adviser

The study identified the reading comprehension level of the first and second year students on the following reading skills: noting details, identifying main ideas, following directions, sequencing events, and making inferences; determined the effects of gender, school graduated from and parents’ educational attainment in the reading comprehension level of the subjects; and found out the differences in the reading comprehension level between the first and second year students.

Findings showed that both first and second year students are competent in noting details but in identifying main ideas, following directions, sequencing events, and making inferences, the second year students are very competent. Gender did not affect the reading comprehension level of the first and second year students in noting details, identifying main ideas, following directions, and making inferences except in sequencing events; school graduated from and parents’ educational attainment did not also affect the reading comprehension level of the first and second year in all the reading skills.
READING PERFORMANCE ALONG INTERPRETATIVE SKILLS OF SOPHOMORES
AT THE UNIVERSITY OF BAGUIO SCIENCE HIGH SCHOOL

PAYAKET, RUTH B. (MA English as a Second Language, October 2008)
JOSEFINA A. DACANAY, M.A., Adviser

Much has been reported about literacy problem specifically secondary students reading below grade level thus, resulting to low comprehension performance not only in English but also in other subjects and causing dropout rate because they couldn’t cope with the school’s curriculum. This prompted the researcher to look into the sophomores’ level of reading performance along the selected interpretative skills, namely, identifying implicit main ideas, making inferences, drawing conclusions and generalizations, identifying cause and effect relationships, and predicting outcomes. It also focused on the differences between the subjects’ levels of reading performance along the aforementioned skills and their gender, languages spoken at home, and levels of exposure to various reading materials such as computer-generated English texts, books, and periodicals. To determine the subjects’ level of reading performance along each skill, descriptive statistical tools like frequency distribution and weighted mean were utilized in the study. To test the significant difference between the subjects’ level of performance along each skill and their gender, t-test was used. To obtain the differences between the subjects’ levels of performance in the interpretative skills and variables language spoken at home and level of exposure to various reading materials, one-way Analysis of Variance (ANOVA) was used.

The following are the salient findings: the subjects manifested a very satisfactory performance along identifying main ideas, making inferences, drawing conclusions and generalizations, and predicting outcomes. They projected a satisfactory performance along identifying cause and effect relationships. The subjects’ reading performances and their gender and languages spoken at home did not significantly differ. Furthermore, there were significant differences between the subjects’ levels of reading performance along making inferences and their levels of exposure to computer-generated English reading texts and periodicals. No significant differences between the subjects’ levels of reading performance along the rest of the skills and their levels of exposure to the aforementioned reading materials were noted. On the other hand, the subjects’ level of reading performance along identifying implicit main ideas and their level of exposure to books bared a significant difference. Their performance along the rest of the skills and their exposure to books showed no significant differences.

Based on the conclusions, the succeeding recommendations are offered. Teachers should include various reading comprehension drills to further enhance the students’ comprehension skills, give activities that would prompt intensive and extensive reading of various genres, and let the students determine the possible relationships of ideas as signaled by cohesive devices. Since this study only focused on the interpretative level of comprehension, it is suggested that studies on gauging the higher levels should also be considered. It is further recommended that the use of authentic materials or selections from different literary genres should be used as comprehension tests.

GRAMMATICAL ERRORS IN THE ESSAYS OF THIRD YEAR ENGLISH MAJOR
STUDENTS OF BENGUET STATE UNIVERSITY

SALAZAR, KARA P. (MA English as a Second Language, April 2008)
JOSEFINA A. DACANAY, M.A., Adviser

The study looked into the grammatical errors in the essays of third year English major students of Benguet State University. Specifically, this study determined the commonly committed grammatical errors in the essays of the subjects and the effects of variables on the grammatical errors: gender, language spoken at home/first language, reading material preferences and attitude towards writing. The errors in the essays were classified into morphological, syntactic and lexical errors using Hendrickson’s model. To determine the commonly committed grammatical errors, frequency count, percentage, rank and weighted mean were used. To test if there were significant differences among the grammatical errors committed, Friedman test was used to treat the data. To describe the variables, frequency count, percentage, weighted mean and rank were used. The test on proportion was used to determine the effect of gender on the grammatical errors.
while the Analysis of Variance (ANOVA) test was utilized for the effect of the other variables such as language spoken at home, reading material preferences and attitudes towards writing.

