

Identifying the Level of Vowel Sound Pronunciation of Criminology Students

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Abstract: This study aimed to identify the level of vowel sound pronunciation difficulties of criminology students in terms of front, central and back vowels, conducted in one of the private institutions in Pagadian City, Zamboanga del Sur, Philippines. Purposive sampling was used, which included 36 participants. This study utilized a descriptive quantitative design through a pronunciation test using validated reading material composed of 90 words. Findings revealed that the level of vowel sound pronunciation difficulties of the criminology students in terms of the front vowels as shown in Table 3 are the following; [i] is Fair, [I] is Poor, [e] is Good and [ε] is Fair. Meanwhile in Table 5, the students obtained a Poor level in the vowel sound [æ], [a] is Fair, [u] Fair, [U] is Poor, [ɔ] is Fair and [o] is Fair. However, the participants encountered less difficulty in the central vowel as they pronounced the word list correctly and got a higher average of 26.08 labelled as Very Good shown in Table 4. Hence, how they pronounce English words is influenced by the similarity of their native phonemes.

Keywords— Front vowels, Central vowels, Back vowels, Vowels, Difficulty, Reading, Pronunciation

1. INTRODUCTION

Pronunciation plays an essential role in effective communication. Studying pronunciation in specific categories gives valuable insights and improves such skills and overall communication competence. However, many learners need help mastering English pronunciation, which can negatively impact their communication skills (Pourhossein Gilakjani, 2016). It hinders comprehension and compromises the speaker's credibility in communicating with various individuals.

A study by Almaqrn and Alshabeb (2017) revealed that ESL learners have positive attitudes toward proper pronunciation and recognize its importance in achieving intelligibility in spoken English. Moreover, Aksakalli (2022) believes correct pronunciation is vital for effective communication and professional success. Pronunciation instruction can be facilitated using podcasts, as Almaqrn and Alshabeb (2017) suggested, which can help learners acquire phonemic awareness. Additionally, Abu Bakar and Abdullah (2021) found that learners' self-awareness and effort to improve their pronunciation skills are essential in achieving accurate English pronunciation.

Research has identified several factors contributing to good pronunciation, such as education, exposure, environment, and motivation (Cholisah et al., 2022). To improve pronunciation, teachers could use pronunciation tests with categorized words (Cholisah et al., 2022) and provide English input that emphasizes pronunciation practice (Rosyid, 2016). Additionally, students can benefit from a supportive environment with family and friends that encourage reflective practice (Cholisah et al., 2022). Motivation is also a significant factor that impacts good pronunciation (Cholisah et al., 2022), and teachers can help foster this by making pronunciation learning fun and engaging (Rosyid, 2016).

A case study on English pronunciation errors of low-proficient students by Shak, Lee, and Stephen (2016) found that pronunciation problems can lead to miscommunication and difficulty in expressing oneself in English. Similarly, Hassan (2014) conducted a study on Sudanese University students and found that pronunciation was a significant difficulty for them. Another study by Yanagi and Baker (2016) revealed that Japanese students studying in Australian universities had difficulties with oral communication skills, particularly pronunciation. Pospieszńska-Wojtkowiak (2018) investigated the competence level of advanced Polish

learners of English in pronunciation, while Porzuczek (2015) emphasized the importance of pronunciation for English as a second language.

Locally, Filipinos encounter various difficulties in oral communication when using English as a second language. Alaga (2016) found that systematic errors in pronunciation, especially with vowels, arise from L1 interference and confusion over the spelling structure of words. Meanwhile, Duran and Aloy (2023) discovered that multicultural students encounter challenges in segmental phonemes, while Trazo and Abocejo (2019) noted that beginner learners need help recognizing front vowel sounds. These difficulties can negatively affect the academic performance of learners (Tejada et al., 2019) and may result in long-term problems if not addressed appropriately.

