Research Article

ESP Grammar-Based Materials for Enhancing the Written Communication of Computer Engineering Students

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Abstract: This study, "ESP Grammar-Based Materials for Enhancing the Written Communication of Computer Engineering Students," was conducted to determine the baseline data needed in preparing the writing materials for college sophomores. The descriptive survey method of research was used in this study, involving 80 respondents taking up B.S. Computer Engineering. Each of these students was given a questionnaire and two testing materials. Based on the results, the data were tabulated using percentages, frequency count, measures of central tendency, standard deviation, percentile rank, skewness, and kurtosis.

In answering the specific questions in the study, the investigation yielded the following findings:

According to their personal profile, the female respondents outnumbered the male respondents and their average age was 17. There were an equal number of those who came from public and private schools in high school and they had an average grade in English. Most of their parents were college graduates. They usually owned smart TVs/smartphones, desktops, and laptops as home furnishings. Similarly, they always used television and radio as their sources of information at home. Regarding their language profile, most of them spoke Tagalog and made no attempts to improve their vocabulary and language use before entering college. They claimed that they could express English in writing than in speaking and that they could learn English through reading than listening. Based on their reading preferences, they were more exposed to news stories and they often loaned technology and useful arts books. They never purchased a coffee table or classic books. Most of them availed of newspapers through family subscriptions. As regard their viewing habits, they always watched cartoon/anime' and seldom watched adult materials. Most of them chose the television program they watched at home. Their study habits revealed that they did not spend enough time reading and studying English lessons for they often visited the library only when doing research.

Based on the standard of the Commission on Higher Education (CHED), there are no specific writing skills required in B.S. Computer Engineering course. The required skills in writing technical reports are true to all engineering courses. With the tabulated results, the study reveals that the respondents performed well in mechanics and spelling but poorest in syntax and word choice when they answered the structured test. On the contrary, the paragraph-writing test showed that they were inconsistent with their knowledge in mechanics component. Moreover, the content component revealed that they had difficulty in developing their topic and purpose. Concerning the needs analysis of this study, the grammar-based materials that fit in improving ESP composition skills of the respondents are lessons on syntax, word-choice, and selection/development of topic and purpose. In addition, the materials will also include lessons on structural flaws, parallelism, subject-verb agreement, punctuation and mechanics, paragraph writing, and composition writing.

Keywords: English for specific purposes, grammar-based materials, written communication, writing materials, ESP compositions.

1. Introduction

Writing remains the most difficult and complicated skill compared to other macro language learning skills. Although there have been numerous kinds of research that underscore different strategies for enhancing writing, a lot of composition teachers still remain frustrated whenever they check the written outputs of their students. The challenging nature of written communication causes many ESP engineering students to neglect the said skill and it becomes the least of the priorities for those who do not consider themselves good writers. However, being able to write well is a very important 21stcentury skill required both in the academe and in the workplace. The use of correct grammar in written communication still remains the number one problem among ESP students based on the studies of Ruminar (2018) and Syvak (2018). Although this research does not criticize the modern approaches for enhancing students' writing skills, the author maintains that deemphasizing the role of grammar can defeat these strategies. There are drawbacks if the grammar is separated from the teaching of ESP writing. The main purpose of this study was to determine the grammar-based materials for improving the ESP compositions of the respondents based on the needs analysis and required writing competencies of the Bulacan State University computer engineering students. ESP grammar lessons come with various learning materials aimed at suiting the needs of students in different science and technology fields, particularly engineering.

Specifically, this study sought answers to the following sub-questions: How may the respondents be described in terms of personal profile, language profile, reading preferences, viewing habits, and study habits? What are the required composition skills in Computer Engineering according to the Commission on Higher Education (CHED)? What are the features of the writing aptitude of the respondents? What ESP grammar-based materials may be prepared to improve the students' composition skills?

2. Methods

The descriptive method of research is used in this study because it explains some current situations, practices, conditions, or phenomena. Since this study is concerned with the existing status of the respondents' writing aptitude, the researcher reckons the idea that the descriptive method is the most suitable for this present investigation. Among the types of descriptive research mentioned above, the survey method is the most appropriate to use in this study. Conducting a survey can be reckoned as a means of gauging the properties of the respondents through the use of questionnaires, interviews, testing materials, and other related research instruments. In other words, the researcher probed into the writing aptitude of computer engineering students to assess their characteristics as a group and their present status in ESL composition writing. Using non-random or purposive sampling, the researcher chose a total of 80 respondents who were composed of 49 females and 31 males belonging to sections II-A and II-B, taking up a computer engineering course. Moreover, a descriptive study is appropriate for two classrooms considered as one group. In other words, with this limited number of students, their present condition in ESP composition was thoroughly analyzed whether they were capable of meeting the standard writing skills required of them as computer engineering students.

