Phonotactic Constraints in English Language Learning among Bachelor of Arts in English Language Studies Students at Mindanao State University-Sulu

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ABSTRACT. This study explored the phonotactic constraints experienced by Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu in learning the English language. It specifically examined segmental modifications, suprasegmental influences, and communicative adaptation strategies. A descriptive–correlational research design was employed, with data gathered from 100 students through an adapted and validated survey questionnaire. The data were analyzed using frequency and percentage distribution, weighted mean, t-test, analysis of variance (ANOVA), and Pearson correlation. The findings showed that most respondents were female, 25 years old and below, came from families with an average monthly income ranging from 10,001 to 15,000 pesos, resided mainly in rural areas, and were slightly dominated by first-year students. Results further revealed that segmental modifications were rarely observed among the respondents, while suprasegmental influences and communicative adaptation strategies were occasionally evident in their English language learning experiences. The study also found no significant differences in the extent of phonotactic constraints when respondents were grouped according to gender, age, parents' average monthly income, and area of residence. However, a significant difference was identified when respondents were classified according to year level. In addition, the correlational analysis showed low to high positive relationships among segmental modifications, suprasegmental influences, and communicative adaptation strategies, suggesting that these factors are interconnected and collectively influence students' English language learning. Based on these findings, the study recommends that university administrators strengthen programs aimed at improving students' pronunciation and phonological competence. Teachers are encouraged to apply more targeted and communicative teaching strategies, while students should engage more actively in pronunciation practice and self-monitoring. Future researchers may also consider conducting intervention-based studies and exploring the use of technology-assisted language learning to further enhance English language instruction.

Keywords: *Phonotactic, Constraints, English, Arts, Students*

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1. INTRODUCTION

Phonotactic constraints refer to the rules that govern how sounds are arranged and combined within the words and syllables of a language. These rules determine which sound patterns are acceptable and natural for speakers of a particular language. In English, phonotactic constraints influence consonant and vowel combinations, syllable structures, and the complexity of sound clusters. For example, the three-consonant cluster "str" is acceptable in English words such as street, whereas the cluster "tl" cannot normally occur at the beginning of an English syllable, even though it may exist in other languages. Because these phonotactic rules are deeply embedded in a speaker's mental grammar, they unconsciously shape how individuals perceive, process, and produce spoken language. This linguistic grounding is consistent with broader discussions on English language development and communicative competence in educational contexts (Chavez & Lamorinas, 2023; Kilag et al., 2024; Aranda, 2022).

Recent international studies emphasize that phonotactic patterns strongly affect second-language learning, particularly among bilingual and multilingual learners. According to Freeman and Marian (2023), learners tend to rely on the phonological system of their first language when interpreting foreign language sounds. Similarly, Hassan, Ghabanchi, and Al-Mamoory (2025) found that first-language phonotactic rules often lead to mispronunciation and misperception in second-language acquisition. These findings suggest that learners experience difficulty when the sound structures of the target language differ significantly from those of their native language. Supporting this, Salve (2025) also noted that English language anxiety may further intensify pronunciation difficulties and affect learners' oral performance in higher education settings. Moreover, learner support systems such as parental involvement and instructional guidance have been shown to influence English language development outcomes (Chavez, Adalia, & Alberto, 2023; Chavez, 2024).

In the Philippine context, English remains an important language used in education, employment, and professional communication. Despite its widespread use, many Filipino learners continue to experience challenges in English pronunciation and oral communication. This difficulty is particularly evident among speakers of regional languages whose phonological systems differ greatly from English. Philippine languages such as Tagalog, Cebuano, and Tausug commonly follow a consonant-vowel (CV) syllable pattern, while English permits more complex consonant clusters and syllable formations. As noted by Kilag, Uy, and Macapobre (2024) and Aranda (2022), these structural differences often result in pronunciation difficulties among Filipino English learners. In relation to this, Ramos (2025) emphasized that innovative English teaching practices, including technology-assisted instruction, may help address such persistent pronunciation challenges. Additionally, parental engagement and learning environments also contribute significantly to learners' language acquisition processes (Chavez, 2024).