Thus, it is recommended that English language instructors focus more on teaching pronunciation to help learners overcome systematic errors (Alaga, 2016) and use the International Phonetic Alphabet (IPA) to aid in front vowel sound recognition (Trazo & Abocejo, 2019). On the other hand, Baker's (2013) study emphasizes the importance of incorporating various pronunciation techniques into language teaching, including guided techniques, to improve phonological improvement and produce intelligible speech. Lengkoan's (2017) research highlights the effectiveness of using songs to improve students' pronunciation and listening skills. Additionally, Kobilova (2022) recommends using techniques such as explicit instruction, modeling, and feedback to enhance pronunciation instruction in the English language classroom. Based on these studies, it is recommended that language learners should receive explicit and systematic instruction on pronunciation, including the use of technology-assisted tools. Teachers and educators should also know students' beliefs and attitudes toward pronunciation and develop strategies to address their concerns. By implementing these strategies, learners can improve their English pronunciation and oral communication proficiency.

Research on pronunciation difficulties has predominantly centered on adult language learners, with relatively limited attention given to children and teenagers who are learning the challenges they face in pronunciation. Additionally, while there has been some research on English as a second language (ESL) learners' pronunciation difficulties, more research may need to be done. Furthermore, while some research exists on the efficacy of various methods of teaching pronunciation, there may be a gap in the quantity and quality of research on this topic, particularly in determining which instructional approaches work best for different types of learners.

While existing research has focused on the challenges faced by late bilinguals in distinguishing between lax and tense vowels in English (Chang & Weng, 2012), as well as the importance of understanding students and faculty

members' perceptions of pronunciation difficulties (Garita Sánchez et al., n.d.), there remains a research gap in several areas. Little research has been conducted on Filipino speakers' difficulties when attempting to pronounce English vowel sounds accurately. This gap in the literature limits our understanding of the unique challenges that different language backgrounds present in vowel pronunciation. Lastly, although an analysis of students' errors in pronouncing English words has been conducted (Idayani, 2019), further research is needed to explore practical instructional approaches for addressing vowel pronunciation difficulties in different learner populations. This research gap inhibits the development of targeted pedagogical strategies to improve vowel pronunciation skills among diverse learners.

Several factors inspire the researchers to identify pronunciation difficulties of criminology students in terms of front, central, and back vowels. Students in specialized fields, such as criminology, may encounter unique pronunciation challenges due to their specific linguistic needs and communication requirements within their professional domain. These specific vowel categories will provide targeted insights into the areas where criminology students commonly struggle, allowing for tailored instruction and support. The researchers believe that addressing pronunciation difficulties can enhance the students' communication competence and boost their confidence and effectiveness in various contexts.

2. METHOD

2.1 Research Design

This study employs a descriptive-quantitative method as the researchers aim to identify the level of vowel sound pronunciation difficulties and actions to be taken for the criminology students to help them enhance their pronunciation skills which are helpful in their academics and future career. A descriptive-quantitative method is a data-driven approach that objectively describes and quantifies the variable interest of a study.

Using a pronunciation test with lists of words in the reading material and the given checklist allowed the researchers in obtaining the data and the result of the study.

2.2 Research Environment

This study was conducted in one of the private institutions in Pagadian City, Zamboanga del Sur that offers various college courses.

2.3 Research Participants

The participants of this study are composed of 36 criminology students. They participated in a pronunciation test given 90 words accompanied by an expert that recorded their correct and mispronounced words in the checklist.

2.4 Research Instruments

The researchers utilized reading material adapted from a book written by Estelita Pangilinan and Myrna J. Dilig (1991). It is composed of 90 words with International Phonetic Alphabet (IPA) vowel sounds: [i], [I], [e], [E], [ə], [æ], [a], [u], [U] and [ɔ] along with a sound guide, checklist and an expert that recorded every correct and mispronounced words of the students. The scores in the checklist served as the data subject for analysis and interpretation. The instrument focused on identifying the level of pronunciation difficulties of the students in terms of front vowels, central vowels, and back vowels, which guided the researchers in developing an action plan.

Data Gathering Procedure

The following actions comprised the data collection method for this study. First, the researchers designed a reading material adapted from a book written by Pangilinan and Dilig (1991), a sound guide, and a checklist validated by the two English instructors from the Saint Columban College-CTEAS Department and one from the Senior High School Faculty, English teacher. The researchers then prepared and handed a letter to the Dean of the Criminology Department and to the assigned instructors then conducted the pronunciation test together with the expert. One of the researchers explained to the students the importance of participating in the study and reminded them to read the words thoughtfully and confidently. The other researchers

a mark on the checklist based on their correct and mispronounced words.