The main instruments used in this study are the following: a questionnaire (profile) and two testing instruments (a non-standard grammar test based on the table of specifications and a paragraph writing test). The questionnaire, which is composed of 20 questions, focuses on the following parts: personal profile, economic profile, language profile, reading preferences, television viewing habits, and study habits of the respondents. In addition, the questionnaire was patterned after the previous studies conducted at Bulacan State University and was revised by the researcher based on the context of the study. The researcher submitted the first draft of the questionnaire to his adviser for comments and suggestions, which were incorporated into the final draft. Then, it was distributed to the 80 respondents enrolled in B.S. Computer Engineering II-A and II-B. The researcher collected the answered questionnaire assuring the respondents that everything was secured with full confidentiality. Also, the researcher constructed a non-standard test based on the table of

International Journal of Recent Innovations in Academic Research

specifications divided into five columns. The first column shows the five writing components with their corresponding number of items, which were included in the test such as grammar, syntax, mechanics, organization/coherence, and word choice. Consisting of different objectives, the second column shows the learning activities. Moreover, the third and fourth columns show the number of items and the placement of these items in the test. Lastly, the fifth column shows the percentage of each item for a total of 100 percent. Further, the researcher also prepared a flowchart on how computers work. Its purpose was to measure the respondents' ability to write a paragraph by process, based on the flowchart shown. In short, the non-standard test and the paragraph development test revealed which of the five writing components manifested the students' writing deficiencies. In turn, the researcher prepared ESP grammar-based materials aimed at improving their composition skills. The questionnaire and testing instruments prepared based on the foregoing were administered to COE II-A and II-B students.

The instruments were administered to the respondents in the month of August 2022. The researcher wrote a letter requesting from the Dean of the College of Engineering, asking permission that he be allowed to administer the research instruments online. In addition, the responses found in the profile of the students were tabulated using sheets of graphing paper. The names of the respondents were written alphabetically on the extreme vertical left column. Opposite to this are the tallied responses. The results were based on the raw scores using the following statistical tools: mean for the age of the respondents and their average grade in English in the fourth year; whereas, the frequency and percentages were also used for the following variables: personal profile, economic profile, language profile, reading preferences, viewing habits, and study habits. Using the same procedure, the answers to the grammar test were tallied to get the raw scores. Opposite to this are five columns, which are divided into grammar (35 pts.), sentence/syntax (20 pts.), mechanics/fragments, comma splice, and run-on (35 pts.), organization/coherence (20 pts.), and word choice (10 pts.). These are the five writing components that measured the students' grammatical competence. Under these are the raw scores made by the 72 respondents. The number of respondents was 80; unfortunately, eight of them were absent during the grammar test. Thus, the grammatical competence of the students consisting of five key areas was tallied using the following statistical treatments: mean, median, mode, standard deviation, percentile ranks, skewness, and kurtosis. Below is the table of specifications on which the grammar test was based:

KEY AREAS	Learning Activities	No. of	Placement	Percentages			
		Items					
1) Grammar	-Editing errors in subject/verb	15	I–A. 1–15	12.50%			
	agreement						
	-Avoiding unnecessary shifts	10	B. 1–10	8.33%			
	in tense, person, number, and						
	mood						
	-Using correct articles and	10	C. 1–10	8.33%			
	prepositions						
2) Sentence/	-Correcting faulty parallelism	5	II–A. 1– 5	4.17%			
Syntax							
	-Improving illogical sentence	5	B. 1–5	4.17%			
	-Changing the order of	10	C. 1–10	8.33%			
	sentence parts						
3) Mechanics,	-Improving fragments, comma	10	III-A.1-10	8.33%			
Fragments,	splices, and run-on			12.50% 8.33% 8.33% 4.17% 4.17% 8.33% 8.33% 8.33% 8.33%			
Comma Splice,	-Supplying the correct	10	B. 1–10	8.33%			
Run-On	punctuation marks						

 Table 1. Table of Specifications

International Journal of Recent Innovations in Academic Research

	-Correcting spelling errors	15	C. 1 –15	12.50%
4) Organization	-Using transitional devices in	10	IV–A. 1–10	8.33%
and Coherence	sentences			
	-Achieving coherence to	10	B. 1–10	8.33%
	express clear and logical			
	sentences			
5) Word-Choice	Editing frequently occurring	10	V-1-10	8.33%
	errors such as troublesome			100.00%
	words & phrases, double			
	negatives, and frequently			
	confused words			

Finally, the paragraphs were scored using the criteria found in the composition evaluation form of Schaffrat *et al.*, (1989). After scoring the paragraphs, they were tabulated using the mean, median, mode, standard deviation, percentile ranks, skewness, and kurtosis.