At Mindanao State University–Sulu, Bachelor of Arts in English Language Studies students encounter unique phonological challenges influenced by their first languages, particularly Tausug and Sama. English words containing consonant clusters such as strengths, splint, and street are often difficult to pronounce because similar sound combinations are uncommon in their native languages. As a result, students may apply various phonotactic adjustment strategies, including vowel insertion (e.g., iskul for school), sound substitution (e.g., /t/ for /θ/), and deletion of final consonants. These pronunciation patterns reflect the influence of first-language phonotactic constraints on English language learning, a phenomenon also reflected in broader classroom communication studies (Chavez et al., 2024).

Several local studies support the idea that mother tongue interference significantly affects students' pronunciation skills in Sulu. For instance, Ajan, Amilhasad, Habbail, and Talikan (2025)

reported that first-language phonological habits influence English speech production among college students in Sulu. Likewise, Jhun (2024) highlighted the continuing struggle of learners in producing accurate English sounds due to native-language influence. Supian (2025) further emphasized that instructors' awareness of learners' linguistic challenges and pedagogical strategies plays an important role in improving English language outcomes. Although these studies discuss pronunciation difficulties in general, there remains limited empirical research specifically examining phonotactic constraints among Bachelor of Arts in English Language Studies students at MSU-Sulu. Existing studies also provide little attention to the relationship among segmental modifications, suprasegmental influences, and communicative adaptation strategies in English language learning. This research gap limits the development of localized and evidence-based instructional strategies that address the actual linguistic needs of students in multilingual contexts such as Sulu. Similar gaps in instructional responsiveness and learner support have also been identified in related educational research contexts (Chavez, 2020; Chavez & Vicente, 2024).

To address this gap, the present study investigated the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu. Specifically, the study examined three major variables: segmental modifications, suprasegmental influences, and communicative adaptation strategies. It also explored whether significant differences exist when respondents are grouped according to demographic profile and determined the relationships among the identified variables. Through the use of a validated survey questionnaire grounded in recent phonological research, the study aimed to provide a clearer understanding of how phonotactic interference affects students' English pronunciation and communication skills. These analytical approaches align with contemporary discourse on assessment, academic integrity, and learning adaptation in education (Chavez, Lamorinas, & Ceneciro, 2023).

The study is expected to contribute to the improvement of English language teaching and pronunciation instruction in multilingual learning environments. Its findings may help teachers design more responsive classroom strategies, assist curriculum developers in creating context-based instructional materials, and encourage students to become more aware of their pronunciation patterns and communication practices. Furthermore, this aligns with findings from Ceneciro (2025), which highlight the importance of sustained engagement and meaningful learning experiences in language education. The study may also serve as a foundation for future research on intervention-based pronunciation training and technology-assisted language learning, as supported by Cutillas (2025), who emphasized the growing role of generative AI in enhancing instructional effectiveness. These directions are consistent with broader innovations in language education and pedagogical development (Chavez & Prado, 2023).

More importantly, this study aligns with United Nations Sustainable Development Goal 4, which promotes inclusive and equitable quality education for all. According to UNESCO (2021), improving learners' communication skills contributes significantly to academic success, employability, and participation in global society. In geographically and linguistically diverse areas such as Sulu, strengthening students' English pronunciation and communicative competence may help expand educational and professional opportunities. Therefore, understanding phonotactic constraints is not only important in language learning but also essential in promoting more effective, inclusive, and culturally responsive English language education.

2. METHODS

2.1 Research Design

This study utilized a descriptive correlational research design to examine the phonotactic constraints experienced by Bachelor of Arts in English Language Studies (BAELS) students in learning the English language. The descriptive component of the study focused on identifying and describing the different phonotactic constraints manifested by the students, particularly in terms of segmental modifications, suprasegmental influences, and communicative adaptation strategies. On the other hand, the correlational component aimed to determine whether significant relationships existed between these phonotactic constraints and the respondents' demographic characteristics. This research design was considered appropriate because it enabled the researcher to investigate existing language learning conditions without manipulating any variables. It also provided a systematic way of examining both the extent and patterns of phonotactic interference among the respondents. Furthermore, the study adopted a quantitative approach, using statistical tools and numerical data analysis to measure and interpret the identified variables objectively.

2.2 Participants of the Study

The study was conducted at Mindanao State University–Sulu in Jolo, Sulu, a public higher education institution offering the Bachelor of Arts in English Language Studies (BAELS) program. The university was chosen because of its linguistically diverse student population, which mainly includes Tausug, Sama, and Filipino speakers, making it an appropriate setting for examining phonotactic interference in English language learning. The respondents of the study were BAELS students enrolled during the academic year 2025–2026. Participants were selected from different year levels to ensure broader representation across academic stages. The study also considered demographic variables such as gender, age, parents' average monthly income, area of residence, and year level. Out of the approximately 502 students in the English Department of the MSU-Sulu System, 100 students, representing 20% of the total population, were selected as respondents for the study.

