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ARTICLE

Analyzing the Demographic-based Grammatical Competence and Its Relationship to Academic Performance in Higher Education Setting

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ABSTRACT

The purpose of this study was to assess the grammar competence and English academic performance of first-year college students in Basilan State College. Stratified random sampling (n = 464) was carried out to sample the participants from each college within the institution. A standard grammatical test was used to assess the grammar skills of the participants. English grade point average (GPA) represented the students' academic performance in English. Findings indicated that the first-year college students had limited skills in grammar mainly limited to familiar situations and had frequent problems in understanding and expression. Despite this, they still perform satisfactorily in their English classes. There was a significant moderate correlation between students' grammar competence and overall academic performance. Education and health sciences students were highly competent compared to students from criminal justice, information and communication, and arts and sciences. Understanding the interactions among grammatical competence, academic achievement, and contextual factors may have significant effects on instructional strategies and direct the creation of focused interventions that will integrate students' linguistic and intellectual growth. *Keywords:* English academic performance; Grammatical competence; Higher education

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1. Introduction

In recent decades, there has been a growing focus on the study of English as a second language (ESL) in higher education institutions worldwide (Alqahtani, 2022; Rienties et al., 2012). ESL generally refers to people who utilize the English language as a secondary language, different from their actual native language (Allen, 2017; Seran and Nalenan, 2022). The two levels of language acquisition proficiency for second language learning were social cognitive language and academic communicative language (Alqahtani, 2022). This study focused on the concept of academic communicative language, specifically grammatical competence, among college students.

Tilfarlioğlu and Yalçın (2005) believed that grammar is an integral component of language as it provides details about sentence structure, word categorization, and the formation of word groups within sentences. Grammar, according to DeCapua (2008), refers to the set of rules that govern the formation of words and the construction of sentences. Thus, grammar can be defined as the systematic arrangement of linguistic elements or the fundamental framework of a language (Syafryadin et al., 2022). This allows students to structure and construct coherent sentences (Quiñones, 2022). It is imperative to note that the absence of proper grammar hinders one's ability to communicate effectively through speech or writing.

The purpose of this study was to analyze the grammatical competence of the first-year college students from Basilan State College main campus. This study was the first quantitative paper published about the grammatical competence of Filipino students in Zamboanga Peninsula, Philippines.

Learning grammatical patterns among adults using a second language (L2) has proven to be a formidable challenge (Chen et al., 2022; Friederici, 2017; Luque and Morgan-Short, 2021). Modern learners often perceive the process of grammar learning as tedious and uninteresting because of the need for a significant investment of time, concentration, and cognitive effort (Shirav and Nagai, 2022). The primary objective of grammar instruction is to facilitate

students' comprehension of language patterns and the corresponding rules governing them (Bikowski, 2018; Safford, 2016). The acquisition of grammar knowledge and adherence to grammar rules are considered essential factors in attaining language proficiency (Quiñones, 2022).

Sahagun (2021) observed that education students exhibited a lack of familiarity with grammar rules, particularly in areas such as parts of speech and subject-verb agreement. As aspiring educators, they must become familiar with grammar guidelines because having an extensive knowledge of grammar concepts and the ability to apply them correctly is critical (Quiñones, 2022). Similarly, Merza (2022) found out that students feel challenged in English grammar because of subject-verb agreement, pronoun-antecedent relationships, noun pluralization, adverb forms, adjective order, and comparisons in adjectives.

Pamuji (2020) discovered that students with strong grammatical skills perform better in writing due to increased confidence. Students with strong grammatical skills excel in writing and expressing their ideas effectively. As reflected in the study of Lutviana (2020) findings, improving grammar scores leads to higher writing scores. Students with poor grammar skills may struggle with writing while students with stronger grammar skills tend to write more effectively.