Standards for Holistic Evaluation

Content	1–Low	3–Average	5–High
1	Unclear, unimaginative writing.	Understandable but unimaginative writing.	Imaginative, interesting writing.
2	Boring or poorly defined topic.	Topic adequately limited and defined.	Well-chosen, precisely developed topic.
3	Purpose unclear, or not achieved in the writing.	Purposedefinedadequately.Notcompletely achieved.	Clear, well-defined purpose. Writing achieves purpose.
4	Writing so lacking in full detail that topic remains undeveloped.	Incomplete development. More information needed.	Topicthoroughlycovered.Writing is rich indetail.
5	Many irrelevant sentences or details.	Few irrelevant sentences or details.	Well-chosen, relevant sentences and details.
6	Disjointed ideas. No transitional words, phrases, or ideas.	Inconsistent flow. Some transitional devices.	Ideas flow well. Good use of transitional devices.
7	Lack of any logical organization of ideas.	Some organization of ideas evident.	Well-organized ideas. Type of organization suited to topic and purpose.
8	Dull, general words, poorly chosen. Inappropriate to audience.	Suitable but unimaginative language. Generally appropriate to audience.	Specific, vivid language. Appropriate to audience.

Mechanics

1	Many fragments and run-	Few fragments and run-	No fragments or run-						
	on sentences. Frequent	ons. Some mistakes in the	ons. Few mistakes in the						
	mistakes in the use of	use of nouns, verbs, and	use of nouns, verbs, and						
	nouns, verbs, and	pronouns and in subject-verb pronouns and in su							
	pronouns and in subject-	agreement.	verb agreement.						
	verb agreement								
2	Frequent mistakes in	Occasional mistakes in	Infrequent mistakes in						
	capitalization.	capitalization.	capitalization.						
3	Punctuation marks	Punctuation marks usually	Infrequent mistakes in						

International Journal of Recent Innovations in Academic Research

	frequently misused or	used correctly.	punctuation.
	missing.		
4	Frequent mistakes in	Occasional misspellings,	Infrequent spelling
	spelling, without any	usually indicating an	mistakes.
	indication of awareness of	approximation of the correct	
	spelling patterns.	spelling and an awareness of	
		spelling patterns.	
5	Paragraphs not indented.	Some carelessness or	Correct form. Neat, legible
	Writing	inconsistency in	handwriting.
	illegible. Incorrect	form. Occasionally hard to	
	headings or margins.	read.	

3. Results

3.1 Demographics

Variables	Frequency	Percent
Sex	110440005	
Male	31	38.75
Female	49	61.25
	80	100.00
Age		
Mean (17 years old) and above	80	100.00
High School of Origin		•
Public	40	50.00
Private: Sectarian	23	28.75
Non-Sectarian	17	21.25
	80	100.00
Average Grade in English (Fourth-Ye	ar)	·
Below mean	34	42.50
Mean (87.25) and above	46	57.50
	80	100.00
Educational Attainment of Both Paren	nts	
Doctorate Degree	3	3.75
College Graduate	59	73.75
College Undergraduates	33	41.25
High School Graduate	32	40.00
High School Undergraduate	14	17.50
Elementary Graduate	11	13.75
Elementary Undergraduate	8	10.00
	160	100.00

Table 2. Personal Profile of the Respondents

Table 2 presents the profile of the respondents based on their personal variables. It shows that among the B.S. Computer Engineering students, 49(61.25%) were females and 31(38.70%) were males constituting a minority. Obviously, all of the respondents were 17 years old and above. This means that none of them whose age is 16 or below belonged to the group. As regard high school of origin, 40(50%) came from public schools, and another 40(50%) from private schools of which 23(28.75%) were sectarian schools while 17(21.25%) were from non-sectarian schools). Generally, 46(57.50%) of the respondents earned an average grade of 87.25% and above in English in the fourth year, and only 34(42.50%) got average grades below the mean. Lastly, parents' educational attainment variable shows that only three (3.75%) have a doctorate; none has a master's degree; 59(73.75%) were college graduates; 32(40.00%) were high school

graduates; 14(17.50%) were high school undergraduates; 11(13.75%) were elementary graduates; and four (5.00%) were elementary undergraduates.