Distribution of Samples According to Year Level

Year Level	Total
1st Year	32
2nd Year	27
3rd year	24
4th Year	17
Grand Total	100

2.3 Sampling Procedure

The study employed purposive sampling to select respondents who were most relevant to the research objectives, particularly BAELS students who exhibited observable phonotactic constraints in English language learning. This sampling technique allowed the researcher to gather more focused and meaningful data directly related to the study's research questions. It was considered appropriate because the study aimed to examine specific linguistic phenomena, including segmental modifications and suprasegmental interference, which may not be present among all students. In educational and linguistic research, purposive sampling is widely recognized as an effective method for selecting participants who can provide rich and relevant

information. According to Cohen, Manion, and Morrison (2018), purposive sampling enables researchers to intentionally choose participants who are closely connected to the objectives of the study, thereby increasing the relevance and usefulness of the collected data. Similarly, Kumar (2019) emphasized that purposive sampling is particularly valuable when investigating specialized phenomena such as phonological or phonotactic interference. Through this approach, the study ensured that the selected BAELS students represented the linguistic characteristics needed to better understand the phonotactic challenges experienced in English language learning.

2.4 Research Instrument

The primary research instrument used in this study was a survey questionnaire adapted, with slight modifications, from the study of Freeman, Blumenfeld, and Marian (2016) titled Phonotactic Constraints are Activated across Languages in Bilinguals. The questionnaire was revised to suit the context and objectives of the present study, particularly in examining phonotactic constraints among Bachelor of Arts in English Language Studies (BAELS) students at Mindanao State University–Sulu. The instrument consisted of two main parts. Part I gathered the respondents' demographic information, including gender, age, parents' average monthly income, area of residence, and year level. Part II focused on determining the extent of phonotactic constraints experienced by BAELS students in English language learning, particularly in terms of segmental modifications, suprasegmental influences, and communicative adaptation strategies.

2.5 Data Gathering Procedure

Before conducting the data collection, the researcher first secured the necessary permissions from the School of Graduate Studies and the coordinator of the Bachelor of Arts in English Language Studies (BAELS) program. Ethical clearance was also obtained from the appropriate institutional ethics committee to ensure that the study followed ethical research standards. The participants were properly informed about the purpose, objectives, and scope of the study. They were also asked to sign an informed consent form to confirm their voluntary participation. Afterward, the adapted questionnaire was distributed to the respondents during their scheduled class hours. Clear instructions were provided to guide them in answering the questionnaire, and sufficient time was given for completion. The accomplished questionnaires were collected immediately after administration. Finally, the gathered data were organized and submitted for statistical treatment and analysis.

2.6 Ethical Considerations

Ethical considerations were carefully observed throughout the conduct of the study to ensure the reliability, validity, and integrity of the research process. The researcher ensured that all gathered data were handled in accordance with established ethical standards. Participants were treated with respect, and their rights, dignity, privacy, and confidentiality were protected at all times. Their participation in the study was purely voluntary, and informed consent was secured before data collection. The researcher also maintained objectivity in the interpretation and analysis of the findings to avoid bias and ensure accuracy. In addition, ethical clearance was obtained by complying with all the requirements set by the institutional Ethics Committee.

3. RESULTS

Quastion 2. What is the extent of the phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu, in terms of; 2.1 Segmental modifications; 2.2 Suprasegmental influences; and 2.3 Communicative adaptation strategies?

Table 2.1 Extent of the phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu, in terms of Segmental modifications.

