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Industrial Technology Students' Taxonomy of Learning

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Abstract: Learning is the fruit of all academic endeavors of both teachers and students. This paper aims to analyze the industrial technology students' taxonomy of learning at the Batangas State University-JPLPC Campus, Malvar, Batangas, Philippines Specifically, this paper determined the strengths and weaknesses of the students using in English using Bloom's TAXONOMY of Learning; determined the program of activities that can be designed to develop and enhance the weaknesses, while provided advanced learning activities to enrich and prosper the strenghts treated and found in the study. Descriptive method of research was used to analyze and interpret data. The corpus of the study was 262 sample test papers of the students-covering 131 for preliminary examination, and 131 for midterm examination. To support the data analysis, focus group discussion employing Kohen's test, coefficient of concordance, and interview have been made. To analyze and interpret data, the study utilized item analysis that mainly focused on the items correctly and incorrectly answered, as well as the frequency and percentage.

Based on the actual analysis of the data gathered from the test papers of the students, the study found out that the students have a very high level on knowledge as they can easily and appropriately understand and answer the items indicated to their number of correct answers about nouns or naming words through filling out the blanks that can complete the ideas and concepts of the university vision, mission, and core values, and the CIT goals and objectives. In comprehension level, however, the students are low or poor as indicated that most of them did not give the correct answers for each item. Dramatically, the study found out that the students have a good or an average level on analysis as indicated to their correct and incorrect responses. Seemingly, the students in midterm examination have a very high level on knowledge as indicated that most of them completed most of the statements by filling out the blacks about the form of verbs appropriately and necessarily. However, very low level on application as reflected to their difficulty and uncertainty in constructing and completing sentences using the given forms and tenses of the verbs.

Keywords: Assessment and Evaluation, Examination, Learning and Learning Domains, Learning Tasks, Taxonomy of Learning

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Introduction

All academic institutions, either public or private, ensure that their clienteles are learning, and that learning is best described through assessment and evaluation procedures. Learning can be defined as the way of getting meaningful concepts and ideas that can be applied in one's

way of living or daily activities based on the situation or context. Students can learn to the higher level as they move and go forward to the learning tasks provided in their program chosen in college after their high school or secondary level, where the department or university guides them towards successful learning and experiences. In all classroom procedures, teachers are expected to identify their teaching objectives relevant to their students' learning tasks or domains.

The International Assembly for Collegiate Business Education (2015) exemplified the "learning domains as (a) knowledge-based consisting of six levels, and encompassing intellectual or thinking skills (cognitive); (b) attitudinal-based domain consisting of five levels and encompassing attitudes and values (affective); and (c) skills-based domain consisting of six levels and encompassing physical skills or the performance of actions (psychomotor)" (p.1). In this manner, the students are expected to exhibit their cognitive, affective, and psychomotor skills towards varied lessons in English Plus. According to King, Goodson, and Rohani (n.d.), "Higher order thinking skills which includes critical, logical, reflective, metacognitive, and creative thinking are activated when individuals encounter unfamiliar problems, uncertainties, questions,, or dilemmas" (p.1). They added that "successful applications of the skills result in explanations, decisions, performances, and products that are valid within the context of vailable knowledge and experience and that promote continued growth in these and other intellectual skills" (p.1).

However, teachers and even some administrators complain about the freshman college students because of their low level or poor performance in class. According to Alagoslu (2007), college students demonstrate poor performance in grammar as manifested in their inability to construct sentences in English with correct grammar and utilize verbal ideas effectively. Anderson (2001) stressed that the "revised taxonomy of learning from Bloom's original became a challenge to face the 21st century that includes significant changes in terminology and structure that resulted in a more dynamic model for classifying the intellectual processes used by learners in acquiring and using knowledge" (IACBE, 2015, p.3).

English Plus is the basic English offered for the college freshman students who failed the English Placement Test (EPT) during the entrance examination. This course deals with the (a) parts of speech such as noun, pronoun, verb, adverb, adjective, preposition, interjection, conjunction, determiner, particle, and intensifier; (b) sentences and basic sentence patterns; (c) subject-verb agreement; (d) phrases and clauses; (e) and some other areas for basic English described in the course. A former Jose P. Laurel Polytecnic College as a technical and vocational school in Malvar, Batangas is now Batangas State University-JPLPC Campus, Malvar, Batangas that offers Bachelor of Industrial Technology under the College of Industrial Technology headed by technology educators and experts. The college offers ladderized and degree programs, i.e., for ladderized: 1-year, 2-year, 3-year, and 4-year for the degree. The students who graduate every year can continue until four-year degree program.

In this regard, industrial technology students are required to take the following English courses along with their curriculum: English Plus for Non-EPT Passers, Advanced Grammar and Composition, Study and Thinking Skills, Oral Communication, and Technical Writing. Along with the changes and revision of the curriculum for industrial technology, Advanced Grammar and Composition is no longer included in the 2013-2014 Revised Curriculum. At the present time, industrial technology deals with four English courses, namely: English Plus

for Non-EPT Passers, Study and Thinking Skills, Oral Communication, and Technical Writing. The following must be taken one by one as a pre-requisite of one another.