This study analyzed the grammatical competence of first-year college students in Basilan State College. The study assessed their competence through their academic achievement and written assessments using a standardized test, focusing on aspects such as word classes, subject-verb agreement, and sentence structure. The analysis explored how these grammatical skills correlated with their overall academic performance in English, providing data on the relationship between language proficiency and academic success.

2. Literature review

In recent years, there has been a significant volume of literature published on the resurgence of grammar in foreign language learning. This resurgence can be seen as a response to the widespread adoption of the communicative approach.

Defining grammatical competence can be a highly complex task, primarily due to the inherent ambiguity surrounding the definition of the term "competence" itself. The concept of competence remains somewhat elusive and lacks a precise and universally agreed-upon definition (Le Deist and Winterton, 2005). Most recent studies followed Chomsky (1965) account for competence referring as the learner's knowledge of a language. For Hartle (1995), competence is "a characteristic of an individual that has been shown to drive superior job performance." This concept includes performance, showing that the competence of a student extends beyond knowledge to results and performance.

With the advancement of applied linguistics, the term "competence" has undergone growth and evolution, comprising various other concepts such as ability and skill (Laabidi and Ouahbi, 2023). Following the trajectory of previous literature on competence, this study conceptually defines grammatical competence as an ability to understand and use the syntactic and morphological rules of a language accurately and effectively reflecting the knowledge of grammatical structures and the ability to apply this knowledge in practical communication, resulting in clear and correct language use.

Writing in a foreign language can be challenging for students due to the complicated tenses and grammar guidelines involved (Salman and Hazem, 2022). Ankawi (2015) reported that Saudi students in New Zealand struggle with academic writing due to grammatical difficulties, differences in the fundamental structures of Arabic and English, and sociocultural differences between these two languages. In Yemen, Algamal et al. (2021) discovered that learners committed errors like subject-verb agreement, wrong signal words, capitalization, misspelling of general words, punctuation, and misuse of quantifiers, when writing paragraphs.

Several empirical research examined learners' grammatical competence. For instance, Fikron (2018) found out that grammatical competence has a signifi-

cant influence in improving learners' communicative abilities which not only affects learners' language production, but also their language monitoring.

Ilam et al. (2022) conducted a study that determined the correlation between grammar mastery and speaking ability. The participants were eighth grade students at SMP TP 45 Denpasar during the academic year 2021–2022, totaling 40 students. Two instruments were used to assess the students' grammar mastery and speaking ability, constructed based on the criteria suggested by the first and second advisors. Findings revealed a significant correlation between the students' grammar mastery and their speaking ability, with a correlation coefficient of 0.423, indicating a moderate positive relationship between the two variables.

The current study was concerned about the grammatical competence of the first-year college students in Basilan State University. As per the review, no study in Southern Philippines was conducted regarding this matter. Nevertheless, some studies on the grammatical competence of Filipino students were prominent.

A study was conducted regarding the grammar competence of first-year college students. Merza (2022) evaluated the basic English grammar proficiency of first-year technology students at Don Mariano Marcos Memorial State University, Philippines. Data was collected through the descriptive method and a validated Achievement Test. The results revealed that the students were moderately proficient in basic English grammar. They showed strong skills in using verb tenses, prepositions, conjunctions, and possessive forms of nouns. However, they struggled with noun pluralization, subject-verb agreement, pronoun-antecedent relationships, types of adverbs and pronouns, the order of adjectives and adverbs, and comparisons in adjectives.

Andilab and Amante (2024) assessed the levels of English grammatical competence and grammatical knowledge of selected Grade 11 and Grade 12 Technical-Vocational-Livelihood and General Academic students from selected Senior High Schools in the Division of Siquijor for the School Year 2022–2023. Their descriptive method employed frequency

counts, straightforward percentages, weighted mean, and Pearson r to identify significant relationships. The findings revealed their grammatical competence ranged from somewhat to moderate mastery, and their grammatical knowledge ranged from slight to somewhat mastery.