2.5 Statistical Treatment

The statistical process used in this study was descriptive statistics, particularly calculating the mean scores of the criminology students in terms of front vowels, central vowel, and back vowels.

The data were processed using Statistical Package for Social Sciences (SPSS) computer software to ensure that the data collected is accurate and correctly processed. The results are shown in the following chapter.

Ethical considerations

In conducting this study, the following ethical considerations are observed:

Informed Consent and Voluntary Participation. The researchers sent a letter to the Dean of the Criminology Department and the instructor was asked for permission to conduct the study. Along with the letter was the informed consent for the participants, which clearly stated that their participation would be voluntary, and they were given the freedom to decide whether they would participate in the study or not.

Anonymity and Confidentiality: Students' personal information, including their responses and personal data, is confidential. All the collected data are secured, and students obtain informed consent before using their responses for the study.

Non-discrimination. Students are not discriminated against based on race, ethnicity, nationality, or other personal characteristics. All students are treated equally and avoided any biases during the pronunciation test.

Ethical use of data. Any data collected are used ethically and responsibly. Researchers and educators ensured that the data was used for its intended purpose and not shared or misused.

Overall, it is vital to approach any research or educational project involving students with sensitivity and respect. By following these ethical guidelines, we ensure that their rights are protected and treated equitably.

3 RESULTS AND DISCUSSION

This chapter presents the results and discussion on the data gathered about the level of pronunciation difficulties of criminology students. The data are presented hereunder through the tables.

3.1 Tables

Table 1. Pronunciation Test Scores

Based on the data gathered presented in Table 1, it shows that the participants got the least average of 27.43% on words with front vowel [I] followed by an average of 47.91% for [i], 59.12% for [E] and 86.90% for [e] respectively. Meanwhile,

Classification of Vowel Sounds	Front Vowels				Central Vowel		Back Vowel				
	[i]	[I]	[e]	[E]	[ə]	[æ]	[a]	[u]	[U]	[ɔ]	[o]
No. of Participants											
1	3	2	3	1	28	1	2	3	2	4	2
2	0	0	2	1	24	0	4	3	3	2	3
3	7	3	7	5	28	3	4	5	3	5	5
4	8	1	7	6	30	5	5	5	0	5	5
5	2	0	7	4	28	1	5	5	2	5	5
6	7	0	7	5	27	5	5	5	1	5	2
7	2	6	7	6	28	1	5	2	2	5	4
8	7	0	6	5	29	0	3	4	2	5	2
9	8	1	7	6	30	5	4	5	0	5	5
10	3	4	7	0	22	2	3	2	3	2	4
11	4	2	7	5	27	3	2	4	2	4	5
12	1	0	4	5	27	2	2	3	1	4	4
13	4	2	7	5	29	2	1	4	3	5	5
14	6	0	5	3	18	0	3	4	0	5	3
15	1	1	6	0	20	0	3	1	2	3	5
16	2	0	7	0	29	2	4	3	0	2	5
17	5	1	7	0	28	2	4	3	1	3	5
18	8	2	7	7	30	3	5	4	0	6	5
19	4	0	6	0	26	1	3	2	3	2	1
20	4	0	6	0	27	2	0	2	0	0	5
21	2	3	8	6	30	0	3	3	4	5	3
22	3	6	6	6	30	4	4	3	1	4	3
23	2	2	7	7	29	4	5	5	2	3	3
24	1	2	7	4	29	2	0	0	2	3	5
25	1	0	7	7	28	1	4	3	1	5	4
26	2	0	7	7	29	0	4	4	1	3	5
27	4	0	7	6	29	0	5	2	1	5	5
28	4	6	5	3	23	3	2	4	4	4	4
29	4	5	6	6	22	4	4	4	5	2	4
30	6	3	7	7	27	5	4	4	4	4	5
30	6	3	7	7	27	5	4	4	4	4	5
31	3	4	7	5	26	4	2	3	5	1	2
32	4	4	7	4	26	3	1	2	4	2	5
33	5	5	3	6	20	2	3	3	2	3	2
34	4	6	3	4	21	3	4	4	3	3	4
35	5	4	3	5	15	3	3	2	3	3	3
36	2	4	7	2	20	2	3	2	2	2	4
TOTAL:	138	79	219	149	939	80	118	117	74	129	141
AVERAGE:	47.91	27.43	86.9	59.12	86.94	44.44	65.55	65	41.11	71.66	78.33