As to the grammatical errors committed, the subjects committed the most in morphology, followed by syntax and the least was lexicon. Along morphology, verb forms had the highest number. The second was errors in subject-verb concord and the last was plural markers. For syntax, misused/omitted preposition ranked first followed by misused/omitted pronoun while misused/omitted articles followed next. The misused/omitted subordinator ranked fourth and misused/omitted coordinators ranked last. In lexicon, misused/omitted verb ranked first followed by misused/omitted adjective. Errors in diction or word choice ranked third followed by misused/omitted noun. Errors in word order ranked fifth and the misused/omitted adverb ranked last. In summary, there were significant differences in the grammatical errors committed by the subjects. For the effects of variables on the grammatical errors, there were no significant differences on the effects of gender, language spoken at home, reading material preferences and attitude towards writing.

Based on the findings, it can be concluded that the subjects committed different grammatical errors in writing their essays. Moreover, the effects of the variables on the grammatical errors did not differ. The following are recommended: focus should be given in the areas of morphology when teaching grammar in classes. In addition, more activities in the area of lexicon and syntax should also be given in classes; teachers should provide activities that will let the students make use of the target language; students should be given opportunities to express their ideas through writing tasks like essays, book reports, movie reviews, reaction papers and the like, publications written in English could be used as authentic materials or instructional materials to further enhance the exposure of the students to the target language; a study on phonological errors should be done and studies on the sources of the errors and the level of gravity of errors should also be considered.

EFFECTIVENESS OF COMMUNICATIVE APPROACH IN TEACHING ENGLISH AS A SECOND LANGUAGE BY PUBLIC SCHOOL TEACHERS IN BAGUIO CITY

SAO-AN, MELONY B. (MA English as a Second Language, October 2008)
JOSEFINA A. DACANAY, M.A., Adviser

This study dealt with finding the effectiveness of communicative approach in teaching English as a second language by public school teachers of Baguio City. Specifically, it intended to find out the following: the degree of effectiveness of using the approach along the four language skills; the difference in the degree of effectiveness of the approach when respondents were categorized according to gender, educational attainment, ethnic origin and years of teaching; and the degree of seriousness of specified problems encountered in the implementation of communicative approach in teaching English. A structured questionnaire was used in gathering data from fifty (50) respondents. These respondents are English teachers at public high schools in Baguio City. In using the communicative activities, which manifest Communicative Approach, the respondents consider them very useful in teaching English. In fact, quite a number of the activities along the four language skills are evaluated as very effective.

In the overall rating, communicative activities along the four language skills are very effective. In the listening skill, following directions is found very effective and the rest of the listening activities are effective. In the reading skill, vocabulary bee is considered very effective and the rest of the listening activities are effective. In the reading skill, vocabulary bee is considered very effective and the other items are effective. In the speaking skill, two communicative activities which are the dialogue and the role play both receive the highest rating, thus are deemed effective while the other activities are considered effective. In the writing skill, movie review is the very effective activity and the rest are effective. On the other hand, there are few activities which received low ratings. Nevertheless, their corresponding description is relatively high. According to the order of ranking, these activities are in the lowest level but their equivalent degree of effectiveness is either “very effective” or “effective”. This implies that using communicative approach in teaching English is definitely significant regardless of the numerical values of the activities manifesting the approach.
The communicative activities which obtained low degree of effectiveness are along reading and writing skills. This indicates that teachers are either not familiar with activity or using other reading and writing activities not presented in this study. Among gender, educational attainment, ethnic origin and years of teaching experience, only gender has significance in the three language skills-reading, speaking and writing while the other variables have significance in one skill only-educational attainment in the speaking skill and years of experience in the reading skill. The problem such as class size, class time, teaching load, and availability of authentic materials, are indicated by the respondents as hindrances in the implementation of communicative approach in language teaching. These problems are actually common not only in communicative approach but also in other language teaching approaches. Thus, recognizing and applying the principles of the communicative language teaching will counteract these impediments in the success of teaching-learning process in a communicative classroom. Statistically, all the communicative activities’ overall mean scores are corresponding to very effective description. However, there is an indication that a number of teachers do not have an extensive idea or knowledge about the principles of communicative approach. This conclusion is indicated by the respondents’ less frequency of using some of the important communicative activities in their teaching especially along reading and writing skills.