Roca and Manla (2023) explored the grammar learning strategies and grammatical competence levels of 2nd year and 3rd year pre-service teachers. Employing a descriptive-correlational research method, results revealed that pre-service teachers extensively utilized Grammar Learning Strategies (GLS), with Cognitive GLS being the most utilized category and Socio-affective GLS being the least. However, they demonstrated a fair level of grammatical competence across various areas, including parts of speech, subject-verb agreement, pronoun-antecedent agreement, and adjective-adverb agreement. Furthermore, the study identified a highly significant relationship between the usage of grammar learning strategies and grammatical competence levels.

This study was inspired by the fact that Filipinos were generally competent in the English language. Filipinos value this language as an essential asset for their future. In fact, English proficiency is often seen as a key factor in securing better employment prospects, accessing higher education opportunities, and participating in global communication networks (Ceneciro et al., 2023; Chavez, 2021; Chavez, 2022; Chavez et al., 2023; Chavez et al., 2024). As a result, Filipinos view mastery of English as a symbol of competence and upward mobility, with many investing significant time and resources in improving their language skills through formal education, language training programs, and self-study initiatives.

3. Research question

This study aimed to examine, determine and analyze the Socio-cultural factors affecting reading comprehension levels and demographic-based grammatical competence of higher education students. Specifically, this study sought to answer the following questions:

What is the overall grammatical competence of first-year college students?

What is the academic performance level of first-

year college students?

Was there a significant relationship between the respondents' grammatical competence and their academic performance?

Was there a significant difference in the respondents' grammatical competence when data were grouped according to college course and socio-economic status?

4. Methodology

4.1 Research design

This study was a quantitative research that analyzed the correlation between academic performance in English and the overall grammatical competence of first-year college students from Basilan State College. Correlational analysis assesses the strength and direction of the relationship between two or more variables. Unlike causation, which implies that one variable directly affects another, correlation only indicates that changes in one variable are associated with changes in another.

In interpreting academic performance and grammatical competence, this study used descriptive analysis. Descriptive analysis summarizes and describes the main characteristics or features of a dataset (Chavez, 2020; Chavez, 2021; Chavez and Madrazo, 2019). This study used descriptors to represent the quantitative data in an interpreted narrative.

This study also analyzed whether student's grammar competence can potentially mediate their grammatical competence. Comparative analysis (Chavez and Lamorinas, 2023) was conducted comparing sub-variables of college/course (education, arts and sciences, criminal justice education, information and computer technology, health and sciences) and family income (poor, low-income, low-middle income, middle-middle income, upper-middle income).

4.2 Participants

This study was conducted on the main campus of Basilan State College. In the academic year 2021–2022, the school had a total of 2,323 first-year college students. Specifically, there were 157 from College of Education (CE), 1,210 from College of

Arts and Sciences (CAS), 179 from College of Criminal Justice Education (CCJE), 232 from College of Information, Communication, Computer and Technology (CICCT), and 545 from College of Health and Sciences (CHS).

This study carried out stratified random sampling to sample the participants from the institution. This study used 20% of the population to represent as samples. Hence, as presented in **Table 1**, this study had a total of 464 participants.

Table 1. Distribution of the study samples.

College/Course	N	Sample
CE	157	31
CAS	1,210	242
CCJE	179	36
CICCT	232	46
CHS	545	109
TOTAL	2,323	464

4.3 Research instrument

The grammatical test used in this study was a standardized test in vocabulary and grammar to determine the respondent's ability and competency in their English.

The vocabulary test consisted of a 45-item test divided into three levels: Easy (15 items), Average (15 items) and Difficult (15 items). The grammar test was composed of Subject-Verb Agreement which consisted of twenty-five (25) items and twenty (20) items on Verb tenses.

The objective type of test used for vocabulary was multiple choices with only three choices, while the grammar type of test items used sentence completion and identifying errors. This means that the items were assessed objectively and that there was only one correct answer for every item. **Table 2** is the matrix of the grammatical competence test.