distributed the consent forms, as well as the checklist, individually. Afterward, the expert started calling the students, reading the words on the given material, and putting

the participants got the least average of 41.11% on the back

Table 2. Front Vowel Sounds Pronunciation Test Scores

Participants	[ə]	Interpretation
1	28	VG
2	24	G
3	28	VG
4	30	VG
5	28	VG
6	27	VG
7	28	VG
8	29	VG
9	30	VG
10	22	G
11	27	VG
12	27	VG
13	29	VG
14	18	A
15	20	G
16	29	VG
17	28	VG
18	30	VG
19	26	VG
20	27	VG
21	30	VG
22	30	VG
23	29	VG
24	29	VG
25	28	VG
26	29	VG
27	29	VG
28	23	G
29	22	G
30	27	VG
31	26	VG
32	26	VG
33	20	G
34	21	G
35	15	A
36	20	VG
Total:	939	VG

vowel [U], followed by [æ] with an average of 44.44%, 65% for [u], 65.55% for [a], 71.66% for [ɔ] and 78.33% for [o] as the highest average on back vowels. However, most participants got high scores in pronouncing the words under the central vowel, with an average of 86.94%.

Participants	[i]	Interpretation	[I]	Interpretation	[e]	Interpretation	[ɛ]	Interpretation
1	3	P	2	P	3	P	1	VP
2	0	VP	0	VP	2	P	1	VP
3	7	VG	3	P	7	VG	5	G
4	8	VG	1	VP	7	VG	6	G
5	2	P	0	VP	7	VG	4	F
6	7	VG	0	VP	7	VG	5	G
7	2	P	6	G	7	VG	6	G
8	7	VG	0	VP	6	VG	5	G
9	8	VG	1	VP	7	VG	6	G
10	3	P	4	F	7	VG	0	VP
11	4	A	2	P	7	VG	5	G
12	1	VP	0	VP	4	F	5	G
13	4	F	2	P	7	VG	5	G
14	6	G	0	VP	5	G	3	P
15	1	VP	1	VP	6	G	0	VP
16	2	P	0	VP	7	VG	0	VP
17	5	F	1	VP	7	VG	0	VP
18	8	VG	2	VP	7	VG	7	VG
19	4	F	0	VP	6	G	0	VP
20	4	F	0	VP	6	G	0	VP
21	2	P	3	P	8	VG	6	G
22	3	P	6	G	6	G	6	G
23	2	P	2	P	7	VG	7	VG
24	1	VP	2	P	7	VG	4	F
25	2	VP	0	VP	7	VG	7	VG
26	2	P	0	VP	7	VG	7	VG
27	4	F	0	VP	7	VG	6	G
28	4	F	6	G	5	G	3	P
29	4	F	5	G	6	VG	6	G
30	6	G	3	P	7	VG	7	VG
31	3	P	4	F	7	VG	5	G
32	4	F	4	F	7	VG	4	F
33	5	G	5	G	3	P	6	G
34	4	F	6	G	3	P	4	F
35	5	G	4	F	3	P	5	G
36	2	P	4	F	7	VG	2	P
AVERAGE:	3.83	F	2.19	P	6.083	G	4.13	F

Note: HMI for [i] and [I]: 0.00-1.60 – Very Poor (VP); 1.61-3.20 – Poor (P); 3.21-4.80 – Fair (F); 4.81-6.40 – Good (G); 6.41-8.00 – Very Good (VG) and for [e] and [ɛ]: 0.00-1.40 – Very Poor (VP); 1.41-2.80 – Poor (P); 2.81-4.21 – Fair (F); 4.22- 5.61 – Good (G); 5.62-7.00 – Very Good (VG).

Findings revealed shown in table 2 that the sound under front vowel, the highest score recorded was 219 from the [e] sound which makes it equivalent to its hypothetical mean of Good that makes it the easiest. Meanwhile, the lowest score is 79 from the vowel sound [I] which makes it equivalent to its hypothetical mean of Poor. Therefore, makes it the most difficult.

Table 3. Central Vowel Sound Pronunciation Test Scores

Note: HMR for [ə]: 0. 00-1.60 – Very Poor (VP); 1.61-3.20 – Poor (P); 3.21-4.80 – Average (A); 4.81-6.40 – Good (G); 6.41-8.00 – Very Good (VG).