Table 3 Sources of Information

Sources of		Utilizing Sources of Information Frequencies								
Information	Al	ways	Ó	ften	Occ	asional	Se	ldom	Never	
	F	%	F	%	F	%	F	%	F	%
Smart TV/Smart	67	83.75	10	12.50	2	2.50	1	1.25	0	0
Phones										
Radio	40	50.00	27	33.75	4	5.00	6	7.50	3	3.75
Books	22	27.50	34	42.50	17	21.25	5	6.25	2	2.50
Newspapers	17	21.25	20	25.00	21	26.25	16	20.00	6	7.50
Desktop/Laptop	8	10.00	10	12.50	12	15.00	12	15.00	38	47.50
Magazines	2	2.50	11	13.75	32	40.00	26	32.50	9	11.25
Others	1	1.25	0	0	2	2.50	0	0	0	0
(unspecified)										

3.2 Sources of Information

In this "Information Age," it is important to have such sources of information at home so that one can keep abreast with significant happenings locally and globally. The last part of Table 3 reflects that among the common sources of information utilized by the respondents at home, 67(83.75%) always have a smart TV and 40(50.00%) always use radios either analog or digital. Similarly, 34(42.50%) believe that printed books or eBooks are their sources of knowledge. Almost a quarter (26.25%) reads printed or online newspapers and 32(40.00%) have magazines. In addition, almost half (47.50%) of them do not use online platforms in acquiring information.

3.3 Language Profile

Referring to the language profile of the respondents, Table 4 shows that among the B.S. of computer engineering students, 75(93.75%) speak Tagalog and only 5(6.25%) speak Kapampangan. Also, 61(76.25%) never had the opportunity of improving their English in terms of vocabulary and language use through tutorial classes and training programs. Only 19(23.75%) had the chance of improving their language skills in English.

Table 4. Language Profile of the Respond	Table 4. Language Frome of the Respondents									
Variables	Frequency	Percent								
Students' First Language										
Tagalog	75	93.75								
Kapampangan	5	6.25								
	80	100.00								
Efforts Made to Improve the Students' Vocabulary and Lang	uage Use									
Yes	19	23.75								
No	61	76.25								
	80	100.00								
Mode by Which Students Express English Comfortably										
Writing	63	78.75								
Speaking	17	21.25								
	80	100.00								
Mode by Which Students Learn English Effectively										
Reading	50	62.50								
Listening	30	37.50								
	80	100.00								

Table 4. Language Profile of the Respondents

Moreover, 63(78.75%) claim that they can express English more comfortably through writing than speaking, of which only 17(21.25%) expressed their ability to converse. Further, 50(62.50%) of the respondents believe that they learn English effectively through reading, and 30(37.50%) learn the language through listening.

3.4 Reading Preferences

Using the guide below, Table 5 shows that 34(42.50%) of the respondent are exposed to news stories more often than the other sections in the newspaper, namely: life and leisure, 30(37.50%), features and documentaries, 27(33.75%), and editorial, 34(42.50%). The table reflects that they need to keep themselves abreast with the recent developments in the country and in other parts of the world. On the other hand, 31(38.75%) occasionally loan literature and language arts books, and 21(26.25%)occasionally loan fiction books, because these are just one of the requirements in their subject. The least frequently loaned books are history/bibliography/travel books, 12 (15.00\%).

Table 5. Reading Preferences of the Respondents										
Variables]	Reading	Frequ	encies in	n Eng	lish		
	A	ways	0	ften	Occa	asional	Se	ldom	N	ever
	F	%	F	%	F	%	F	%	F	%
Newspaper section read	by th	e studen	ts							
Editorial	3	3.75	19	23.75	34	42.50	20	25.00	4	5.00
Life and Leisure	19	23.75	30	37.50	12	15.00	14	17.50	5	6.25
Comics/Horoscope	20	25.00	19	23.75	17	21.25	17	21.25	7	8.75
News Stories	16	20.00	34	42.50	15	18.75	10	12.50	5	6.25
Features/Documentaries	14	17.50	27	33.75	19	23.75	15	18.75	5	6.25
Others (varied answers)	3	3.75	2	2.50	3	3.75	2	2.50	0	0
Books Loaned in the Lib	orary	(printed	/electi	ronic)						
History/Bibliography/	3	3.75	10	12.50	26	32.50	29	36.25	12	15.00
Travel										
Science & Match	20	25.00	25	31.25	19	23.75	9	11.25	7	8.75
Technology/Useful Arts	10	12.50	27	33.75	19	23.75	16	20.00	8	10.00
Literature/Language	5	6.25	15	18.75	31	38.75	19	23.75	10	12.50
Arts										
Fiction	12	15.00	18	22.50	21	26.25	20	25.00	9	11.25
Books Purchased										
Science Fiction	14	17.50	19	23.75	27	33.75	20	25.00	0	0
Inspirational	14	17.50	19	23.75	29	36.25	11	13.75	5	6.25
Computer Books	11	13.75	20	25.00	23	28.75	19	23.75	5	6.25
Romance/Love Stories	10	12.50	16	20.00	26	32.50	12	15.00	15	18.75
Coffee Table Books	6	7.50	3	3.75	10	12.50	27	33.75	33	41.25
Classics	2	2.50	13	16.25	23	28.75	19	23.75	23	28.75
Others (unspecified)	1	1.25	3	3.75	2	2.50	0	0	0	0
No Response = 6										
Types of Newspaper Sub	oscrip	tions								
Family	16	20.00	22	27.50	14	17.50	12	15.00	16	20.00
Personal	4	5.00	12	15.00	20	25.00	23	28.75	21	26.50
School	4	5.00	14	17.50	19	23.75	22	27.50	21	26.50