COMPREHENSION OF IDIOMATIC EXPRESSIONS AMONG FOURTH YEAR HIGH SCHOOL STUDENTS OF BAGUIO CITY NATIONAL HIGH SCHOOL AND UNIVERSITY OF BAGUIO-SCIENCE HIGH SCHOOL

DIMAS P. WANDIT, M.A., Adviser

This study was conducted to determine and compare the comprehension of idiomatic expressions among fourth year high school students of Baguio City National High School and University of Baguio-Science High School with the following objectives: (1) to determine the comprehension level of the subjects on idiomatic expressions and (2) to determine how some selected variables namely; gender, type of school enrolled in, ethnic affiliation and educational attainment of parents affect the subjects’ comprehension of idiomatic expressions. An analysis of the comprehension level through a 70-item teacher-made test was administered. A questionnaire was administered as the first part of the test to determine the effect of some selected variables in the comprehension of idiomatic expressions of the subjects. A five-point scale was used to interpret the comprehension level of the subjects. Data were treated statistically by using mean scores, Chi-square, F-test and t-test.

Findings of the study show that the overall level of comprehension of the subjects on idiomatic expressions is fairly competent with an overall mean score of 65. Moreover, statistical analysis revealed that there is a significant difference on the comprehension of idiomatic expressions among the subjects. As to type of school enrolled in, the subjects were found to be fairly competent in the comprehension of idiomatic expressions for both private and public schools; nevertheless, the subjects enrolled in the public school obtained a higher mean score which is 66 as compared to those of the private school who obtained a mean score of 63. However, the result showed that there is no significant difference on the comprehension of idiomatic expressions as to type of school enrolled in. As to gender, both male and female subjects were found to be fairly competent, but the male subjects obtained a higher mean score of 67 as compared to 64 mean score of the female subjects. The comprehension of idiomatic expressions as to gender is not significant. With regard to the educational attainment of mothers, the students whose mother’s educational attainment is secondary, post graduate and elementary were fairly competent with mean scores of 66, 63 and 61 respectively; while for the subjects whose mother’s educational attainment is tertiary fall under the competent level with a mean score of 71. The mother’s educational attainment did significantly affect the level of the subjects’ comprehension on idiomatic expressions. On the educational attainment of fathers; it was also found that the level of comprehension of the subjects is fairly competent with a mean score of 66 for the tertiary and 65 for the post graduate. With the results of the study, it was found out that the educational attainment of the father did not affect significantly the subjects’ level of comprehension on idiomatic expressions. Along ethnic affiliation, Bontok, Ibaloi, Ilocano, Kankan-ey, Kapampangan, Pangasinense and ‘others’ performed fairly competent with only Kalinga that obtained a competent level.
was also discovered that the ethnic affiliation did not significantly affect the subjects’ comprehension.

Based on the findings, the following recommendations are forwarded: (1) supervisors and curriculum designers should develop more effective materials, as well as handbooks and workbooks inculturating the use of idiomatic expressions since the subjects were found to be fairly competent; (2) language teachers must always integrate idiomatic expressions in their everyday classes, be it in their lectures, casual conversations and activities; (3) there is a need for the subjects to be exposed more to idiomatic expressions through reading materials, mass media and other means for them to be encouraged to use idiomatic expressions in both speaking and writing; and (4) further researches can be conducted exploring other variables and idiomatic expressions.

PAGLILIHIS-PAKSA NG MGA GURO NG FILIPINO SA IKAAPAT NA TAON NG PALAWAN NATIONAL HIGH SCHOOL

BUÑAG, ALVIN G. (MA Filipino, Mayo 2008)
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Sinuri sa pag-aaral na ito ang paglilihis-paksa ng mga guro ng Filipino sa ika-apat na taon ng Palawan National High School. Nilalayon ng pag-aaral na: 1) Matukoy ang mga paraan ng paglilihis-paksa ng mga guro ng Filipino sa ika-apat na taon ng Palawan National School. 2) Masuri ang mga dahilan ng paglilihis-paksa ng mga guro ng Filipino sa ika-apat na taon ng Palawan National High School. 3) Masuri ang antas ng persepsyon ng mga estudyante sa paglilihis-paksa ng mga guro ng Filipino ayon sa: (a) unang wika; (b) kasarian.