In an observation and interview conducted in this study, industrial freshman college students are said to be more at ease applying or creating industrial and technological tasks like machining, electronics and electrical wiring, sketching, and computer keyboard manipulating rather than remembering, understanding, analyzing, and evaluating. Dramatically, students perform the tasks without much attention to the concepts or theories discussed as they appear strong in their psychomotor skills. Hart Research Associates (2015) stressed that "today's college graduates are not particularly well-prepared to achieve the learning outcomes where employers highly value-the cross-cutting skills" (p.1). This statement means that graduates or learners today "must have the ability to apply learning in real-world settings; must emphasize applied learning experiences in college" (p.2). Upon the realization of several reasons from both the experiences and observations for almost eight years in the academe, the main author and co-researchers found the relevance of this study as it can provide ideas to a wide audience or school communities, universities and colleges regarding the learning and learning levels of the students and how these learning levels be assessed and evaluated for a continuous change, growth and development of the teaching-learning process for a long-term career success.

This paper aimed to analyze the industrial technology students' taxonomy of learning at the Batangas State University-JPLPC Campus, Malvar, Batangas. Specifically, this paper determined the strengths and weaknesses of the students using Bloom's Taxonomy of Learning; determined the program of activities that can be designed to develop and enhance the weaknesses, while provided advanced learning activities to enrich and prosper the strenghts treated and found in the study. It is evident that Bloom's Taxonomy of Learning has been widely used in making and designing a table of specification, which has also been prescribed in and practiced by most of educational institutions, specifically the Batangas State University. This practice encouraged the main author of this study to device test questions based on the Bloom's taxonomy of learning as reflected in the TOS. According to Asaad and Hailaya (2004), "Table of specification is a plan prepared by a classroom teacher as a basis for test construction specially a periodical test". They revealed that TOS is important as it can be carefully prepared because of its contribution to the development of the quality test which by itself is a good instrument for diagnostic and remedial teaching. The degree of content as well as skills mastery can be determined, and balanced test representing varied skills that can be achieved. Both test papers had been developed comprising knowledge, comprehension, application, analysis, synthesis, and evaluation as main parts.

Methods and Materials

Design: Descriptive method of research was used to analyze and interpret data about the student's level of learning using the taxonomy of learning.

The Corpus: This paper attempted to utilize the test papers of the freshman students in English Plus who are non-English Placement Test passers (EPT), namely: computer, electrical, electronics and mechatronics, and mechanical technology. Specifically, 262 sample test papers of the students-covering 131 for preliminary, and 131 for midterm examination. This study used Slovin's Formula with five percent margin of error from 195 populations to get the samples of test papers in both preliminary and midterm examinations. The study employed a purposive sampling method to get the target samples of test papers, i.e. arranged the test papers in alphabetical orders, then picked the representatives. Test papers which had

been arranged and picked in the preliminary examination were also representatives for midterm examination.

The instrument or test items had been checked and verified by the Associate Dean of the College of Industrial Technology, and the Dean of Colleges of the Campus. Then, language experts from the campus and other universities and colleges had been consulted to validate the test items. To ensure the reliability and validity of the test items, statisticians from both UST and PNU had also been tapped for comments and suggestions towards the development and final production of the test instrument. This test instrument had been utilized and administered twice to the two groups of students in the past which found to be effective as reflected to almost half of the participants got high and very high scores. For preliminary test instrument, 20 students from other four colleges participated in the test. After checking the test, the same respondents were asked again to answer the same instrument with the same items. For the midterm examination, 20 new participants from the same colleges particpated in the dry-run. The re-test was also given after checking the first attempt. Calmorine (2011) defined reliability as the second characteristic of assessment methods which means the extent to which a test is consistent and dependable. Thus, test-retest appears to be highly recommended as to reliability of test is concerned.

Table 1 shows the test-retest using the instrument for dry-run. These test instruments, prior to the actual/real administration as preliminary and midterm examinations, were tested to ensure their validity and reliability as to usefulness and effectives of the test items are concerned. The first-and-second administration of the instrument was made for prelim instrument as well as for midterm examination. Consequently, twenty selected students from other four colleges, namely CAS, CABEIHM, CTE, and CECS participated in the test-retest. Each college had five representatives to determine the validity and reliability of the test items. Then, for midterm examination a new set of twenty students participated with the same procedure.

Table 1. Test-retests as dry-run for preliminary and midterm examinations

Test Category	Computed Value rs	Interpretation
Preliminary Examination	0.9623011	Very high relationship
Midterm Examination	0.9201234	Very high relationship

As can be seen in the table, that in preliminary examination there is very high relationship or marked relationship with a computed value of rs 0.9623011, and for midterm examination there is also high relationship/marked relationship with a computed value of 0.9201234. Results show that the two different sets of major examinations are suitable and appropriate to use. This also means that students in the test-retest (as dry-run) who got very high scores in the preliminary exam in English Plus in during the first administration also got very high scores in the second administration; those who got very low in the first administration also got very low scores in the second administration. Therefore, it is concluded that both tests are reliable. This made the main author decided to utilize the same test instruments to the target respondents of this study. Specifically both preliminary and midterm examinations were used. Both examinations are teacher-made tests, prepared by the teacher-researcher based on the contents stated in the syllabi and the lessons taken by the students. Since the main focus of the author is to determine the strengths and weakness of the students in English Plus using the Bloom's Taxonomy of Learning. Table 2 shows the distribution of respondents.

Table 2. Distribution of Respondents

Section	Population	Sample for Prelim	Population	Sample for Midterm	Total Samples
Computer	37	25	37	25	50
Electrical	52	35	52	35	70
Electronics and Mechatronics	52	35	52	35	70
Mechanical	54	36	54	36	72
Total	**195**	**131**	**195**	**131**	**262**

To support the data analysis, the researcher conducted focus group discussion and interview. Likewise, item analysis has been done that mainly focused on the items correctly and incorrectly answered, and mean scores to analyze and interpret data. Then, to determine the conclusion and generalization, mean scores and verbal interpretations about the level of learning in each Bloom's taxonomy category utilized the Likert scale 1-4 as expressed below.