Among the books in the university E-library, 27(33.75%) of the respondents often loan technology and useful arts books, and 25(31.25%) often loan science and mathematics books. This is consistent with the course they are pursuing since they are engineering students. The second to the last part of Table 5 deals with the books usually purchased by the respondents. Among the books mentioned 29(36.25%) buy inspirational books: 27(33.75%) buy science fiction books; 26(32.50%) buy romance/love stories books; 23(28.75%) buy computer books and 23(28.75%) buy classics books. On the other hand, 33(41.25%) never buy coffee table books. Further, the last part of Table 5 shows that in most frequencies, 22(27.50%) of the respondents often avail of newspapers through family subscription; 23(28.75%) seldom avail through personal subscription and 22(27.50%) also seldom avail through school subscription. Lastly, 6 respondents abstained from answering this part of the research instrument.

3.5 Viewing Habits

As regards Smart TV viewing habits, Table 6 shows that among the television programs, 30 (37.50%) of the respondents always watch cartoon animations; 42(52.50%) often watch news and public affairs programs and 29(36.25%) also often watch telenovelas. Occasionally, 38(47.50%) watch documentary films.

Variables	Viewing Frequencies									
	Al	ways	0	ften	Occa	asional	Se	ldom	N	ever
	F	%	F	%	F	%	F	%	F	%
T.V. Programs Watche	ed									
Cartoons/Anime'	30	37.50	25	31.25	11	13.75	14	17.50	0	0
Telenovelas/Movies	23	28.50	29	36.25	15	18.75	11	13.75	2	2.50
News/Public Affairs	25	31.25	42	52.50	9	11.25	4	5.00	0	0
Program										
Documentary Films	8	10.00	18	22.50	38	47.50	16	20.00	0	0
Others (varied	5	6.25	3	3.75	2	2.50	0	0	0	0
answers)										
English Movies Watch	ed									
Action	14	17.50	26	32.50	23	28.75	14	17.50	3	3.75
Comedy	27	33.75	35	43.75	11	13.75	5	6.25	2	2.50
Drama	12	15.00	22	27.50	26	32.50	16	20.00	4	5.00
Horror/Suspense	26	32.50	31	38.75	15	18.75	7	8.75	1	1.25
Science Fiction	27	33.75	29	36.25	16	20.00	6	7.50	2	2.50
Adult Materials	5	6.25	7	8.75	13	16.25	35	43.75	20	25.00
Others (unspecified)	2	2.50	0	0	1	1.25	1	1.25	1	1.25
People Who Choose the Television Programs										
Parents	5	6.25	23	28.75	19	23.75	15	18.75	18	22.50
Siblings	3	3.75	18	22.50	15	18.75	15	18.75	29	36.25
Myself	49	61.25	22	27.50	9	11.25	0	0	0	0
Others	1	1.25	2	2.50	2	2.50	6	7.50	2	2.50

Table	6	Viewing	Habits	of the	Respond	lents
1 ant	υ.	viewing	manns	or the	respond	i ch i c

Meanwhile, the second portion of Table 6 shows the English movies watched by the respondents. Among these movies, comedy (35 or 43.75%), horror and suspense (31 or 38.75%), science fiction (29 or 36.25%), and action (26 or 32.50%) are the most frequently watched movies. Regarding the people at home who choose the television programs, 49(61.25%) of respondents always choose the programs by themselves. Only 23(28.75%) responded that their parents often choose the programs. Also, 29(36.25%) declared that their fellow siblings never decide on the television programs they watch.