Sa mamamagitan ng nakateyp na aktwal ng pagkaklase ng mga guro ay tinukoy, sinuri at inalam ang paraan, dahilan at persepsyon ng mga estudyante sa paglilihis-paksa ng mga guro ng Filipino. Ang modelo ni Hughes (1979) sa mga pamapagtuturong tungkulin ang ginamit na katanungan. Ang mga ito ay hinango sa pag-aaral ni Espique (2005). Ang mga natukoy na paraan ng paglilihis-paksa ng mga guro ng Filipino, ginamitan ng Z-test na may 5% level of significance at computed Z-value na 2.24. Ang pagtukoy sa dahilan ng paglilihis-paksa ay ginamitan na t-test na may 1% level of significance. Samantala sa pagtukoy naman ng persepsyon ng mga estudyante sa paglilihis-paksa ng mga guro ayon sa unang wika at kasarian, ginamit ang F-test na may 5 point iskala na 5 (palagi), 4 (malimit), 3 (paminsan-minsan), 2 (bihira) at 1 (hindig-hindi).

Sa isinagawang pag-aaral natuklasan ang mga sumusunod: a) Ang mga paraan ng paglilihis-paksa ng mga guro ng Filipino sa ikaapat na taon ng Palawan National High School ay pagkontrol, pagtatakda, pagpapaunlad ng nilalaman, pagtutugon, positibong pappapahalaga at negatibong pappapahalaga ayon sa pagkakasunud-sunod. b) Ang mga dahilan ng paglilihis-paksa ng mga guro ng Filipino sa ikaapat na taon ng Palawan National High School ay pinangunahan ng pagbibigay ng positibong pappapahalaga. Sumunod ang pagpapaunlad sa nilalaman ng paksa, pagtugon, pagtatakda tulad ng pagbibigay ng pangaral, pagkontrol sa kaugalian ng mga estudyante at ang pinakahuli ay pagbibigay ng negatibong pappapahalaga. Batay sa pagsusuring estatistika, lumalabas na may makabuluhang pagkakaiba ang mga dahilan ng paglilihis-paksa ng mga guro ng Filipino. c) Sa pagsusuri sa persepsyon ng mga estudyante sa paglilihis-paksa ng mga guro, may kabuluhang ang unang wika sa kasarian, lumalabas na ang unang wika ay may kabuluhan samantalan ang kasarian ay walang kabuluhan.

Sa ginawang pagsusuri, natuklasan ang mga datos: 1) Ang pinakagamiting paraan ng paglilihis-paksa ng mga guro ay positibong pappapahalaga at negatibong pappapahalaga ayon sa pagkakasunud. 2) Ang pinakamataas na unang wika ay may mean na 3.88 at t-value na 56.68. Samantala pinakamababa naman sa mga dahilan ang nobahan ay may 2.18 at t-value na 21.19. 3) Sa persepsyon ng mga estudyante sa paglilihis-paksa ng mga guro, may kabuluhan ang unang wika sa kasarian at kasarian ay walang kabuluhan.