	Statements	Mean	S.D	Interpretation
1	Substituting /θ/ with /t/ or /s/ (*think → tink*)	2.71	1.038	Sometimes
2	Adding a vowel between consonants (*school → iskul*)	2.87	1.236	Sometimes
3	Replacing /ʃ/ with /s/ or /ch/ (*she → si* or *chi*)	2.35	1.114	Rarely
4	Affrication of /t/ or /d/ (*tree → chree*)	2.43	.956	Rarely
5	Final consonant deletion (*cold → col*)	2.17	1.101	Rarely
6	Consonant cluster reduction (*desk → dek*)	2.17	1.006	Rarely
7	Vowel substitution (*bit → beet*)	2.51	1.049	Sometimes
8	Glottal replacement (*bottle → bo'le*)	1.94	1.043	Rarely
9	Nasal assimilation (*input → imput*)	2.64	.938	Sometimes
10	Voicing errors (*fan → van*)	2.12	1.076	Rarely
	Total Weighted Mean	**2.3910**	**.68003**	**Rarely**

Legend: (5) 4.50-5.00=Always; (4) 3.50-4.49=Often; (3) 2.50- 3.49=Sometimes; (2) 1.50- 2.49=Rarely; (1) 1.00-1.49=Never

Table 2.1 The results show the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu in terms of segmental modifications. The category obtained a weighted mean score of 2.3910 with a standard deviation of 0.68003, which is interpreted as "Rarely." This suggests that, in general, the students exhibit a low level of segmental phonotactic constraints in their English language learning. Overall, segmental modifications appear to be minimal among the respondents. In terms of specific pronunciation patterns, some errors were reported as occurring "Sometimes." These include substituting /θ/ with /t/ or /s/ (e.g., think pronounced as tink), inserting vowels between consonants (e.g., school pronounced as iskul), vowel substitution (e.g., bit pronounced as beet), and nasal assimilation (e.g., input pronounced as imput). On the other hand, several segmental modifications were observed only "Rarely." These include replacing /ʃ/ with /s/ or /ch/ (e.g., she pronounced as si or chi), affrication of /t/ or /d/ (e.g., tree pronounced as chree), final consonant deletion (e.g., cold pronounced as col), consonant cluster reduction (e.g., desk pronounced as dek), glottal replacement (e.g., bottle pronounced as bo'le), and voicing errors (e.g., fan pronounced as van). Overall, these findings indicate that while some phonological adjustments still occur, segmental pronunciation issues are generally infrequent among the respondents.

Table 2.2 Extent of the phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu, in terms of Suprasegmental influences.

	Statements	Mean	S.D	Interpretation
1	Difficulty in stress placement (*record* vs. *record*)	3.09	.830	Sometimes
2	Misalignment of intonation in questions/statements	2.82	.687	Sometimes
3	Syllable timing influenced by L1	2.53	1.058	Sometimes
4	Monotone delivery in extended speech	2.56	.935	Sometimes
5	Overuse of rising intonation in declaratives	2.64	.811	Sometimes

6	Stress shift in polysyllabic words (*banana → baNAna*)	2.36	1.243	Rarely
7	Pausing between syllables (beautiful → beau-ti-ful)	3.08	1.098	Sometimes
8	Lack of contrastive stress (I said SHE did it)	3.20	1.137	Sometimes
9	Difficulty with reduced syllables (comfortable → com-for-ta-ble)	2.81	1.187	Sometimes
10	Misuse of pitch contours in emotion or emphasis	2.75	.925	Sometimes
	Total Weighted Mean	**2.7840**	**.57818**	**Sometimes**

Legend: (5) 4.50-5.00=Always; (4) 3.50-4.49=Often; (3) 2.50- 3.49=Sometimes; (2) 1.50- 2.49=Rarely; (1) 1.00- 1.49=Never

Table 2.2 The results present the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu in terms of suprasegmental influences. This category obtained a total weighted mean of 2.7840 with a standard deviation of 0.57818, interpreted as "Sometimes." This suggests that the respondents experience a moderate level of suprasegmental-related difficulties in their English language learning. In general, suprasegmental influences are occasionally evident in their pronunciation and spoken performance. Looking more closely at the specific indicators, the students rated several items as "Sometimes." These include difficulty in stress placement (e.g., record vs. record), misalignment of intonation in questions and statements, influence of syllable timing from their first language, monotone delivery in longer speech, overuse of rising intonation in declarative sentences, pausing between syllables (e.g., beautiful pronounced as beau-ti-ful), lack of contrastive stress (e.g., I said SHE did it), difficulty with reduced syllables (e.g., comfortable pronounced as com-for-ta-ble), and incorrect use of pitch to express emotion or emphasis. In contrast, stress shifting in polysyllabic words (e.g., banana pronounced as baNAna) was rated as "Rarely." Overall, these findings indicate that while suprasegmental features are not consistently problematic, they still appear occasionally and reflect areas where students may benefit from further practice in English prosody and speech delivery.

Table 2.3 Extent of the phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu, in terms of Communicative adaptation strategies.