Scale	Range	Description	Verbal Interpretation
4	3.25-4.00	Most of the responses are right in all items./Few responses are wrong.	High/Very Good
3	2.50-3.24	Responses are good./More of the responses are correct.	Good
2	1.75-2.49	Responses are moderate or fair in all items./Some of the responses are correct.	Moderate/Fair
1	1.00-1.74	Most of the responses are wrong in all items./Few responses are correct.	Low/Poor

Procedure

The researchers decided to utilize the test papers of freshman students in English Plus-the non-EPT passers because the test paper clearly categorized the items in the taxonomy of learning. The English Plus instructor as the main researcher coordinated with the other faculty researchers who also handle the same group of students to conduct a study regarding the students' taxonomy of learning. The faculty researchers had their preliminary observation, i.e., sharing of ideas and thoughts about the learning level of the students, prior to the actual analysis and interpretation of the results of the test papers in both preliminary and midterm examinations. In test-retest, a Spearman rho was used to test the reliability of both preliminary and midterm examinations. On the actual process, the individual researchers used the test papers as corpus of the study to analyze and interpret the data based on the objectives of the study. After the individual analysis and interpretation, the group of researchers gathered together to conduct their focus group discussion (FGD) employing Kohen's test or coefficient of concordance where agreement of the inter-raters or researchers has been considered for their individual analyses and interpretations of data. FGD only involved the main author and the co-researcher and co-faculty members, no participation from the students as it is very clear that the main sources of the data were from the selected corpus.

Table 3 shows the agreement among the researchers. Results on the possible connection and comparison among the researchers' evaluation are classified into three: a) perfect agreement,

meaning the evaluation of the researchers are exactly the same; b) partial agreement, which indicates a difference of two exists between the four evaluations; and c) no agreement, which indicates when the difference of three exists between the three researchers.

Table 3. Agreement among the Main Author, Co-Researcher, and Faculty Members' Evaluation

Perfect Agreement		Partial Agreement		No Agreement	
F	%	F	%	F	%
262	100	0	0	0	0

As shown in the table above, results reveal that there seem to be a perfect agreement in terms of the researchers' observation or evaluation of the students' scores based on the questions in the following items categorized by taxonomy of learning as indicated in the frequency of 262 or 100 percent. This means that the observation and evaluation of the researchers highly agree with one another about the students' level of learning.

Since the focus of this investigation was industrial technology students, then no other teachers handled the same course. It is clearly evident that the instructor handling the course was encouraged to device test papers intended for the enumerated purpose of the study alone. Another, no other English teachers from other colleges involved in the conduct of the study. Multidisciplinarily and interdisciplinarily, the co-researchers only of the main author had collaborated and participated in this study as they could give impressions, observations, and evaluations about the respondents as these three co-researchers had the opportunity to handle the respondents in their own classes.

Data Analysis: Sampling Method was used to determine the samples of the study. Slovin's Formula with five percent margin of error from 195 populations has been applied to identify the sample per section. To determine the levels of the students' learning, item analysis has been employed, i.e., determined the frequency and percentage of who correctly and/or incorrectly responded to the given items per level of learning in both preliminary and midterm examinations in English Plus. Item analysis is a method of identifying the number of correct responses from the test items. It is a measure of how easy or difficult the item that makes the test results of the examinees either low or high. According to Asaad and Hailaya (2004), "Item analysis is the process of determining the degree of discrimination between the bright students and slow one in an item". Likewise, item analysis is the process of examining student response to each item in the test.

Frequency and Percentage have been used to determine the portion or number of responses in a set or entity covered by test items with corresponding percentage of the given portion from the whole or perfect performance of individual and/or group of the students. To get the percentage of the portion of a set, the formula is express as: P equals the *f* as the number or portion of responses from the total items/whole is divided by the N as the total or perfect number of responses; then must be multiplied by 100. Thus, the perfect performance or scores can be determined by adding all the frequencies and portion of percentages, as 131 (100%) of both prelim and midterm examinations. This study mainly focused on the results of both preliminary and midterm examinations of freshman computer, electrical, electronics and mechatronics, and mechanical students in the first semester academic year, 2014-2015. The examinations are designed for English Plus students enrolled-both regular and irregular. The test papers served as the corpus of the study to be coded, analyzed, and interpreted. Item analysis has been made that deals with the identification of correct and incorrect responses

indicated in the test papers. This item analysis delimits the identification of item index of difficulty and item index of discrimination-rejecting, revising, and retaining of items in the test are not considered in the study.

Results and Discussion

This paper aims to analyze the industrial technology students' taxonomy of learning at the Batangas State University-JPLPC Campus, Malvar, Batangas, Philippines. As shown in the succeeding tables, the test is classified according to the taxonomy of learning, namely: knowledge, comprehension, application, analysis, synthesis, and evaluation. Bloom's Taxonomy of Learning: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation (Garcia, 2010, pp.14-16). Based on the researchers' preliminary observation, this paper assumed that students highly understand the concepts of the lessons well and more ready to perform and carry out the tasks and activities entail in the course; however, students were weak on comprehension, application, analysis, synthesis, and evaluation.

