

PRONUNCIATION LEARNING STRATEGY RELATIONSHIP WITH PRONUNCIATION PERFORMANCE

Toni Indrayadi

Institut Agama Islam Negeri Kerinci, Jambi, Indonesia

e-mail: toniindrayadi2gmail.com

Abstract

This study aims to investigate the pronunciation learning strategies (PLS) and pronunciation performance of Indonesian EFL students and to examine their correlation. A correlation design, adapting questionnaires of Tseng et al (2006) vocabulary learning strategies, which were developed from Eckstein (2007) and test was employed in this study. 68 students from the English department at one higher education institution in Jambi, Indonesia, were recruited using convenience sampling. Descriptive statistical analysis was run to analyze the level of students' PLS and pronunciation performances. While inferential statistics of Pearson product-moment to examine the relationship between the two variables. The results revealed that the undergraduate students were at a medium level in using PLS, but cognitive is the highest among the strategies. The participants also performed well in terms of accuracy and intelligibility. A significant correlation was found between PLS and both accuracy and intelligibility, and pronunciation performances. This study has a positive impact on pronunciation learning as it can be a foundation for lectures and students.

Keywords: accuracy, intelligibility, pronunciation learning strategy

1. Introduction

Pronunciation performance is essential in English Performance in pronunciation is a mirror of the target language level (Rouabah, 2018), and leads to successful communication (Kaharuddin & Ahmad, 2018). Specifically, it can make the learners easily understand native speakers' utterances (Li & Qi, 2023). However, pronunciation different realizations between English and Indonesia makes the learners challenging to pronounce the target language like a native. In the context where English is used as a foreign language like Indonesia, English pronunciation is influenced by first language interference. The inconsistency in the realization of English letters and phonetics made Indonesian English as a foreign language (EFL) learners transfer from their language into English in pronouncing words (Indrayadi et al., 2021). In other words, the linguistic patterns of the learners' first language

influence the target language production (Alkhateeb, 2016).

To achieve better pronunciation performance among EFL and ESL learners, an effective pronunciation learning strategy needs to be promoted. Strategy in pronunciation learning refers to an effort to make pronunciation learning more efficient. Peterson (2000) defined the terminology as analyzing, evaluating, asking for assistance, and memorizing the sounds of the target language to have proper pronunciation. Eckstein (2007) viewed pronunciation learning as associated with self-action used by EFL learners to achieve better pronunciation. Moreover, the pronunciation learning strategy is choosing specific actions for learning target language pronunciation (Pawlak & Szyszka, 2018). Thus, the awareness of using a certain strategy to improve pronunciation is important for learners, as lecturers cannot fully help them

(Eckstein, 2007). The lecturers only stimulate the students to seek their own ways to achieve their pronunciation learning goals (Sardegna et al., 2018).

Pronunciation Learning Strategies (PLS) and pronunciation performance has been investigated by several studies: increasing stress and intonation using metacognitive strategies (Peñuela, 2018), English user PLS (Szyszka, 2015), investigating PLS used EFL learners (Royani, 2023), online strategies for learning pronunciation (Danica, 2024), strategies in learning pronunciation (Malle et al., 2026). However, studies that seek the correlation between pronunciation learning strategies and pronunciation performance are rare: investigating the effect of pronunciation learning strategies on pronunciation (Muhammad & Othman, 2018), relationship between PLS and pronunciation accuracy (Rouabah, 2018), correlation between PLS and aptitude with pronunciation performance (Véliz-Campos, 2018). Thus, this study aims to examine further the correlation between PLS and pronunciation performance to expand the findings, using guidance research questions: (1) What types of pronunciation learning strategies do Indonesian undergraduate students use most and least in pronunciation learning? (2) Is there any difference between students' pronunciation accuracy and intelligibility? (3) Is there any correlation between students' pronunciation learning strategy and their pronunciation performance?

.....

2. Literature Review

Pronunciation learning strategies are derived from Oxford 1990's language learning strategies. Peterson, (2000) views that Oxford's taxonomy can be used as a feasible foundation of a pronunciation learning strategy.

Language learning strategy (LLS) is divided into direct and indirect strategies. Direct strategies deal with the mental processing of learning the target language and comprise memory, cognitive, and compensation strategies (Erbay et al., 2016). Memory strategy is an effort learners use to present sounds in memory (Taladngoan et al., 2020). This can be done by learning and remembering how to pronounce new words, such as minimal pairs, phonics, and rhyming words. Cognitive strategy is defined as the conscious action of learners to practice sound production and imitate native speakers' voices to improve pronunciation proficiency (Li & Qi, 2023). In addition, compensation strategy refers to adjusting difficult words' pronunciation by adapting easier pronunciation forms (Taladngoan et al., 2020).