Table 2. Matrix for grammatical competence test.

Linguistic feature	Type of objective	Item placement	Total
Paper I: Grammar			
Tenses	Sentence complete items	1–15	15
References	Error-recognition items	1–15	15
Subject-verb agreement	Error-recognition items	1–15	15
Subtotal:			45
Paper II: Vocabulary			
Easy	Multiple choice	1–15	15
Average	Multiple choice	16–30	15
Difficult	Multiple choice	31–45	15
Subtotal			45

4.4 Data gathering procedure

After preparing the instruments, the researcher received permission to administer the research instruments to prospective study participants from the college president's office. This authorization was then given to the college dean. After the request was approved, the researchers sought the master list of first-year students from each college for random sampling. After sampling the participants, they were contacted seeking permission to participate in the study. A consent form was employed and attached

to the questionnaire to verify the respondents' willingness to participate in the study. Only the students who signed the agreement were included in the study.

The language test on grammar competency took two hours. Each portion of the questionnaire took three hours to complete for the respondents overall.

The English GPA from the midterm and final grades of the first semester was used to determine the respondents' academic progress. Their grades were gathered from the college dean's grade records.

4.5 Data analysis

This study used JASP (Jeffreys's Amazing Statistics Program) version 0.18.2 to analyze the quantitative data gathered from grammatical competence test and English GPA. JASP is a free and open-source program for statistical analysis.

Descriptive analysis was carried out to analyze the grammatical competence and the English academic performance of the first-year college students. Descriptive analysis summarizes and describes the characteristics of a dataset and focuses on presenting the basic information of the data.

The English GPA of students was based on average grade in the first and second semester. The grading system in the Basilan State College is described in **Table 3**. This was the final computed grades they earned in the midterm and final grading periods in the midterm for School Year 2021–2022 which was the basis for the

analysis and interpretation of the data.

Table 3. Grading system in the university.

Grade	Description
96–100	Outstanding
91–95	Very Satisfactory
86–90	Satisfactory
80–85	Fair
75–79	Passing

In analyzing the overall grammatical competence of first-year college students, this study used mean/average. It is calculated by adding all the individual numbers in a dataset and then dividing the sum by the total number of values. The mean provides a central value that represents the overall dataset, offering a simple and clear indication of the typical value within the data. **Table 4** was used to describe the overall grammatical competence of the first-year college students.

Table 4. Grammatical test descriptors based on student score.

Scale	Level	Description
82–90	Expert User	Has fully operational command of the language; appropriate accurate and affluent with complete understanding.
73–81	Very good User	Has fully operational command of the language with only occasional unsystematic inaccuracies and inappropriateness; misunderstanding may occur in unfamiliar situation; handles complex detailed argument well.
64–72	Good User	Has operational command of the language, though with occasional inaccuracies, inappropriateness and misunderstanding in some situation; generally, handles complex language well and understand fairly complex language, particularly in familiar situation.
55–63	Competent User	Has generally effective command of the language despite some inaccuracies, inappropriateness and misunderstanding; can use and understand fairly complex language, particularly in familiar situation.
46–54	Modest User	Has partial command of the language, coping with overall meaning in most situation, though is likely to make mistakes; should be able to handle+D6 basic communication in own field.
37–45	Limited User	Basic competence is limited to familiar situation; has frequent problem in understanding and expression; is not able to use complex language.
28–36	Extremely Limited User	Coveys and understands only in general meaning in familiar situations; frequent breakdown in communication occur.
19–27	Intermittent User	No real communication is possible except for the most basic information using isolated words or short formulas in familiar situation and to meet immediate need; has great difficulty understanding spoken and written English.
10-18	Non-user	Essentially has no ability to use the language beyond possibly a few isolated words.
1–9	Did not attempt the test	No essential information.