	Statements	**Mean**	**S.D**	**Interpretation**
1	Intrusion of local language elements	3.13	1.002	Sometimes
2	Code-switching for clarity or comfort	3.24	1.016	Sometimes
3	Self-correction during speech	3.33	1.016	Sometimes
4	Repetition to ensure understanding	3.37	1.143	Sometimes
5	Avoidance of difficult words	3.60	1.005	Often
6	Use of fillers (*uh*, *you know*)	3.15	1.201	Sometimes
7	Simplification of sentence structure	3.07	.913	Sometimes
8	Use of gestures to support speech	3.43	1.174	Sometimes
9	Asking for confirmation (*Did I say it right?*)	3.48	1.291	Sometimes
10	Mimicking native-like pronunciation	2.89	1.024	Sometimes
	Total Weighted Mean	**3.2690**	**.67729**	**Sometimes**

Legend: (5) 4.50-5.00=Always; (4) 3.50-4.49=Often; (3) 2.50- 3.49=Sometimes; (2) 1.50- 2.49=Rarely; (1) 1.00-1.49=Never

Table 2.3 The results present the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu in terms of communicative adaptation strategies. This category obtained a

weighted mean score of 3.2690 with a standard deviation of 0.67729, interpreted as "Sometimes." Overall, this indicates a moderate use of communicative adaptation strategies among the respondents, suggesting that these strategies are occasionally evident in their English language learning and communication. In terms of specific behaviors, the students reported several strategies as occurring "Sometimes." These include the intrusion of local language elements during speech, code-switching for clarity or comfort, self-correction while speaking, repetition to ensure understanding, use of fillers such as "uh" and "you know," simplification of sentence structures, and the use of gestures to support verbal communication. They also sometimes asked for confirmation (e.g., "Did I say it right?") and attempted to mimic native-like pronunciation. On the other hand, avoidance of difficult words was reported as "Often," indicating that this strategy is more frequently used compared to others. Overall, these findings suggest that while students actively employ various communicative strategies to cope with language challenges, they still tend to rely heavily on simplifying or avoiding complex expressions during English communication.

Question 3. Is there a significant difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu when data are categorized according to the demographic profile in term of; 3.1 Gender; 3.2 Age; 3.3 Parents' Average Monthly Income; 3.4 Area of residence; and 3.5 Year Level?

Table 3.1 Difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu when data are categorized according to the demographic profile in terms of Gender.

Variables	Grouping	Mean	S.D	Mean Difference	t	Sig.	Description
Segmental modifications	Male	2.354	.63671	-.41282	-1.76	.082	Not Significant
	Female	2.767	.99373				
Suprasegmental influences	Male	2.755	.54554	-.32283	-1.61	.110	Not Significant
	Female	3.078	.82580				
Communicative adaptation strategies	Male	3.236	.64005	-.36374	-1.55	.125	Not Significant
	Female	3.600	.96566				

Note. * Significant at alpha 0.05

Table 3.1 The results show the difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu when grouped according to gender. Based on the analysis, all computed t-values and p-values were found to be not significant at the 0.05 level of significance. This means that there is no meaningful difference between male and female students in their perceptions of phonotactic constraints across the identified subcategories. In other words, gender does not appear to influence how students experience or perceive difficulties related to segmental, suprasegmental, and communicative aspects of English pronunciation. Overall, the findings suggest that both male and female respondents share similar experiences in terms of phonotactic constraints in English language learning. Therefore, the hypothesis stating that there is no significant difference when grouped according to gender is accepted.

Table 3.2 Difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State

University-Sulu when data are categorized according to the demographic profile in terms of Age.

Variables	Grouping	Mean	S.D	Mean Difference	t	Sig.	Description
Segmental modifications	25 years old and below	1.968	.55683	-.52170	-3.14*	.002	Significant
	26-30 years old	2.490	.67093				
Suprasegmental influences	25 years old and below	2.674	.44950	-.13619	-1.18	.276	Not Significant
	25-30 years old	2.810	.60386				
Communicative adaptation strategies	26 years old and below	3.490	.64455	.27219	1.589	.115	Not Significant
	26-30 years old	3.217	.67819				

Note. * Significant at alpha 0.05

Table 3.2 The results present the differences in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu when grouped according to age. Based on the findings, most of the computed t-values and p-values, except for those under segmental modifications, were not significant at the 0.05 level of significance. This indicates that students of different age groups generally do not differ in how they perceive phonotactic constraints in English language learning. In other words, age does not appear to strongly influence students' perceptions of suprasegmental influences and communicative adaptation strategies. However, a difference was observed in terms of segmental modifications, suggesting that this area may vary slightly depending on age. Overall, the findings suggest that age has little to no significant effect on how students experience most aspects of phonotactic constraints in English. Therefore, the hypothesis stating that there is no significant difference when grouped according to age is accepted, with the exception of segmental modifications.