Meanwhile, indirect strategies are defined as the strategies that help learners manage the targeted language learning without being directly involved, including metacognitive, affective, and social strategies. According to Taladngoan et al (2020), metacognitive strategies refer to how the learners observe and identify pronunciation problems to find the solution; affective strategies relate to the strategy used by the learners to regulate pronunciation learning emotions, motivations, and attitudes; social strategies is defined as learning pronunciation through direct practice with others.

Regarding pronunciation performance, it refers to the ability to produce a nearly accurate and understandable sound. Pronunciation performance can help both speakers and listeners communicate clearly and understandably. Accuracy and intelligibility are considered appropriate measurements to examine pronunciation performance (Véliz-Campos, 2018). Accuracy relates to understanding

speech production (Harlika et al., 2018), which comprises stress and intonation (Thomson & Derwing, 2015). These two pr of speech sound production are mainly affect pronunciation accuracy (Harlika et al., 2018).

Meanwhile, intelligibility is defined as the ability level of the listeners to recognize and understand words or utterances (Derwig & Munro, 2015); Smith & Nelson, 1985). More specifically, Bøhn and Hansen (2017) argues that intelligibility refers to how learners make them recognize and understand a speaker's message. The recognition and understanding of messages are influenced by the target language speech patterns (Franklin & Stoel-Gammonb, 2014). The study on pronunciation intelligibility conducted by Zielinski (2008) revealed that ESL learners face difficulties recognizing syllable stress and certain strong consonants produced by speakers. Thus, it is important to implement pronunciation training on explicit segmental properties to achieve EFL pronunciation intelligibility (Yenkimaleki & Van Heuven, 2011).

3. Research Method

3.1. Research Design

A correlation design was adopted in this study since it attempts to examine the relationship between EFL undergraduate students of PLS and pronunciation performance. This research design uses statistical test measurements to investigate the relationship among variables (Creswell, 2012). Therefore, it is considered more appropriate for this study.

3.2. Participants

68 English department students at a higher education institution in Jambi, Sumatra, Indonesia were recruited as study participants. They

comprise 46 females and 22 males, ranging in age 19-22 years old, and from three different years of study, including year 2, year 3, and year 4. Involving these students as participants, because they had taken a pronunciation class in the third semester. Involving 68 students as the research sample, as all of them responded to questionnaires and participated in tests. This means that they received phonetic articulation training during the teaching and learning process in the classroom. Convenience sampling was used to select the participants. For privacy, the students' names were masked, such as S1, S2, S3, and so forth.

3.3. Instrument

Questionnaires and tests were employed in this study. To collect the data on the pronunciation learning strategy, questionnaires containing strategies used in learning pronunciation were administered to students. It was adapted from (Eckstein, 2007), who modified Tseng et al (2006) vocabulary learning strategy. The questionnaires aimed to assess the frequency of students' pronunciation learning strategy using 5-point Likert scale options i.e. '1 (Less than once a month)', 2 (About once a month)', 3 (About once a week)', 4 (About once a day)', and '5 (Several times a day)'. This questionnaire consists of 37 items that are divided into six majors' strategies, i.e. memory, cognitive, compensation, metacognitive, affective, and social strategies. Before administering the questionnaire to the target students, the items were first translated into Indonesian, proofread, and assessed for face and content validity by two professors with expertise in pronunciation. Involving experts is required to ensure the validity of the instruments and for revision purposes (Sbaihat et al., 2018; Vaghei et al., 2020).

The Indonesian version items were then piloted with 40 students with similar levels and characteristics to the study participants to examine validity and reliability. The validity and reliability were analysed using corrected item-total correlation analysis in SPSS version 24. The standard measurement of the coefficient correlation for validity $\geq .31$ and reliability $\geq .50$. The analysis showed that Cronbach's alpha of all items was higher than .31 for validity and .94 for reliability. Aisyiyah et al (2025) argues that if the reliability of the instrument is higher than .50, so it is considered more appropriate to be used in research.

given word.
 I look for opportunities to practice my pronunciation as much as possible.
 I watch and listen to a video to improve my pronunciation.
 I notice my pronunciation mistakes and use that information to help me improve.
 When I speak with other students, I compare my pronunciation with them.
 I evaluate my pronunciation accuracy when speaking with others
 I speak to myself to practice my pronunciation
 I look for people I can talk to in English
 Compensation If I do not know how to pronounce a given word, I guess its pronunciation
 If I cannot pronounce a given English sound, I pronounce a sound as similar to it as possible
 I ask for feedback on my English pronunciation when speaking with someone
 I enjoy helping someone else learn pronunciation
 Indirect Strategy Metacognitive I pay attention to a given word's pronunciation.
 I focus on my pronunciation problems and try to overcome them.
 I record my sound