Findings revealed shown in Table 3 that the sound under central vowel, the score recorded was 939 from the sound [ə] which makes it equivalent to its hypothetical mean range of Very Good and therefore makes it very easy.

Table 4. Back Vowel Sounds Pronunciation Test Scores
 Note HMR for [i] & [I]: 0.00 - 1.60 – Very Poor (VP); 1.61 – 3.20 – Poor (P); 3.21 – 4.80 – Average (A); 4.81 – 6.40 – Good (G); 6.41 – 8.00 – Very Good (VG)

Findings revealed shown in Table 4 that that each sound under back vowels, the highest score recorded was 141 from the [o] sound which makes it equivalent to its hypothetical mean range of Good and therefore makes it the easiest. Meanwhile, the lowest score was 74 from the vowel sound [U] and makes it equivalent to its hypothetical mean range of Poor therefore makes it the most difficult.

4 CONCLUSION

Based on the researchers’ findings, this study proves that the participants mostly struggled with words with front and back vowels. Among the front vowels, the specific sound they committed the most miscue is the [I] sound which contains the words fill, lid, mitt, hill, whit, bid, knit, and it, with interpreted as Poor. Meanwhile they also struggle in words with the back vowels: [U] which contains the words pull, full, stood, book, foot, and [æ] with the words pat, back, tap, black, and map which are both interpreted as Poor. Hence, the way they pronounce English words is influenced by the similarity of their native phonemes.

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Participants	[ə]	Interpretation	[o]	Interpretation	[ɔ]	Interpretation	[U]	Interpretation	[ɔ]	Interpretation	[ə]	Interpretation
1	1	VP	2	P	3	A	2	P	4	G	2	P
2	0	VP	4	G	3	A	3	A	2	P	3	A
3	3	A	4	G	5	VG	3	A	5	VG	5	VG
4	5	VG	5	VG	5	VG	0	VP	5	VG	5	VG
5	1	VP	5	G	5	VG	2	P	5	VG	5	VG
6	5	VG	5	VG	5	VG	1	VP	5	VG	2	P
7	1	VP	5	VG	2	P	2	P	5	VG	4	G
8	0	VP	3	A	4	G	2	P	5	VG	2	P
9	5	VG	4	G	5	VG	0	VP	5	VG	5	VG
10	2	P	3	A	2	P	3	A	2	P	4	G
11	3	A	2	P	4	G	2	P	4	G	5	VG
12	2	P	2	P	3	A	1	VP	4	G	4	G
13	2	P	1	VP	4	G	3	A	5	VG	5	VG
14	0	VP	3	A	4	G	0	VP	5	VG	3	A
15	0	VP	3	A	1	VP	2	P	3	A	5	VG
16	2	P	4	G	3	A	0	VP	2	P	5	VG
17	2	P	4	G	3	A	1	VP	3	A	5	VG
18	3	A	5	VG	4	VG	0	VP	5	VG	5	VG
19	1	VP	3	A	2	P	3	A	2	P	1	VP
20	2	P	0	VP	2	P	0	VP	0	VP	5	VG
21	0	VP	3	A	3	A	4	G	5	VG	3	A
22	4	G	4	G	3	A	1	VP	4	G	5	A
23	4	G	5	VG	5	VG	2	P	3	A	3	A
24	2	P	0	VP	0	VP	2	P	3	A	5	VG
25	1	VP	4	G	3	A	1	VP	5	VG	4	G
26	0	VP	4	G	4	VG	1	VP	3	A	5	VG
27	0	VP	5	VG	4	VG	1	VP	5	VG	5	VG
28	3	A	2	P	4	VG	4	G	4	G	4	G
29	4	G	4	G	4	VG	5	VG	2	P	4	G
30	5	VG	4	G	4	VG	4	G	4	G	5	VG
31	4	G	2	P	3	A	5	VG	1	VP	2	P
32	2	P	1	VP	2	P	4	G	2	P	5	VG
33	2	P	3	A	3	A	2	P	3	A	2	P
34	3	A	4	G	4	VG	3	A	3	A	4	G
35	3	A	3	A	2	P	3	A	3	A	3	A
36	2	P	3	A	2	P	2	P	2	P	4	G
Total	79		118		119		74		128		141	79

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