Strengths and Weaknesses of the Students

Industrial Technology students' taxonomy of learning covered in this analysis are knowledge, comprehension, application, and analysis. Preliminary examination covers the following: knowledge, comprehension, and analysis, while in midterm examination the knowledge and application have been covered. This attempt aims to determine to what taxonomy of learning the students can be found strong or weak based on the results of both preliminary and midterm examinations in English Plus.

Preliminary Examination

In the actual analysis of the data gathered from the test papers of the students in the preliminary examination, the study found out that in knowledge level the students understand the lessons as indicated to their very high level of learning and to their number of correct answers about nouns or naming words, through filling out the blanks, that can complete the ideas and concepts of the university vision, mission, and core values, and the CIT goals and objectives. Table 4 shows the frequency of students' responses in VMCVGO as to naming words.

Table 4. Frequency of Students' Knowledge on VMCVGO as to Naming Words

Naming Words	Correct Responses		Incorrect Responses	
	F	%	F	%
Vision: institution, learning, citizens, participants, challenges	124	94.66	7	5.34
Mission: Batangas State University, citizens, environment, education, economy	123	93.89	8	6.11
Core Values: human dignity, integrity, mutual respect	124	94.66	7	5.34
Goals (CIT): individuals, workers	95	72.52	36	27.48
Objectives (CIT): curricula, education, citizens,technologists, Research	89	67.94	42	32.06

As shown in the table, the students have the mastery of the naming words appropriate and necessary to the VMCV of the university with the frequency of 124 students as 94.66 percent for both Vision and Core Values, and the frequency of 123 students as 93.89 percent for Mission respectively. While there is 95 students as 72.52 percent of the correct answers for

the Goals, followed by 89 students or 67. 94 percent of the correct answers for CIT Objectives. It implies that more that 60 percent of the students got the correct answers in knowledge level as they were able to memorize the vision, mission, core values of the university. Another observation is that they can have the low level of mastery of the concepts about VMGO. Undeniably, it is evident that the students' answers about naming words for CIT goals and objectives are good, and very good for VMCv. In these areas, there were few students who seemed to be reluctant or puzzled, or perhaps they do not have enough time to memorize the college goals and objectives as to appropriateness and correctness of answers are necessary.

On the other hand, the comprehension level of the students is poor as indicated that most of them did not give the correct answers for each item. In comprehension level, students are expected to develop certain insights, and give a more in-depth look at knowledge. The Comprehension level usually involves explanation, illustration, summary, paraphrasing. Table 5 shows the frequency of students' comprehension on the poem as to kinds of nouns.

Table 5. Frequency of Students' Comprehension on the Poem as to Kinds of Nouns

Kinds of Nouns	Correct Responses		Incorrect Responses	
Abstract noun referring to doubts in second stanza	0	0	131	100
Abstract noun that refers to the problems in second stanza	5	3.82	126	96.18
Abstract noun that refers to the means or cause leading to madness in third stanza	1	0.76	130	99.24
Proper noun that can be felt and found as father above in third stanza	4	3.05	127	96.95
Concrete noun refering that when something is clear from darkness, through it you can now see in fourth stanza	0	0	131	100
Concrete noun referring that when the persona has full of wisdom and experiences, this surely flows like blood in his veins in fourth stanza	1	0.76	130	99.24
Abstract noun referring that everything the persona has tried is found, solution is there—from hardships and challenges, this is now his time to do things right and feel the happiness expressed by his lips and face in fourth stanza	2	1.53	129	98.47
Concrete noun referring that when the persona seeks the approval and guidance of the Heaven above, this can be seen that bears blue color on its surface in fifth or final stanza	1	0.76	130	99.24
Abstract noun referring that peace can be felt within, no worries, or even doubts in fifth or final stanza	2	1.53	129	98.47
Abstract-common (absmon) noun referring that when everything goes into different aspects, this is still colorful as a rainbow in the sky in fifth or final stanza	2	1.53	129	98.47

As can be found in the table above, majority of the students were not able to comprehend or distinguish the kind of noun as indicated in certain line or portion of the poem per stanza. This means that students' comprehension is very weak or poor as reflected to their inability to answer the given questions appropriately based on the poem. It is evident that the students find difficulty in terms of comprehending the questions or situation found in the poem or text. They appear to be reluctant or uncertain to their answers as reflected to their erasures and double answers of nouns for some items, or even poor in distinguishing what is the real answer to the question. Another observation is that when the students cannot determine the correct answers, they simply leave the items unanswered. This study implies that the students are not well motivated and encouraged to do English activities that can develop their comprehension skills. According to Reed (2007), there are students who appear to be weak on their comprehension level it is probably due to their lack of exposure to the real world, or they never find things in their own context, i.e., experiences and real-life situations.

Along with the analysis, students are expected to separate or break up the whole into its component parts to find their nature, and function, draw their relationships, identify errors; find out unique features, differentiate information, and derive reasons for certain observations. Analysis usually involves deduction, relationship, differentiation, inference, exception, and extrapolation. Table 6 presents the frequency of students' analysis as to number of nouns and pronouns.

Table 6. Frequency of Students' Analysis as to Number of Nouns and Pronouns

Number of Nouns and Pronouns	Correct Responses		Incorrect Responses	
	F	%	F	%
tables (pl.) of table	131	100	0	0
monarchs (pl.) of monarch	113	86.26	18	13.74
genius (sg.) of genii	54	41.22	77	58.78
criterion (sg.) of criteria	19	14.51	112	85.49
tempo (sg.) of tempi	94	71.76	37	28.24
they (pl.) of she	98	74.81	33	25.19
you (pl.) of you	48	36.64	83	63.36
me (pl.) of me	127	96.95	4	3.05

As presented above, majority of the students got the correct answers from the four options or choices that made them analyzed before they could decide on their final answers. Dramatically, correct responses as *tables* with a total of 131 or 100 percent; me as answered by 127 students with 96.95 percent; *monarchs* as answered by 113 students with 86.26 percent; *she* as answered by 98 students with 74.81 percent; and tempi as answered by 94 students with 71.76 percent.