Table 1. Sample of PLS Questionnaire

Variable	Items
Direct Strategy	Memory I use a visual aid to memorize the pronunciation of new words. I repeat the pronunciation of words silently after listening to someone speaking English. I repeat a word several times to memorize its pronunciation. I practice new sound when learning pronunciation. I memorize the pronunciation of a given word by visualizing its transcription I write down word phonetics to memorize their pronunciation. I group words that sound similar in order to memorize their pronunciation. Cognitive I repeat after my lecturers in pronouncing a

Indirect Strategy

Compensation

Metacognitive

	<p>for evaluating my pronunciation progresss. While preparing a talk in English, I look up the pronunciation of new words in a dictionary and practise their pronunciation. I purposefully focus my listening on particular sounds. I plan and set time for pronunciation learning.</p>	<p>students. I ask for help from my English lecturers if I do not know how to pronounce a given word. I help others learn pronunciation.</p>
Affective	<p>I welcome others correcting my pronunciation errors. When others speak English, I pay attention to their pronunciation. I encourage myself to speak in English. I inform my classmates about their pronunciation errors. I ask other people about the level of my pronunciation. I discuss with other people the correct pronunciation of words I dream of sounding like native speakers.</p>	<p>To assess the learners' pronunciation performance, accuracy and intelligibility were devised, which consists of four sections. The first section focuseds on the quality and quantity of vowels and consonant contrasts of 19 words and 9 phrases; the second section consists of 7 sentences with vowel contrasts, consonantal differences, and consonant clusters; the third section consists of three short dialogues, which focus on sentence accent and intonation. Finally, the fourth section consists of two open-ended questions, which allow for a freer type of pronunciation performance. A five-level scoring scale, ranging from 1 (poor), 2 (Deficient), 3 (Satisfactory), 4 (very good), and 5 (excellent), was used to assess pronunciation performance. However, the two raters were also involved in discussing the face and content validity.</p>
Social	<p>If I find difficulty in pronouncing the words, I ask the other person to pronounce them loudly and slowly several times. I ask my English lecturers to correct me when I pronounce the words I practice English with other</p>	<p>3.4. Data Collection Before conducting the research, permission was first obtained from the Rectors of the higher education institutions through email. After receiving approval, the head of the English department was contacted via WhatsApp to involve his students in the research. The link to the Google form was sent to the head of the English department to be forwarded to targeted students, whereas the students were asked to respond to only one item of the questionnaire. He also requested to inform the students respond to the questionnaire as honestly as possible,</p>

and their participation would not affect their pronunciation class score. For pronunciation performance, the second, third, and fourth authors were involved to assess accuracy and intelligibility. Each of them has the responsibility of handling ten students in different locations. Separating the place is due to the consideration of avoiding disturbance. In doing so, the students were asked to pronounce the target vowels and consonant sounds in words, phrases, sentences, and short dialogues within fifteen minutes for each student.

3.5. Data Analysis

After collecting the data through a questionnaire and a test, the data were then analysed using descriptive and inferential statistics with the help of SPSS. Mean scores and standard deviations were calculated using descriptive statistics to describe the pronunciation learning strategy and pronunciation performance. Moreover, to determine whether the Pearson product-moment correlation for normally distributed data or Spearman correlation test for not normally distributed data is used to analyse the relationship among variables. When the significance score is higher than .05 (normally distributed), the Pearson product-moment is run. Meanwhile, the Spearman correlation is used when the significance score is lower than .05 (not-normally distributed). As the number of participants exceeds 50, the Kolmogorov-Smirnov test is used. In addition, the correlation level was adopted from Schober and Schwarte (2018), as shown in Table 2.

Table 2. Interpretation of Correlation Level

Correlation Coefficient Range	Description
0.00–0.10	Negligible
0.10–0.39	Weak
0.40–0.69	Moderate

0.70–0.89	Strong
0.90–1.00	Very strong

4. Result and Discussion

4.1. Results

The primary data in terms of minimum, maximum, Mean, and standard deviation of PLS and pronunciation performance aspects are presented in this section, followed by correlation analysis between the two variables. Table 3 presents the data summary of direct strategies and indirect strategies of PLS among the study participants. Direct strategies include memory, cognitive, and compensation strategies. Whereas indirect strategies comprise metacognitive, affective, and social strategies. Each strategy was analysed, and the analysis results were presented separately. Table 3. Data Summary of PLS

Variable	Min	Max
Direct Strategy	2.37	4.00
Memory	2.14	4.00
Cognitive	2.63	4.00
Compensation	2.25	4.00
Indirect Strategy	2.50	4.00
Metacognitive	2.50	4.00
Affective	2.43	4.00
Social	2.20	4.00

According to Table 3, the mean score of the participants in using PLS was at the medium level. The table indicates that cognitive is the highest, followed by affective and compensation as the second and third. Meanwhile, memory strategies have the lowest mean score. After presenting the PLS, the data pronunciation performance comparison in terms of mean and standard deviation is shown in Table 4.