3.6 Study Habits

Table 7 reveals that 28(35.00%) of the respondents devote only 3 hours a week to studying lessons in English. In addition, the second part of Table 7 shows that only 2(2.50%) of the respondents always study books and other reading materials in English. Moreover, 29(36.25%) admitted that they often

consider English materials in their study. However, 39(48.45%) of them occasionally study these materials and one (1.25%) declared that he has no time for them.

Variable	Studving Lessons in English												
variable		Froque	nev	Study		550115 111 1	Percent						
Number of He	une in a	Wook	JIICy				10	cent					
	ours in a	week		1.05									
7 and above		1			1.25								
6 Hours		3					3	.75					
5 Hours		8					1(0.00					
4 Hours		6					,	7.50					
3 Hours		28					35	5.00					
2 Hours		13					16	5.25					
1 Hour		15					18	3.75					
30 minutes		6					,	7.50					
TOTAL		80					10	0.00					
Variable				Re	ading	Frequen	cies						
Books and	Alw	ays	0	ften	Occ	Occasional Seldom			Never				
other reading	F	%	F	%	F	%	F	%	F	%			
materials in	2	2.50	29	36.25	39	48.75	9	11.25	1	1.25			
English													
				Libra	ary Vi	sit Frequ	encies		•				
Schedule	2	2.50	6	7.50	25	31.25	26	32.50	21	26.25			
Free time													
When Doing	28	35.00	34	42.50	8	10.00	3	3.75	7	8.75			
Research													
Others	0	0	1	1.25	1	1.25	2	2.50	0	0			
(Unspecified)													

Table 7. Study Habits of the Respondents

Regarding how frequently they visit the library, the last portion of Table 7 shows that 34 (42.50%) often go to the library only when doing research and 26(32.50%) seldom go to the library during free time. This only proves that the respondents are not motivated to read. They do not take the initiative of frequently visiting the library for them to be able to cope up with their lessons in school.

3.7 Required Composition Skills in Computer Engineering According to CHED

According to the Commission on Higher Education (CHED) No. 86, Series of 2017 under Section 2.5 Instructional Materials, Methods, and Support, particularly 2.5.1.3 (Basic Skills), "If the circumstances of students and the school finances so warrant, the school may offer remedial courses in basic mathematics and English language skills." This means that there are no specific required writing skills prescribed for B.S. Computer Engineering. The basic communication skills of the English language are generally taught to all engineering courses.

3.8 Features of the Writing Aptitude of the Respondents

3.8.1 Grammatical Competence: At a glance, one observes that Table 8 shows the students' relative deficiency in semantic and lexical competence. The table reflects that they rank lowest in the manipulation of syntactic structures. This condition can be explained by the students' low reading motivation (see Table 5).

The preceding parts indicate that students spend more time watching TV shows or listening to the radio in both traditional and digital media than reading books. Specifically, the books that they read are not related at all to what they study (see Table 7). They seldom go to the library unless being told to do so (see Table 7).

Writing Components	Grammar (35)	Syntax (20)	Mechanics (35)	Coherence (20)	Word Choice (10)	Total (120)					
Statistics											
Mean	21.653	3.903	22.347	13.597	5.889	16.241					
Median	25.833	3.875	23.192	14.200	5.540	17.773					
Mode	24.000	4.500	24.000	16.000	5.000	17.833					
SD	3.567	1.483	4.670	2.453	1.219	8.152					
Percentile10	16.000	2.000	16.000	10.000	4.000						
Percentile 90	26.000	6.000	28.000	16.000	8.000						
Skewness	-3.516	0.057	-0.543	-0.737	0.859	-0.564					
Kurtosis	2.583	0.969	1.933	2.366	1.385						

 Table 8. Grammatical Competence of the Respondents

3.8.2 Writing Competence: Table 9 shows that on a scale of 5, the students registered the lowest score in purpose and topic. Such is explained by the fact that students write only when they are asked to. They do not write of their own volition most likely because most of the writing activities that they had were not content-based. Moreover, they did not have a specific purpose in mind because they just write for the sake of writing and not to communicate ideas. Furthermore, in actual writing, the students manifested a relatively poorer grasp of the mechanics because such activity requires multilevel skills. If the sentences are structured, the students can easily identify or use the correct mechanics unlike when they develop the text themselves, because such activity is a multi-level skill. While in writing, they attend to other components like interest, topic, purpose, development, unity, continuity, organization, and language; hence, the students are distracted.