On the other hand, very evident that the students got incorrect responses that should be criteria, you, genius, tempi, and she.

Generally, the students have a good or high level on analysis. It implies that the students appear to be at ease on the common terms or nouns, but find difficulty on some of the Latin names or nouns or even on legal jargon. Results reveal that the students analyzed well the given choices despite the unfamiliarity with some of the naming words given in the test items.

Table 7. Frequency of Students' Analysis as to Gender of Nouns and Pronouns

Gender of Nouns and Pronouns	Correct Responses		Incorrect Responses	
	F	%	F	%
Jade (Masculine or Feminine)	115	87.79	16	12.21
They (Neuter)	131	100	0	0
Josie (Feminine)	128	97.71	3	2.29
Her (Feminine)	127	96.95	4	3.05
Him (Masculine)	128	97.71	3	2.29
bull (Masculine)	119	90.84	12	9.16
sunset (Undefined)	131	100	0	0

As can be seen in the table above, majority of the students got a very high score in terms of the gender of nouns and pronouns. Out of seven items with four choices or options, the students were able to analyze the correct gender of nouns and pronouns. The result reveals that the students have a very high level on analysis in terms of the gender of nouns and pronouns. The study also implies that the responses which are almost correct indicate that students seem to be very familiar and certain to the gender of nouns and pronouns. Thus, the students' competence of the gender can be a reflection effective English classroom activities and varied exercises.

Table 8 shows that frequency of students' analysis as to case and use of nouns and pronouns. As can be seen in the table below, students got the correct and perfect scores of 131 or 100 percent on the pattern of the sentence, followed by the use of pronoun *he* and the reciprocal pronoun each other as both 128 or 97.71 percent. The use of –ing, and its case, as well as the direct object (DO) got 124 correct responses as 94.66 percent. The pronoun themselves, and appositive, pronoun after prep.in, and the function of the word 'that'got 122 correct responses as 93.13 percent. Seemingly, the use of pronoun themselves got 119 or 90.84 percent correct responses, followed by the DO got 102 or 77.86 percent correct responses, the case of pronoun and pattern of sentence got 101 correct responses as 77.10. Then, the use of pronoun themselves got 100 correct responses as 76.34.

Table 8. Frequency of Students' Analysis as to Case and Use of Nouns and Pronouns

Case and Use of Nouns and Pronouns	Correct Responses		Incorrect Responses	
	F	%	F	%
The man shouts. (The use of noun man in the sentence)	120	91.60	11	8.40
The pattern of the sentence?	131	100	0	0
The teacher is he. (Use of he)	128	97.71	3	2.29
She is a teacher. (Use of She)	120	91.60	11	8.40
The singer, Basil Valdez, composed the song I performed last week. (Appositive)	122	93.13	9	6.87
He asked the Father above. (DO)	124	94.66	7	5.34
What pattern of the sentence is in number 51?	120	91.60	11	8.4
In everything he chooses, questions start to build up (pr. after prep. in)	122	93.13	9	6.87
I myself explained the agenda. (kind of	120	91.60	11	8.4

pr. myself)				
My parents joined in the Takbo Kapuso Ko, Para sa Buhay ng Kapamilya	122	93.13	9	6.87
(kind of pr. themselves)				
Use of the pronoun themselves in the sentence no.55	100	76.34	31	23.64
God told him that life is full of challenges.	119	90.84	12	9.16
DO in sentence no.57	102	77.86	29	22.14
That is mine. (function of the word 'that')	122	93.13	9	6.87
Case of pr.him in sentence no. 57	101	77.10	30	22.90
I love my work teaching. (function or use of the word teaching)	120	91.60	11	8.4
Pattern of sentence no. 61	101	77.10	30	22.90
The Sleeping Beauty has been eaten by the tiger. (use of –ing)	124	94.66	7	5.34
Case of the word sleeping in the sentence	124	94.66	7	5.34
I and Lerma love-(appropriate word to complete the statement)	128	97.71	3	2.29

Very evident that the case and use of noun and pronoun are clear for the students to analyze as they appear to be at ease in the analysis level based on the given items in the test.

Midterm Examination

Midterm examination as a major test which have been administered to the same group of students comprises the knowledge and application levels of learning. In knowledge level, the students have been expected to determine or identify the forms, categories, and other ways of verbs, while in the application level the students are expected to construct meaningful sentences in the correct forms and tenses of the verbs.

Students' knowledge of the forms of verbs refers to the understanding of freshman students who have not passed the English placement test. Through English Plus course, students enrolled have been taught about the verbs-categories, kinds, ways, forms, and tenses.

In the test students are expected to answer the given items constructed by the teacher (teacher's made test). After the classroom activities, lecture, discussion, and other tasks employed, in this set of preliminary examination the students are expected to remember or recall information, and bring back facts, rules and processes. The knowledge level of the test usually involves definition, description, identification. The test items in knowledge level appear to be effective, valid, and reliable.