Inferential analysis was conducted to determine the significant correlation between students' English GPA and their grammatical competence. This study also analyzed the potential difference in grammatical competence based on their college and family income.

Pearson's correlation coefficient (Pearson r) evaluates the strength and direction of the linear relationship between two continuous variables, herein the English GPA and the grammatical competence of the

students with r-value ranges from -1 to +1.

One-way Analysis of Variance (ANOVA) determines whether there are significant differences between the means of three or more independent groups. It is particularly useful when comparing multiple groups to see if at least one group mean is different from the others (Chavez et al., 2024). This study used one-way ANOVA to analyze whether the grammatical competence of the first-year college students differed based on their college and family income.

5. Results

Question 1. What was the overall grammatical competence of the first-year college students?

Table 5 shows the overall grammatical competence of the first-year college students. It shows that the students were limited users with the mean of 37.02 and a standard deviation of 9.181. This means that the students' basic competence is limited to familiar situations; has frequent problems in understanding and expression; and is not able to use complex language.

Question 2. What was the overall academic performance of the first-year college students?

Table 6 indicated that the first-year college students from Basilan State College were satisfactory (= 85.08; S.D. = 3.878) in their overall English academic performance based on their grades in the first and second semesters of the School Year 2021–2022. Question 3. Was there a significant relationship between the respondents' grammatical competence and their academic performance?

Table 7 presents that there was a moderate but significant correlation (r = 0.424; p = 0.005) between the grammatical competence and academic performance of first-year college students from Basilan State College in English.

Question 4. Was there a significant difference in the respondents' grammatical competence when the data were grouped according to college course and so-cio-economic status?

Table 8 presents the summary of comparative analysis conducted comparing the groups under college and family income. Findings indicated that there was a significant difference in the grammatical competence (F = 26.06; p = 0.000) of first-year college students in Basilan State College based on their college. No significant difference was observed based on their family income (F = 0.471; p = 0.757).

Table 5. Grammatical competence of first-year college students.

Variable	N	Mean	S.D.	Interpretation
Grammatical competence level	464	37.02	9.181	Limited users

Legend: 82–90 (Expert user); 73–81 (Good User); 55–63 (Competent User); 46–54 (Modest User); 37–45 (Limited User); 28–36 (Extremely Limited User); 19–27 (Intermittent User); 10–18 (Non-user); 1–9 (Did not attempt the test).

Table 6. Academic performance in English based on students' GPA.

Variable	N	Mean	S.D.	Adjectival rating
English academic performance	464	85.08	3.878	Satisfactory

Legend: 96-100 (Outstanding); 91-95 (Very Satisfactory); 86-90 (Satisfactory); 80-85 (Fair); 75-79 (Passing).

Table 7. Correlation matrix of grammar competence and English academic performance.

Independent variable	Dependent variable	r	Correlation	Sig.	Interpretation
Grammatical competence	Academic performance	0.424	Moderate	0.005	Significant
Legend: 0 (No Relationship); ±	±0.10-±0.2 (Weak); ±0.21-±0	0.5 (Moderate); 0.	5 (Strong Relation	ship).	

Table 8. Comparative analysis based on college course and family income.

Variables	Groups	N	Mean	S.D.	F	Sig.	Interpretation
	CE	31	38.61	7.419		,	
	CAS	242	35.71	8.730			
College	CCJE	36	26.86	9.037	26.03	0.000	Significant
	CICCT	46	38.59	9.621			
	CHS	109	42.17	6.647			
	Poor	376	36.9	8.71			
	Low-Income Class	70	37.99	11.109			
Family Income	Low Middle-Income	11	37.09	10.995	0.471	0.757	Not Significant
	Middle Middle-Income	6	33.17	11.822			
	Upper Middle-Income	1	37				
*Significant at α	= 0.05.						