CONTENT														
Writing Components	Interest	Topic		Purpose	Development	Unity			Continuity	Organization		Language		Average
Statistics														
Mean	2.833	1.861		1.777	2.222		3.000	2.277		2.138		3.055		2.395
Median	2.363	1.177		0.666	1.6	76 2.500		1.	687 1.705		5 2.538		8	1.789
Mode	3.000	1.000		1.000	3.0	000 3.000		1.	.000 3.00		0 3.00		0	2.250
SD	1.236	0.990		1.082	1.2	27 1.054		1.	.304 1.04		4 1.052		2	1.497
Percentile10	1.000	1.000		1.000	1.0	.000 1.00		1.	000	1.000		1.000		
Percentile 90	5.000	3.000		3.000	3.0	00	3.000	3.000		3.000		5.000		
Skewness	1.141	2.0	73	3.080	1.335		1.423	1.357		1.244		1.474		1.214
Kurtosis	0.591	0.5	89	0.333	0.8	38	1.25	0.844		0.853		0.635		
MECHANICS														
Writing	Grammar Ca		pitalization Pu		Punctuation		Spelling		Fo	Form A		verage		
Components	usag	e												
Mean	2.972	2	3.694			2.305		4.388		2.916		3.255		
Median	2.47	8	3.500			1.944		5.000		2.445			3.073	
Mode	3.00	0	5.000			3.000			5.000		3.000			3.800
SD	1.17	8	1.459			1.008			1.231		0.	0.968		1.912
Percentile10	1.00	0	1.000			1.000			3.000		1.	1.000		
Percentile 90	5.00	0	5.0				3.000		5.000		3.000			
Skewness	1.25	8	0.399			1.074			-1.491		1.	1.460		0.286
Kurtosis	0.62	0 0	0.			0.972			2.	2.500		223		

 Table 9. Writing Competence of the Respondents

3.9 ESP Grammar-Based Materials for Improving Composition Skills

To supplement the materials, other grammar lessons are included. These are the lessons with their corresponding sub-topics: (1) Syntax-predication, coordination and subordination, complementation, and modification; (2) Structural Flaws-sentence fragment, run-on sentence, comma splice, and problem modifiers; (3) Parallelism; (4) Subject and Verb Agreement; (5) Punctuation and Mechanics-punctuation, capitalization, abbreviations, italic marks, and syllabication and hyphens; (6) Word-Choice-frequently confused words, choosing the right words, and choosing the right level of detail; (7) Topic and Purpose in Writing-writing prompts for science, ways of overcoming writer's block, finding a focus, and unstructured methods of discovery; (8) Paragraph-Writing-definition of paragraph, unity, coherence, emphasis, completeness in a paragraph, methods of paragraph development, and guideline for revising a paper; and (9) Composition Writing-basic outline format for essay, an organization in scientific writing, and in search of form.

The exercises are designed to enhance the ESP composition skills of Computer Engineering students. For this reason, most lessons deal with sentences and paragraphs about computers and other texts so that the respondents will have unlimited opportunities to learn the basic concepts of grammar by using concepts beyond their field of specialization.

4. Discussion

Based on the personal profile of the respondents, Dotterer and Wehrspann (2016) explained that the educational attainment of parents had a direct bearing on the formation and development of students' study, practices, habits, and attitudes." Since most of the parents were college graduates, it is safe to infer that they also wanted their children to follow in their footsteps. On the other hand, Singh and Choudhary (2015) explained that some parents have low educational attainment due to their poor economic conditions. Moreover, they added that most of these parents focus much of their attention on how to make a living and how to manage their homes. Further, the percentage of the parents of the respondents who are still living is higher than those who are deceased–father (3 deceased); mother (8 deceased). Since the respondents are in their early teens, it can be assumed that their parents are in their early forties or early fifties.

In this "Information Age," it is important to have such sources of information at home so that one can keep abreast with significant happenings locally and globally. Among the common sources of information utilized by the respondents at home, 67 always have a smart TV and 40 always use the radio either analog or digital. Since most respondents own smartphones, the said platforms are always used because they can access information anywhere, anytime, and at their own convenience. This confirms the study of Anshari *et al.*, (2017).

Similarly, 34 believe that printed books or eBooks are their sources of knowledge. Almost a quarter (26.25%) reads printed or online newspapers and have magazines. In addition, almost half (47.50%) of them do not use online platforms in acquiring information. This could mean that the said respondents have either no fast internet connection at home or no smartphone to be used inside or outside the home.