Table 3.3 Difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu when data are categorized according to the demographic profile in terms of Parents' Average Monthly Income.

Sources of Variation		Sum of squares	df	Mean Square	F	Sig.	Description
Segmental modifications	Between Groups	2.134	2	1.067	2.372	.099	Not Significant
	Within Groups	43.65	97	.450			
	Total	45.78	99				
Suprasegmental influences	Between Groups	1.422	2	.711	2.177	.119	Not Significant
	Within Groups	31.673	97	.327			
	Total	33.094	99				
	Between Groups	4.119	2	2.060	4.84*	.010	Significant

Communicative adaptation strategies	Within Groups	41.294	97	.426
	Total	45.414	99	

Note. * Significant at alpha 0.05

Table 3.3 The results show the differences in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu when grouped according to parents' average monthly income. Based on the analysis, most of the computed F-values and p-values were not significant at the 0.05 level of significance, except for communicative adaptation strategies. This suggests that students coming from different income backgrounds generally have similar perceptions of phonotactic constraints in English language learning. In other words, parents' monthly income does not appear to strongly influence how students perceive segmental and suprasegmental aspects of pronunciation. However, a significant difference was observed in communicative adaptation strategies, indicating that this aspect may vary depending on the students' economic background. Overall, the findings imply that socioeconomic status has little effect on most areas of phonotactic constraints among the respondents. Therefore, the hypothesis stating that there is no significant difference when grouped according to parents' average monthly income is accepted, with the exception of communicative adaptation strategies.

Table 3.4 Difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu when data are categorized according to the demographic profile in terms of Area of Residence.

Sources of Variation		Sum of squares	df	Mean Square	F	Sig.	Description
Segmental modifications	Between Groups	.018	2	.009	.019	.981	Not Significant
	Within Groups	45.76	97	.472			
	Total	45.78	99				
Suprasegmental influences	Between Groups	.161	2	.081	.238	.789	Not Significant
	Within Groups	32.933	97	.340			
	Total	33.094	99				
Communicative adaptation strategies	Between Groups	.453	2	.226	.488	.615	Not Significant
	Within Groups	44.961	97	.464			
	Total	45.414	99				

Note. * Significant at alpha 0.05

Table 3.4 The results present the differences in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu when grouped according to area of residence. Based on the findings, all computed F-values and p-values were not significant at the 0.05 level of significance. This indicates that students coming from different residential backgrounds whether urban or rural do not differ in how they perceive phonotactic constraints in English language learning. In other words, area of residence does not appear to influence students' experiences or perceptions of segmental, suprasegmental, and communicative aspects of pronunciation. Overall, the findings suggest that both urban and rural students share similar levels of exposure to and understanding of phonotactic constraints in English. Therefore, the hypothesis stating that there is no significant difference when grouped according to area of residence is accepted.

Table 3.5 Difference in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University-Sulu when data are categorized according to the demographic profile in terms of Year Level

Sources of Variation		Sum of squares	df	Mean Square	F	Sig.	Description
Segmental modifications	Between Groups	3.152	3	1.051	2.366	.076	Not Significant
	Within Groups	42.63	96	.444			
	Total	45.78	99				
Suprasegmental influences	Between Groups	3.891	3	1.297	4.26*	.007	Significant
	Within Groups	29.204	96	.304			
	Total	33.094	99				
Communicative adaptation strategies	Between Groups	5.894	3	1.965	4.77*	.004	Significant
	Within Groups	39.520	96	.412			
	Total	45.414	99				

Note. * Significant at alpha 0.05

Table 3.5 The results show the differences in the extent of phonotactic constraints in English language learning among Bachelor of Arts in English Language Studies students at Mindanao State University Sulu when grouped according to year level. Based on the findings, most of the computed F-values and p-values were significant at the 0.05 level of significance, except for segmental modifications. This means that students from different year levels differ in how they perceive phonotactic constraints in English language learning. In particular, year level appears to influence their experiences and awareness of suprasegmental influences and communicative adaptation strategies, while segmental modifications remain relatively similar across groups. Overall, the findings suggest that academic progression plays a role in shaping students' perceptions of phonotactic constraints in English. Therefore, the hypothesis stating that there is no significant difference when grouped according to year level is rejected.