For significant results, this study used Scheffe Test post-hoc analysis for multiple pairwise comparisons in course variables. Findings in **Table 9** show that the CE (S.E. = 2.040; p = 0.000), CAS (S.E. = 1.478; p = 0.000), and CICCT (S.E. = 1.853; p = 0.000) students had significantly higher grammatical competence com-

pared to CCJE students. CHS students, in contrast, had significantly higher grammatical competence compared to students from CAS (S.E. = 0.960; p = 0.000) and CCJE (S.E. = 1.600; p = 0.000). CICCT students' grammar competence was significantly higher (S.E. = 1.853; p = 0.000) compared to CCJE students.

Table 9. Multiple pairwise comparison using Scheffe test.

(I) A I	(D. A I	Mean difference	G. I	G.	95% confidence interval	
(I) Academic track	(J) Academic track	(I–J)	Std. error	Sig.	Lower bound	Upper bound
	CAS	2.902	1.588	0.503	-2.01	7.81
CE	CCJE	11.752*	2.040	0.000	5.44	18.06
CE	CICCT	0.026	1.935	1.000	-5.96	6.01
	CHS	-3.561	1.695	0.354	-8.80	1.68
	CE	-2.902	1.588	0.503	-7.81	2.01
CAS	CCJE	8.850^{*}	1.487	0.000	4.25	13.45
CAS	CICCT	-2.876	1.339	0.331	-7.02	1.27
	CHS	-6.464*	0.960	0.000	-9.43	-3.49
	CE	-11.752^*	2.040	0.000	-18.06	-5.44
COLE	CAS	-8.850^{*}	1.487	0.000	-13.45	-4.25
CCJE	CICCT	-11.726 [*]	1.853	0.000	-17.46	-6.00
	CHS	-15.313*	1.600	0.000	-20.26	-10.36
	CE	-0.026	1.935	1.000	-6.01	5.96
CICCT	CAS	2.876	1.339	0.331	-1.27	7.02
CICCT	CCJE	11.726*	1.853	0.000	6.00	17.46
	CHS	-3.587	1.464	0.201	-8.11	0.94
	CE	3.561	1.695	0.354	-1.68	8.80
CHS	CAS	6.464*	0.960	0.000	3.49	9.43
	CCJE	15.313*	1.600	0.000	10.36	20.26
	CICCT	3.587	1.464	0.201	-0.94	8.11
*The mean difference	is significant at the 0.05 le	evel.				

6. Discussion

Question 1. What was the overall grammatical competence of the first-year college students?

This study found out that the first-year students were *limited users* of grammar. This means that the students' basic competence is confined to familiar situations, where they can only operate effectively within contexts they already know well. Outside these familiar scenarios, they struggle significantly.

The findings of this study reflected several previous findings on grammatical competence and language learning. For example, Andilab and Amante (2024) found out that the performance of senior high school learners in Word Classes and Subject-Verb Agreement was moderate and there were grammar points in which learners excelled, while others presented challenges. Similarly, Sacal and Potane (2023) conducted a study on students' English language proficiency and found that 48% of the students were fairly satisfactory in their outputs. The authors noted that grammar is one of the essential components of language use as it "enables students to utilize the language effectively and accurately".

This could be a general problem in language education in Basilan State College, where students may be receiving inadequate instruction in the application of grammatical principles in a flexible and comprehensive manner restricting their overall language proficiency.

Question 2. What was the overall academic performance of the first-year college students?

This study found that the first-year college students from Basilan State College had a satisfactory level of academic performance with their GPA of 85.08%. Similar findings were evident from previous studies on student's overall academic performance in English. For example, the study of Dajuela et al. (2024) found that the junior high school students from Sulangon National High School had moderate learning in English with 85.21% of the general average grade. Puertos and Puertos (2024) yielded similar data on Grade 8 students' English academic achievement with overall grade of 85.00% in El Salvador City, Misamis Oriental. Both studies noted

that the students were generally good in English.