As regard the language profile of B.S. of Computer Engineering students, 75 speak Tagalog and only 5 speak Kapampangan. Also, 61 never had the opportunity of improving their English in terms of vocabulary and language use through tutorial classes and training programs. Only 19 had the chance of improving their language skills in English. Moreover, 63 claimed that they can express English more comfortably through writing than speaking, of which only 17 expressed their ability to converse. It is common knowledge that many students find speaking difficult because of fear to express the English language (Pineda and Cerna, 2023). This does not necessarily mean that they are good at writing. Basically, writing is a process that follows certain steps. When one writes, he finds enough time to formulate his ideas before putting them into paper. This can be the reason why they are more relaxed when writing. In contrast, speaking is spontaneous in nature. It is a natural skill that

International Journal of Recent Innovations in Academic Research

requires the speaker to interact with other people. Consequently, running out of words during oral communication compels one to refrain from speaking. Further, 50 of the respondents believe that they learn English effectively through reading, and 30 learn the language through listening. One possible explanation for this is that the respondents feel the need to read due to the following reasons: obtain information and instructions, act in a play or play a game or puzzle, keep in touch with friends, know when or where something will take place, know what is happening, and enjoy or get excited (Meniado, 2016). Therefore, it can be deduced that the respondents are more comfortable learning English through reading rather than listening. Also, newspaper sections written in English are worth reading, for they provide readers with important reports on different new articles that bring education, entertainment, and information. Besides, they can also improve the reader's language skills.

The reading preferences of the respondents reveal that 34 of them are exposed to news stories more often than the other sections in the newspaper such as life and leisure, features and documentaries, and editorial. This only reveals that the respondents need to keep themselves abreast with the recent developments in the country and around the world. The learners occasionally loan literature, language, and fiction books because these are a part of their academic requirements. Books and history/bibliography/travel books are the least loaned books due to the fact that these are not in the interest of computer engineering students. In other words, the reading preferences of the students reveal that they are motivated to read loaned books in the library not for any other purpose but for some functional reasons. One is to understand more about the subjects that they are majoring in.

Most people watch TV because of its satisfying, relaxing effects. Based on the findings of this study, high school students whose mothers attained a college education and above tend to view the following shows more frequently: cartoons, animation, and science fiction. The major motivation of the students in TV viewing was to have fun, relaxation, and entertainment, and not so much on its educative function. This indicates that the respondents are either indifferent toward pornography or they do not have the freedom to watch these materials at home due to their parent's disapproval. More so, it can be deduced that most respondents watch TV more often to be entertained rather than to be informed (Webb, 2015). In spite of the fact that most of the respondents are teenagers, many of them are still fascinated by animated motion pictures. They love watching these programs more than they watch the news.

In terms of study habits, the result reveals that 28(35%) of the respondents devote only 3 hours a week to studying lessons in English. Since the respondents are engineering students, it can be concluded that they devote more time to studying the subjects within their field of specialization, indicating that the students do not prioritize English subjects. Regarding how frequently they visit the library, the last portion of Table 7 shows that 34 often go to the library only when doing research, and 26 seldom go to the library during free time. This only proves that the respondents are not motivated to read. They do not take the initiative of frequently visiting the library for them to be able to cope with their lessons in school.

As regard the Commission on Higher Education (CHED) required writing competency for computer Engineering students, the school may offer remedial courses in basic mathematics and English language skills. Within each course syllabus, there shall be some course component directed toward improving student proficiency in the skills of reading, writing, and speaking technical English. The requirement mentioned above shall be applicable in every course in the engineering curricula, and all laboratory course activities shall involve the writing of individual reports with emphasis on the development of skills in technical communication or the use of adequate oral substitutes to increase student proficiency in oral technical English.

Given the foregoing, the researcher prepared ESP grammar-based materials according to the needs analysis of the study, for it revealed the respondents' writing deficiencies manifested in their

International Journal of Recent Innovations in Academic Research

grammar and paragraph-writing tests. Thus, lessons on syntax, word choice, and the development of topic and purpose are emphasized. To supplement the materials, other grammar lessons are included. These are the lessons with their corresponding sub-topics: syntax, structural flaws, parallelism, subject and verb agreement, punctuation and mechanics, word choice, topic and purpose in writing, paragraph writing, and composition writing. Again, this confirms the study of Fareed *et al.*, (2016). To enhance the ESP compositions of the respondents, the following recommendations are being forwarded: First, parents should encourage their children to watch television programs and read printed materials that promote the use of the English language. Second, composition teachers should motivate students to learn writing in their second language through reading. This can happen if they are encouraged to frequently visit the library by giving them reading assignments. Third, authors of English composition and grammar lessons. Fourth, students specializing in computers should utilize computer-assisted language learning software products, for these are helpful in enhancing their language skills. And fifth, similar studies on the same topic be conducted using different variables, research designs and subjects.

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