Table 9 presents the frequency of students' knowledge as to verb forms. It can be revealed that the respondents got 130 or 99.24 percent of correct responses on verb forms like *keeps* for items one and two; *start; do* and *want* for items six and eight; *are* and *help* for items thirteen and fourteen. There are 129 or 98.47 percent of correct responses on keeps for items three and four; cried and asked for items ten and eleven; 128 or 97.71 percent of correct responses on shouts, are, got, saw, and feel for items five, twelve, eighteen, nineteen, and twenty; 127 or 96.95 percent of correct responses on appears for item nine, answered, touched, and turned for items fifteen to seventeen, and sat for item twenty-two.

Table 9. Frequency of Students' Knowledge as to Verb Forms

Verb Forms	Correct Responses		Incorrect Responses	
n=131	F	%	F	%
First Stanza				
Keeps	130	99.24	1	0.76
Keeps	130	99.24	1	0.76
Keeps	129	98.47	2	1.53
Is	129	98.47	2	1.53
Shouts	128	97.71	3	2.29
Second Stanza				
Start	130	99.24	1	0.76
Seem	129	98.47	2	1.53
do, want	130	99.24	1	0.76
Third Stanza				
Appears	127	96.95	4	3.05
Cried	129	98.47	2	1.53
Asked	129	98.47	2	1.53
Are	128	97.71	3	2.29
Are	130	99.24	1	0.76
Help	130	99.24	1	0.76
Fourth Stanza				
Answered	127	96.95	4	3.05
Touched	127	96.95	4	3.05
Turned	127	96.95	4	3.05
Got	128	97.71	3	2.29
Fifth Stanza				
Saw	128	97.71	3	2.29
Feel	128	97.71	3	2.29
did, shout, ask	100	76.34	31	23.66
Sat	127	96.95	4	3.05

Conversely, there are 100 0r 76. 34 correct responses on did, shout, ask for item twenty-one. As to correct responses, nearly 85 percent of the respondents demonstrate good performance on verb forms as reflected to their knowledge and ability to use correct forms of verbs such as present and past.

Table 10 shows the frequency of students' knowledge as to categories of verbs. Out of ten items from the categories of verbs, there were 129 or 98.47 percent of the students who got correct and perfect responses on item 1 about transitive verb, followed by the item two where 127 or 96.95 percent of the students got correct or perfect responses about intransitive verb. There were 125 or 95.42 percent of the students got correct or perfect responses on the fourth, fifth, and sevent items about transitive, intransitive, and non-action verb. There were 120 or 91.60 percent of the students got correct or perfect responses on the third, ninth, and tenth items about transitive, non-action verb, and linking. However, there were least or few number of correct or perfect responses on the sixth and eight items about auxiliary verbs.

Transitive appears to be the easiest category of verb as action verb as it possesses its own formula or usage, rule, or standard that makes the students or learners directly and certainly determine its use or function in the sentence. On the other hand, auxiliary verb is found to be

misleading and difficult because of its combination of two or more verbs to be used in a sentence. The structure of auxiliary verbs seems to be unclear and indefinite that makes the students hardly determine and use.

Table 10. Frequency of Students' Knowledge as to Categories of Verbs

Categories of Verbs	Correct Responses		Incorrect Responses	
n= 131	F	%	F	%
The freshman attended the mass. (Transitive)	129	98.47	2	1.53
The audience applauded warmly. (Intransitive)	127	96.95	4	3.05
Marco took an exam in Philosophy. (Transitive)	120	91.60	11	8.4
Marco and Jane love their son Nathan. (Transitive)	125	95.42	6	4.58
The man shouts again. (Intransitive)	125	95.42	6	4.58
I have to write a short story for little children. (Auxiliary)	94	71.76	37	28.24
He grew uncomfortable after the saddest experience. (NAV)	125	95.42	6	4.58
She should be working on that project already. (Auxiliary)	94	71.76	37	28.24
She became successful in her time. (NAV)	120	91.60	11	8.4
They are finishing their ILO 2. (Linking)	120	91.60	11	8.4

Regular verb is one of the other ways of classifying verbs that ends with –d or –ed if the base form of the verb is used as past, while irregular verb changes in spelling or remains in the spelling from the base form of the verb when it is used as past. Table 11 shows the frequency of students' knowledge as to ways of classifying verbs.

Table 11. Frequency of Students' Knowledge as to Ways of Classifying Verbs

Other ways of Classifying Verbs	Correct Responses		Incorrect Responses	
n= 131	F	%	F	%
walk (regular)	131	100	0	0
write (irregular)	120	91.60	11	8.4
name (regular)	122	93.13	9	6.87
fight (irregular)	119	90.84	12	9.16
play (regular)	128	97.71	3	2.29
dance (regular)	131	100	0	0
seek (irregular)	125	95.42	6	4.58
run (irregular)	100	76.34	31	58.27
cook (regular)	131	100	0	0
stand (irregular)	119	90.84	12	9.16

As can be seen in the table, 131 or 100 percent of the respondents got correct or perfect responses on regular verbs walk, dance, and cook; 128 or 97.71 percent of them got correct

responses on regular verb play; 125 or 95.42 percent of them got the irregular verb seek; 122 or 93.13 percent got irregular verb name; 120 or 91.60 percent got irregular verb write respectively. On the other hand, 119 or 90.84 percent got irregular verbs fight and stand. The results are found to be glaring a number amount of responses on ways of classifying verbs.

In terms of application level, students are expected to apply the knowledge learned in their daily lives, solve real problems by interpreting experiences, and decide what to do based on the rules acquired. This is commonly known as the learning-by-doing**.** Table 12 presents the frequency of students' application as to forms and tenses of verbs.