It was challenging to find data from college students regarding their academic performance in English mainly because most universities use GPA system rather than continuous percentage. The study of Candilas et al. (2023) reported that most students freshmen teacher Education students in college students in Cagayan de Oro City had 86–90 (equivalent to 1.5) GPA in English. Consistent with previous studies, this study can assume that the first-year college students from Basilan State College were academically good in English.

Question 3. Was there a significant relationship between the respondents' grammatical competence and their academic performance?

The findings of this study indicated that the grammar competence of the first-year college students can be attributed to their overall academic performance. There was consistency in the findings about student's English language competence and their academic performance across different studies. Sacal and Potane (2023) found that students' writing abilities were related to their mastery of English grammar. In the study of Algahtani (2022), nursing students in Saudi Arabia who scored high in English Language Usage Scale (ELUS-11) had higher academic achievement. It was obvious to assume that when students perform well in English language exams, like grammar tests, they could yield higher grades. Further analysis is needed to identify what mechanisms mediate the interaction between students' competence in grammar and their English academic achievement.

Question 4. Was there a significant difference in the respondents' grammatical competence when the data were grouped according to college course and so-cio-economic status?

This study found out that the college/course of the students can potentially mediate their grammar competence. Specifically, education and health sciences students were more competent in English grammar compared to other students. As future teachers, education students need to be competent in the English language (Armea et al., 2022; Gultom and Oktaviani, 2022; Muhammad et al., 2023). This explains why

most of them were highly competent in grammar, as they were taught to master this essential aspect of language use. Roca and Manla (2023) reported that, in grammar learning, the pre-service teachers applied cognitive, meta-cognitive, and socio-affective strategies to a high degree. These learning characteristics might set them apart from other students in college not only in grammar but in language and communication as well.

Similar to education students, health sciences students were highly competent in grammar. Some major reasons could be their need to be good at writing, communicating, and expressing themselves. Gilo and Mohammed (2024) found out that 60% of health sciences students in Ethiopia were consistently required to compose their project reports, term papers, and lecture notes. Fundamental writing skills, including grammar, word choice, and organization, are essential for scientific and scholarly writing (Hampton and Chafetz, 2021; Nakazono, 2023). The high competence in grammar observed among health sciences students can be attributed to the rigorous writing demands of their field, reinforcing the importance of strong language skills in their academic and professional development.

7. Conclusions

The overall grammatical competence of first-year college students at Basilan State College was limited, particularly outside familiar contexts, indicating a broader issue within language education that needs to be addressed. However, they perform generally well in English subjects in the School Year 2021–2022. The study also observed significant differences in grammatical competence across different courses, with education and health sciences students demonstrating higher proficiency. This was likely due to the rigorous writing and communication demands of their fields, which require them to be competent and proficient in grammar.

These findings highlighted the reflection of grammatical competence in academic performance and the need for linguistic interventions to improve language education across different disciplines. Future

research should consider a larger sample size, incorporate different measures of language proficiency and explore additional influencing factors (self-efficacy, self-perception, motivation, environment) to provide a more comprehensive understanding of the relationship between grammatical competence and academic performance.

Author Contributions

All Authors were solely responsible for all aspects of this research study. This includes the conceptualization and design of the study, data collection, analysis, and interpretation of the results.

Conflict of Interest

The author declare no conflict of interest.

Data Availability Statement

The data supporting the findings of this study are available from the authors upon request. To access the data, interested parties should contact the corresponding author. Please note that while the data are not publicly accessible, they can be provided for research purposes upon reasonable request. Any restrictions or conditions on the use of the data will be communicated by the authors. This ensures that the data are used appropriately and ethically, in line with the study's objectives and confidentiality requirements.

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Ethics Statement

This study involved administering a grammatical test to first-year college students to gather data on their grammatical competence. All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study. Participation was voluntary, and students were assured that their performance would be confidential and used solely for research purposes. No animal subjects or pathology reports were involved in this research.

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