Batay sa nabuon kongklusyon, itinatagubilin ang mga sumusunod: 1) Dahil natuklasan ang positibong pappapahalaga ang pangunahing nangyari ang pinakamataas na unang wika. 2) Maliban sa anim na paraan ng paglilihis-
paksa na nabanggit, tukuyin din ang ibang mga paraan ng paglilibis-paksa na magagamit din ng mga guro sa kanilang pagkaklase. 3) Natuklasan sa resulta ng pag-aaral na ang pinakadahilang ng paglilibis-paksa ng mga guro sa pagkaklase ay positibong ipagpatuloy na gawin sa loob ng klase upang lalong makatulong sa mga estudyante na magkaroon ng interes sa pag-aaral. 4) Natuklasan sa pag-aaral na halos magkakapareho ang resulatang persepsyon ng mga estudyante sa paglilibis-paksa ng mga gurong Filipino sa Palawan National School o Palawan State University (PSU-LHS) at ibang edad ng mga estudyante. 5) Iminumungkahing magsagawa ng klase para sa mga nagsasanasay ng mga guro, ang mga (practice teacher) at isama sa mga sabjek ang asignaturang itinuturo (basic and major subjects) sa Filipino at magkaroon ng paghahambing sa pagkakaila ng mga gurong Filipino sa estudyante. 6) Iminumungkahing maging bukas ang isipan ng mga gurong Filipino sa anumang asal ng mga estudyante sa paglilibis-paksa ng mga gurong Filipino sa Pagkahambing sa pagkakaila ng mga gurong Filipino sa estudyante. 7) Hindi pa rin lubusang tanging ang mga gay sa lipunan at pagtanda si kanila ay magagamit ng mga gurong Filipino. 8) Kay makita pa rin ang di makatarungang pagtrato sa kanila. Sila ay pa laging kinukutya ng tao. 9) Hindi pa rin lubusang tanging ang mga gay sa lipunan at pagtanda, kaya, ipinagpilitan nilang sila ay maghahanap ng makakasama sa kanilang pagtanda. Palagi silang inuusisa ng kanilang magulang at kapatid tungkol dito. Lagi nilang pinalala na sa kanilang pagtanda ay magiging kawawa sila dahil walang mag-aalaga sa kanila.

PAGSUSURING MORPO-SOSYOLINGGWISTIKA SA MGA PILING AKDA NG GAY

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sila ay maintindihan ng publiko at makakilos sila nang malaya tulad ng ordinaryong tao. 2. Iminumungkahi ang pagsasaliksik sa aspetong sikolohiya ng mga gay upang mas lalo pang mapalalim ang pag-unawa sa kanilang personalidad. 3. Ang pagkakaraan ng isang malayanang talakayan na walang pag-iintriga sa lipunan ay kinakailangan upang matibay ng pagkakataon ang mga gay na mailabas ang kanilang iniiisp at nadarama. Sa pamamagitan din nito mas mabilayan ang ibang tao ng kaalaman at ideya upang sila ay kilalanin bilang lihimong myembro ng lipunan na malaya at walang diskriminasyon. 4. Iminumungkahing magkaroon din ng programa sa radyo at telebisyon ang mga gay. Ito ay malaking tulong sa pagbubukas sa kamalayan ng tao sa kanila. 5. Iminumungkahi pa rin ang ganitong pag-aaral lalo na sa iba pang-akdang pampanitikan ng mga gay tulad ng tula, sanaysay, drama at iba pang maikling kwento.

DIFFICULTIES AND SOME COPING STRATEGIES OF SCIENCE TEACHERS IN THE KOREAN SCHOOLS IN BAGUIO CITY

ALIMAMBO, JHUVYLEN B. (MA General Science, April 2008)
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The study aimed to determine the difficulties encountered by science teachers in the Korean schools in Baguio City. Also, it determined the degree of seriousness of these difficulties and the coping strategies that the teachers employ to enhance the learning of limited English proficient (LEP) students. A total of 17 teachers from 6 secondary Korean schools in Baguio City were the respondents. A questionnaire survey was used to collect data, which were subsequently analyzed statistically through percentages and weighted means.

Results showed that the difficulties met by the teachers are related to students’ behaviors and attitudes in class, study habits, academic preparation, learning weaknesses related to the English language, and attitudes towards science. These difficulties were found to be serious. “Having students who are not prepared to enter the regular class in terms of English proficiency” is the most serious. Most of the difficulties related to teaching are serious. However, the problems on “overtime service during Saturdays”, “no 13th month pay” and “regular holidays not observed” are not serious. The difficulties related to instructional and laboratory needs are serious except “lack of blackboards” and “lack of chalk and eraser” which were found to be not serious. The teachers identified coping strategies that they often use to enhance the learning of LEP students like “allowing students to work in a variety of groupings”, “preparing outlines for lectures”, and “discussing the meaning of words by giving examples and non-examples”.

Recommendations are offered to improve the teaching-learning process among the teachers and students. For instance, the school administrators should see to it that before promoting students to the regular classes, the students should be academically prepared in terms of English language proficiency. Another recommendation is about the conduct of a study to find out the effectiveness of the coping strategies in enhancing the learning of LEP students.