Table 12. Frequency of Students' Application as to Forms and Tenses of Verbs

Forms and Tenses of Verbs	Correct Responses		Incorrect Responses	
n= 131	F	%	F	%
I since this morning, but no one is listening. (ask-present per-prog)	89	67.94	42	32.06
The teacher to his students' opinions and valid ideas. (listen-simple present)	90	68.70	41	31.3
James his ILO 2. (submit- simple past)	100	76.34	31	23.66
My professor our ILO 2. (check-present progressive tense)	88	67.18	43	32.82
I the changes on examination schedule. (announce-present perfect)	88	67.18	43	32.82

As can be found in the table, 100 or 76.34 percent of the respondents got correct responses on simple past tense; 90 or 68.70 percent on simple present tense; and 89 or 67.94 percent got correct responses on present-perfect progressive tense. It can also be found a very little amount of correct responses on present progressive and present perfect tense as a little more than 60 percent.

This study deemed it necessary to design a program of activities that can develop and enhance the weaknesses of the students. It will also provide advanced learning activities to enrich and prosper the strengths treated and found in the study. Table 13 shows that program of activities for students in English Plus. The program is designed for slow/weak and advanced students as they possess different levels of learning. Thus, differentiated learning tasks may be provided through modular approach (Aceron, 2015).

Table 13. Program of Activities for Students in English Plus

Areas Concerned	Description	Objectives	Skills	Activities
A. Words and Sounds Competence	This area focuses on the study of word formation, function, and meaning along with their distinct features and	To develop and enhance students awareness and understanding of the words and	Language Skills	Students may be given: o word-formation o vocabulary enrichment o word drills o word-log

	characteristcs of sounds or speech.	their sounds;		
B. Grammar and Usage	This deals with the construction of sentences in the standard form of English, where use, functions, meaning, and context are emphasized.	To provide students varied tasks that may focus on sentence constructio n utilizing correct grammar and usage;	Grammar Skills	Students may be given: ○ varied sentence constructions in the contexts ○ Clipping of sentences with explaination ○ Pointing out phrases, clauses, and sentences that have something to do with their personal experiences which require explanations
C. Comprehensio n, Problem-solving, and Thinking Skills	This refers to the process or study of finding the value of information which also may challenge students/indivi duals to provide solution or answer to the problems encountered, and their method of understanding of things in the context.	To engage students in varied activities that deal with the ability to comprehen d, analyze, solve, evaluate, and interpret things, issues, and other events related to a real-life situation;	Listening Speaking Writing Interpersona l/Social Skills	Students may be given: ○ Video presentation related to the field or specialization to enhance their listening skills ○ Reaction paper and oral argument ○ Brainstorming ○ Interactive-Collaborative presentation of data, issue, and updates.
D. Technical Writing	This is basically an activity that may develop industrial technology students' in English through appropriate	To provide students a writing assignment or task related to their field of specializati on; and	Writing Speaking	Students may be given: ○ Daily log/report on the laboratory practices and exercises ○ Oral presentation of the narrative or daily log in class.

	writing tasks and other related aspects in the field/course.			
E. Verbal Competence	This is an area where students are expected to express their ideas and thoughts in the field, and other related issues through engagement in English writing and speaking.	To engage students in both oral and written tasks that would develop their ability to express opinions, thoughts, ideas, comments, suggestions, contrast, and support considering the standards of English language.	Speaking Writing	Presentation of a selected report may be employed for the first timer. Students may be engaged in research works that deals with the operation and mechanism, i.e. observing and assessing tools, equipment, and teaching strategies in the workshop using instrument prepared/deviced by the instructor/professor.

Table 14. Program of Activities for Advanced Students in English Plus

Areas Concerned	Description	Objectives	Skills	Activities
A. Words and Sounds Competence	This area focuses on the study of word formation, function, a nd meaning along with their distinct features and characteristcs of sounds or speech.	To develop and enhance students awareness and understanding of the words and their sounds;	Language Skills Reading Analytical Skills Writing	Students may be given: ○ Extracting words from the articles/stories read. ○ Expanding the meaning of the unfamiliar words through context-clues ○ Investigating and contrasting the sounds experiences ○ word-log ○ post a word for audience through social media, bulletin

				board, etc. ○ retrieving or collecting comments and reactions from the POST
B. Grammar and Usage	This deals with the construction of sentences in the standard form of English, where use, functions, meaning, and context are emphasized.	To provide students varied tasks that may focus on sentence construction utilizing correct grammar and usage;	Grammar Skills	Students may be given: ○ varied sentence constructions in the contexts ○ Clipping of sentences with explaination ○ Pointing out phrases, clauses, and sentences that have something to do with their personal experiences which require explanations
C. Comprehension, Problem-solving, and Thinking Skills	This refers to the process or study of finding the value of information which also may challenge students/individuals to provide solution or answer to the problems encountered, and their method of understanding of things in the context.	To engage students in varied activities that deal with the ability to comprehend, analyze, solve, evaluate, and interpret things, issues, and other events related to a real-life situation;	Listening Speaking Reading Writing Interpersonal/Social Skills	Students may be given: ○ Video presentation related to the field or specialization to enhance their listening skills ○ Reaction paper and oral argument ○ Reading data commentaries, or articles ○ Brainstorming ○ Interactive-Collaborative presentation of data, issue, and updates.
D. Technical Writing	This is basically an activity that	To provide students a writing	Writing Speaking	Students may be given: ○ Daily

	may develop industrial technology students' in English through appropriate writing tasks and other related aspects in the field/course.	assignment or task related to their field of specializatio n; and		log/report on the laboratory practices and exercises ○ Oral presentation of the narrative or daily log in class.
E. Verbal Competence	This is an area where students are expected to express their ideas and thoughts in the field, and other related issues through engagement in English writing and speaking.	To engage students in both oral and written tasks that would develop their ability to express opinions, thoughts, ideas, comments, suggestions, contrast, and support considering the standards of English language.	Speaking Writing	Presentation of every report must be employed. Students may be engaged in research works that deals with the operation and mechanism, i.e. observing and assessing tools, equipment, and teaching strategies in the workshop using instrument prepared/devised by the instructor/professo r.