4. DISCUSSION

The findings of this study provide a clearer picture of how Bachelor of Arts in English Language Studies students at Mindanao State University–Sulu experience phonotactic constraints in English language learning, as well as how these experiences relate to their demographic background and learning behavior.

Demographic Profile of the Respondents. The results show that most of the respondents are female, 25 years old and below, and come from families with a modest monthly income ranging from 10,001–15,000 pesos. Many of them live in rural areas, while others come from semi-urban communities. In terms of academic standing, students are fairly distributed across year levels, although first-year students slightly outnumber the rest. Overall, this suggests that the respondents share relatively similar socio-demographic backgrounds, particularly in terms of age and economic status. This kind of homogeneity may help explain why some of the results across demographic variables showed limited variation.

Extent of Phonotactic Constraints in English Language Learning. In terms of phonotactic constraints, the findings indicate that segmental modifications occur rarely among the students. This suggests that sound-level pronunciation errors are not highly frequent, and many students

may already have a reasonable grasp of individual English phonemes. However, suprasegmental influences such as stress, intonation, and rhythm are still observed at a moderate level. This means that while students can generally pronounce individual sounds, they still struggle with the "music" of the language how words and sentences are naturally stressed and intoned. Similarly, communicative adaptation strategies are also used at a moderate level. Students tend to rely on strategies such as code-switching, repetition, avoidance, and simplification when facing difficulty in expressing themselves. This shows that learners are actively trying to cope with communication challenges, even if it means adjusting their language use. Taken together, these findings suggest a pattern: basic pronunciation issues are less common, but challenges become more noticeable at the level of fluency and natural speech production.

Differences Based on Demographic Profile. When the data were analyzed according to demographic variables, the results show that gender, age, parents' income, and area of residence do not significantly affect students' perceptions of phonotactic constraints. This implies that these factors are not strong predictors of how students experience pronunciation-related difficulties in English. However, year level emerged as a significant factor, particularly in relation to suprasegmental influences and communicative adaptation strategies. This suggests that students' exposure to English learning over time plays an important role in shaping their pronunciation awareness and communication behavior. As students progress academically, they may become more aware of stress patterns, intonation, and strategies for managing communication breakdowns.

Relationship Among Phonotactic Components. The correlation analysis reveals that the three components of phonotactic constraints are interconnected. The moderate relationship between segmental modifications and suprasegmental influences suggests that difficulties in sound production are somewhat linked to challenges in stress and intonation patterns. The low correlation between segmental modifications and communicative adaptation strategies indicates that pronunciation errors at the sound level do not strongly determine how students adjust their communication strategies. However, the strong correlation between suprasegmental influences and communicative adaptation strategies suggests a closer relationship when students struggle with stress and intonation, they are more likely to rely on strategies such as repetition, simplification, or code-switching to maintain communication.

Overall, the findings suggest that phonotactic constraints among the students are not isolated issues but interconnected aspects of language learning. While sound-level pronunciation issues are relatively minimal, challenges in speech rhythm and communication strategies remain more prominent. These results highlight the importance of focusing not only on pronunciation accuracy but also on fluency, prosody, and real-life communication strategies in English language instruction. In essence, the study shows that improving English proficiency among students requires a balanced approach one that strengthens both linguistic accuracy and communicative competence.

5. CONCLUSION

In general, the findings show that the respondents share similar demographic backgrounds, meaning their experiences with phonotactic constraints are not strongly shaped by factors like age, gender, income, or residence. Instead, these difficulties are more closely related to linguistic influence, especially interference from their first language. The results also reveal that segmental pronunciation issues are minimal, while challenges in stress, intonation, and rhythm are more

noticeable. To cope with these, students often use strategies such as code-switching, repetition, and simplification. Year level appears to play a role, suggesting that longer exposure to English helps improve phonological awareness and communication skills. Finally, the study shows that segmental, suprasegmental, and communicative strategies are interconnected, meaning difficulties in one area often affect the others. Overall, phonotactic constraints are best understood as a combined system of pronunciation and communication challenges rather than separate issues.

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