PERFORMANCE IN A BASIC SCIENCE SUBJECT OF FRESHMEN NURSING STUDENTS IN THE DEAN’S LIST OF LORMA COLLEGES

CANAYON, ARISTON B. (MA general Science, April 2008)
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The focus of the study was to find out the performance in basic science lecture and basic science laboratory of freshmen nursing student in the dean’s list when grouped according to intelligence quotient; scheduled time of basic science subject; and, type of high school attended. The comparison of performance in the lecture class and the laboratory class according to intelligence quotient, scheduled time and type of school attended were also considered. The relation of performance in science lecture and performance in the laboratory and non-basic science class was likewise determined. The study was conducted at Lorma Colleges in San Fernando La Union. There were 185 freshmen students in the dean’s lists considered in the study. Sources of data were taken from the Academic Community Computerized Enrolment System.
Solutions (ACCESS) while the Intelligence Quotient and type of high school attended were taken from the guidance office of Lorma College.

Result of the study indicated that the performance in basic lecture when respondents were grouped according to intelligence quotient was above average for very superior, superior and average group and average rate for the average and below average group. When grouped according to time of basic subject, performance was rated above average for early morning, late morning and noontime group and average for early afternoon, late afternoon and evening group. Performance was above average for private high school group while average for public high school group. In the basic science laboratory performance, above average performance was observed for the very superior group, average for superior, above average, average, and below average group. This is when group according to intelligence quotient. When group according to scheduled time, above average performance was observed for the late morning group, while average performance for the early morning, early afternoon, late afternoon, evening and noontime groups. When grouped according to type of school attended, an average performance was detected for both private high school group and public high school group.

Performance of student in the basic science lecture class when grouped according to intelligence quotient and type of school attended do not differ significantly. Performance differs significantly for early morning group when grouped according to scheduled time, while no significant difference in the performance in the other scheduled time. Performance in the basic science lecture class did not differ significantly with the performance in the laboratory and performance in non-basic science subjects. Proper planning in scheduling basic science and laboratory classes is recommended. Nursing department should schedule science classes in the morning since a better performance was observed. Further study on intelligence quotient, scheduled time and other factors that could affect students’ performance is likewise recommended.

STATISTICS ANXIETY AND ACADEMIC PERFORMANCE OF GRADUATE STUDENTS IN BENGUET STATE UNIVERSITY

CARREON, LOIDA G. (MA Mathematics, May 2008)
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The study dealt with the statistics anxiety and academic performance in Statistics of graduate students in Benguet State University. Specifically, it determined the profile of the statistics graduate students; their levels of statistics anxiety according to age, gender, ethnicity and degree course; their levels of statistics performance according to age, gender, ethnicity and degree course; and the relationship of statistics anxiety and academic performance in their statistics course. Respondents of the study were the graduate students in Statistics 202 (Statistics for Social Sciences) of Benguet State University during the S.Y. 2007-2008. A survey questionnaire was used to collect the data. The descriptive statistics for the levels of anxiety were weighted means and percentages. The inferential test statistics were the chi-square, t-test and F-test (using the one-way analysis of variance). To determine the relationship of statistics anxiety and academic performance in statistics, the Pearson Product Moment Correlation was used.

This study showed that majority of the respondents were: 20-29 years old; females; and highlander students. There was no significant difference in the distribution of respondents in terms of degree course, which means that respondents were distributed more or less equally in the different course programs. The statistics anxiety of the graduate students was 2.614 or of the “Moderate” level. There was a significant difference on the level of statistics anxiety when grouped according to age, gender, and degree course. However, there was no significant difference on the level of statistics anxiety when grouped according to ethnicity. Statistics anxiety therefore varies with age, gender and degree course but not ethnicity. Moreover, the level of academic performance of the respondents in their statistics course as a whole was 1.629 or “Above average”. There were no significant differences in the statistics performance of respondents according to age, gender, ethnicity and degree course. So the variables age, gender, ethnicity and degree course have nothing to do with academic performance in statistics. There was a significant correlation between the level of statistic anxiety and level of academic performance in statistics. Therefore, statistics anxiety affects academic performance in statistics course.
In the light of the findings and conclusions of the study, the following recommendations were proposed. Professors of Statistics in the Graduate School should endeavor to provide a comfortable atmosphere to minimize their anxieties in statistics. Particular attention or guidance should be extended to female students where Mathematics and Basic Sciences are not their field of specialization to overcome anxieties in statistics. Furthermore, an area of interest in the level of anxiety related to licensure and board examinations can also be done in order to shed more light on the findings of this study.