The ability to use critical thinking skills in the study is crucial to a student's success in their education. This skill progression is often absent from beginning courses. Students significantly need to progress on the level of basic knowledge, which allows them list down and name information. This paper presents an approach to help students gain the ability to understand, apply, and evaluate the form, use, and meaning of English language as a requirement of the course. Bloom's taxonomy was applied to create a student learning model in their examination. The examination model determined students through looking at their graduated goals of knowledge, comprehension, application, analysis, synthesis and evaluation. As a result, students can develop critical thinking skills as they progress through the stages of higher level learning. The student discussion board assignments may correspond to each level of Bloom's Taxonomy. The assignments gradually build the student's skill set which may result a more advanced sophisticated level of English learning through more detailed discussion board postings that include evaluation of problem, issues, concerns, and changes of English standards as well as experiences found in selected readings or literary selections. Examples of these discussion board assignments are providing with specific detail

that can link assignments to particular levels of thinking that may encourage students to widen and strengthen their understanding and ability.

Conclusions and Recommendation

Based on the results of the study, the researchers found out that in preliminary examination, the knowledge level of the students is very high; good/average in analysis; however, poor in comprehension. Similarly, in midterm examination the knowledge of the students is also very high, but very low or poor in application level. To develop the thinking skills of the students, Hudson and Walmsley (2005) emphasized that grammar must be learned as the main tool for talking about logical connections such as classification, causation, and time.

This paper calls for further investigation, study or analysis of the same kind or topic that will focus on the item difficulty index and item discrimination index. Item difficulty index refers to the 'proportion of the number of students in the upper and lower groups who answered an item correctly', while the item discrimination index refers to the 'proportion of the students in the upper group who got an item right minus the proportion of students in the lower group who got an item right' (Asaad and Hailaya, 2004). Results of this study can also be analyzed and interpreted in the development of instructional materials, modules or textbooks to develop among students the highest level of learning, and to achieve very good examination results. Moreover, an analysis and integrative study of the different taxonomies of learning of Bloom, Anderson, SOLO, Finks, and others can be conducted to get a broader knowledge and overview on the development of taxonomies and their domains as assessment and evaluation of learning are concerned in all academic activities, changes, development, integration, and creation. Furthermore, the locale and scope of this study can also be considered for further investigation and future study of the same kind.

References

1. Academic Technology Center. Bloom's Taxonomy of Critical Thinking and Writing Effective Learning Objectives/Outcomes". A personal learning experience with global connections, University of West Florida [Online]

2. Agno, Lydia N. 2008. Building bridges accross disciplines in basic education, a source book in curriculum integration and thematic teaching. C and E Publishing, Inc.

3. Asaad, A.S. and Hailaya, W.M. 2004. Measurement and evaluation: concepts and principles. Rex Book Store.

4. Braxton, Jones, Hirschy, and Hartley. 2008. The role of active learning in college students persistence. Wiley Inter Science, Wiley Periodicals, Inc., 115: 71-83.

5. Brown, H.D. 2000. Principles of language learning and teaching. New York: Pearson

6. Buenaflor, R.C. 2012. Assessment of learning: book one, the conventional approach with DepEd's NCBTS and grading system. Great Books Publishing.

7. Calmorine, L.P. 2011. Assessment of student learning 1. Rex Book Store.

8. Garcia, M.B. 2010. A Teaching handbook on asking questions. Rex Book Store.

9. Hart Research Associates (January 2015. Falling short? College learning and career success. 1724 Connecticut avenue, NW Washington, DC 2009, pp.1-13.

10. Hudson, R. and Walmsley, J. 2005. The English patient: English grammar and teaching in the twentieth century. J. Linguist., 41, 593-622 in Cambridge University Press.

11. International Assembly for Collegiate Business Education, 2015. Bloom's taxonomy of education objectives and writing intended learning outcomes statements. "Advancing academic quality in business education worldwide", Lenexa, Kansas 66215, USA.

12. King, F.J., Goodson, L. and Rohani, F. (n.d.). Higher order thinking skills. Assessment and Evaluation in Educational Services Program. Retrieved July 26, 2016, from www.cala.fsu.edu

13. O'Neil and Murphy, 2010. Assessment: a guide to taxonomies of learning. UCD Teaching and Learning Resources from www.ucd.ie/teaching

14. Reed, S.K. 2007. Cognition theory and application . Seventh Edition. Vicki Knight, Thomson Wadsworth

15. Romel M. Aceron, 2015. Freshman Students' Attitudes and Behavior towards Advanced Grammar and Composition Teaching. Asia Pacific Journal of Multidisciplinary Research, 3(4): 85-92.

16. Suskie, Linda 2004. Assessing student learning from http://www.ccac.edu/uploadfiles/Imported/8b02ade235bb4fd3afd250aa699ef9a9.pdf