STATUS OF LABORATORY APPARATUSES AND PHYSICS REFERENCES IN THE LIBRARY: PERCEIVED EFFECTS ON STUDENTS’ PERFORMANCE IN PHYSICS

BUMACAS, MELANIE F. (MA Physics, April 2008)
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The objectives of this study are to determine the status of laboratory apparatuses and physics references in libraries, the frequency of use of these apparatuses and references, and the perceived effect of the frequency of use and status (referring to both adequacy and condition) of these laboratory apparatuses and physics references on students’ performance in physics. Eight hundred fourth year students studying in sixteen public schools in Baguio City and eight physics teachers were the respondents of this study. Results indicate that: the laboratory apparatuses and physics references in public schools in Baguio City are not adequate for the use of thousands of students; these apparatuses and references are in good condition; the laboratory apparatuses are rarely used by the students; the physics references are often used by the students; and, the status and the frequency of use of laboratory apparatuses and physics references have a significant effect on students’ performance in physics as perceived by the students themselves. Recommendations include the following: administrators of the public high schools should address the need for more laboratory apparatus and physics reference; and, teachers should use the apparatus more often.

PHYSICS LABORATORIES AND TEACHERS’ SKILL IN THE PUBLIC SECONDARY SCHOOLS OF MOUNTAIN PROVINCE

CHEWIRAN, SARYAN F. (MA Physics, May 2008)
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The objectives of this study are to determine the adequacy and physical condition of physics laboratory equipment, the perceived level of skill of teachers in using these equipment, and the relationship of area of specialization and of length of teaching physics to the perceived level of skill of teachers. There were 35 physics teacher-respondents of this study, all from the public secondary schools of Mountain Province. Results indicate that the laboratory equipment in the public secondary schools of Mountain Province are not adequate, although those present are in good condition. The physics teachers perceived their level of skill to be slight. There is a positive but not significant relationship between area of specialization and the perceived level of skill of teachers in using the laboratory equipment. There is a positive but not significant relationship between length of experience in teaching high school physics and level of skill of teachers. The recommendations are: the administrators of the public high schools should address the need for more laboratory equipment, and encourage and help teachers in improvising equipment; science teachers should improve and enhance their skills in the laboratory; and, Demonstrations should be conducted on the correct use of laboratory equipment.
ANTI-BACTERIAL ACTIVITY OF *Maoutia setosa* Wedd. L. (La-i)

**BALLADA, KAREN A.** (MS Biology, October 2008)
**DENISA L. DOMONDON, Ph.D., Adviser**

The unavailability of commercially prepared antiseptic in remote areas led to the determination of possible substitutes that are commonly found in our surroundings. Fifteen medicinal plants used on wounds were listed and screened in the laboratory for their antibacterial activity using disk diffusion method. Among the fifteen plants screened *Maoutia setosa* Wedd. L. (La-i) exhibited the highest antibacterial activity.

*Maoutia setosa* Wedd. L. (La-i) is a common shrub used in the Cordillera Region as antiseptic on wounds. The antibacterial activity of this plant was evaluated in the laboratory. Three extracts were prepared from the test plant which includes: Infusion, Decoction, and Poultice extract. These extracts were tested against four bacteria using the pour plate method. Results of the study showed that the extracts of *Maoutia setosa* exhibited antibacterial activity against pathogenic bacteria causing wound infections, namely *Staphylococcus aureus, Staphylococcus epidermidis* and *Pseudomonas aeruginosa*. Infusion extract showed the highest activity against the test organisms since it was active against *S. aureus* and *P. aeruginosa*. Decoction was active against *S. epidermidis*, while the activity of poultice extract is still uncertain because of the presence of contaminants that were not eradicated during the extraction process.

The extracts prepared from *Maoutia setosa* were also subjected to phytochemical analysis. Results showed that the different extracts of *M. setosa* contained bioactive substances. The Infusion extract revealed the presence of deoxysugars and polyphenolic compounds; the decoction extract have alkaloids, deoxysugars and polyphenols; while the poultice extract revealed the presence of alkaloids, deoxysugars, unsaturated sterol, triterpenes, and polyphenolic compounds. The difference in the variety of compounds present in the plant extracts can be attributed to the manner by which they were prepared. Poultice extract was prepared by mashing the plant material using mortar and pestle and squeezing the juice. Due to the mechanical distortion of the plant tissues and cells in this method, more variety of bioactive components was released. The decoction extract was prepared by boiling the plant material in water for about 10 minutes. Heat has profound effect on plants. Heat caused the plant tissues to disintegrate, thus releasing bioactive compounds. The infusion extract was obtained by steeping the plant material in hot water for about 10 minutes. Though this method made use of heat, the intensity of heat used is lower as compared to that of boiling. Thus lesser bioactive compounds were released.

The performance of the three plant extracts were compared to the performance of betadine (Povidone iodine) and guava extract, both were used as positive control. The performance of infusion against the *S. aureus* and *P. aeruginosa* is almost similar to the effect of the Betadine and Guava extract. Decoction extract was active against *S. epidermidis, E. coli* showed resistance against all the plant extracts used but was inhibited by betadine. The difference in the responses of the test organisms to the different extracts could be related to the difference in their virulence factors, metabolism and sensitivity towards the different bioactive compounds.

These results from the present study have proven the scientific basis for traditional uses of *Maoutia setosa* in the treatment of some ailments. This study was conducted at the Biology Laboratory of the College of Arts and Sciences at Benguet State University. The screening test was performed from October 2007 to November 2007. The Laboratory study proper was conducted the whole month of January 2008. The phytochemical analysis was done by The Natural Science Research Unit of the College of Natural Sciences of Saint Louis University, Baguio City.

LARVAL, COCOON AND FILATURE CHARACTERISTICS OF *Bombyx mori* L. REARED UNDER SABLAN, BENGUET ROOM CONDITIONS

**MAGUILAO, MARISSA N.** (MS Biology, October 2008)
**JOSE J. JOSUE, Ph.D., Adviser**

The focus of this study was to compare the larval, cocoon and filature characteristics of DC$_1$ and TC$_{10}$ strains of *Bombyx mori* L. (new silkworm hybrid strains) to JC$_{102}$ strain (silkworm variety currently
used by farmers). The larval characteristics included larval duration, larval weight and larval mortality rate. The cocoon characteristics were according to cocoon weight, cocoon shell weight, cocoon length and diameter, percentage of quality/reelable cocoons and percentage of discarded/defective cocoons. The silk yarn quality was based on cocoon filament length, cocoon filament size and percent cocoon reel ability. The study was conducted under the natural room conditions at Sablan, Benguet from May to June, 2008. The three hybrid strains utilized were DC\textsubscript{1} ((J\textsubscript{102} x N\textsubscript{144}) x (C\textsubscript{102} x N\textsubscript{144})), JC\textsubscript{102} (C\textsubscript{102} x N\textsubscript{144}) and TC\textsubscript{10} (J\textsubscript{102} x C\textsubscript{102}). The “batak” variety of mulberry was used. Results indicated that the natural temperature and RH at Sablan, Benguet favored the rearing of the hybrid strain TC\textsubscript{10}. Between the two strains compared to JC\textsubscript{102}, TC\textsubscript{10} had the heavier larval weight at the fourth, fifth and the eighth-day post fifth instar, the shorter larval duration, heavier cocoon weight, longer cocoon length, broader cocoon diameter, longer cocoon filament, bigger cocoon filament size and higher percent reelability. In view of these findings, TC\textsubscript{10} variety of B. mori L. is recommended as the strain best adapted for cocoon and silk production under the natural room condition at Sablan, Benguet. Due to poor yield of quality cocoons, JC\textsubscript{102} proved to be least ideal strain for production at Sablan, Benguet. The values under the filature characteristics obtained from the study – length of cocoon filament (1,295.600m – 1,315.835m), cocoon filament size or denier (2.03 - 2.23) and percent cocoon reelability (75.1572% – 93.7951%) were within the international standards set for evaluating cocoon raw silk qualities.