Table 4. Data Summary of Pronunciation Performance

Variable	Min	Max
Pronunciation Accuracy	3.21	4.00
Pronunciation Intelligibility	2.83	4.00

Based on the summary of pronunciation performance in the table above, the mean scores of both accuracy and intelligibility are at a similar level, exactly satisfactory as shown in Table 4. Although the mean scores of both accuracy and intelligibility in similar level. The mean score of accuracy (M=3.67, SD=.16) is higher than that of intelligibility (M=3.32, SD=.21).

In addition, the correlation between independent and dependent variables is presented after PLS and pronunciation performances. As the results of Kolmogorov-Smirnov test analysis, the data of PLS and pronunciation performance in terms of accuracy and intelligibility are normally distributed, a Pearson product-moment correlation was used to examine the relationship.

Table 5. Correlation between PLS and Pronunciation Performance

Pronunciation Performance	Pearson's rho	p-value
Accuracy	.60	.000
Intelligibility	.40	.001
Overall	.62	.000

Table 5 shows that the correlation between PLS and accuracy ($r = .60, p = .000$), intelligibility ($r = .40, p = .001$), and overall ($r = .62, p = .000$) is at the moderate level. This means that there is a significant relationship between the three pronunciation performances listed in the table above, namely, accuracy, intelligibility, and overall.

4.2. Discussion

This study aimed to examine the types of PLS used by students, the differences between pronunciation accuracy and intelligibility, and the

correlation between PLS and pronunciation performance.

4.2.1. Types of PLS used most and least

The results of descriptive analysis show that students tend to use cognitive strategies and rarely use memory strategies. These findings are in line with (Erbay et al., 2016), English department students of Western Languages and Literature at a mid-sized university in the northeast part of Turkey prefer to employ cognitive strategies. Likewise, Sardegna et al (2018) reveal that students tend to use cognitive strategies to improve their pronunciation. Moreover, a study conducted by Permatasari (2019) entitled “The EFL learners’ direct strategies used in pronunciation class” reported that the English department students at the State University of Surabaya, Indonesia, often use cognitive strategies to enhance their pronunciation performance. Similar findings were also highlighted by Li and Qi (2023), who noted that English major students listened to their own pronunciation and compared it to that of native speakers for improvement. In addition, Vaklifard and Ateshgaran (2023), who compared strategies used by Arabic and Chinese mother tongue students at Imam Khomeini International University found that the mean score of Arabic students was higher than Arabic. The research results of several studies indicated that using cognitive strategies is more dominant than other strategies in learning pronunciation among EFL learners.

4.2.2. Accuracy and Intelligibility Performance

Pronunciation performance in terms of accuracy is at a satisfactory level. For accuracy, the study finding differs from (Sihombing et al., 2025), which found that EFL pronunciation

accuracy is low, based on data from a systematic review conducted in 2010 and 2025. Different findings were also noted by Mahmood (2023), EFL learners of Kurdish have low ability in pronouncing English before receiving comments and feedback from teachers. Regarding intelligibility, the mean score is similar to accuracy. It is in line with Franklin and Stoel-Gammonb (2014), intelligibility is problematic for Japanese, Korean, and Spanish EFL learners, especially vowels. However, contradicting the study finding of Chau et al (2022), the pronunciation intelligibility of Vietnamese EFL learners was lower before receiving corrected feedback using a metalinguistic explanation from instructors.

4.2.3. Correlation between PLS and Pronunciation Performance

The analysis results of a Pearson product-moment correlation show significant correlation among accuracy, intelligibility, and overall. Concerning accuracy, the current study results align with those of Muhammad and Othman (2018), who investigated the effect of pronunciation learning strategies on pronunciation. The study results indicated a positive relationship between pronunciation learning strategies and pronunciation accuracy. However, different findings were revealed by Rouabah (2018) study in the Algerian context involving English department students at Mohammed Seddik Ben Yahia University, where no significant correlation was found between PLS and accuracy, and those found in Véliz-Campos (2018) study in the Chile context, in which PLS used by the students of English language teacher education has no correlation with pronunciation accuracy. A significant correlation between PLS and pronunciation accuracy may be due to

the high motivation to have better pronunciation.

For intelligibility, it was similar to accuracy ($r = .40$, $p = .001$). The previous study's findings are in concordance with (Rojas, 2022), who found that seventh-grade ELT students in the public school Monseñor Ramon Arcila in Cali strategies of exercise and repetition of audio positively improved pronunciation intelligibility. Irawan (2023) whose study about relationship between learning habits and pronunciation intelligibility, revealed that pronunciation intelligibility has a strong correlation with a balance of using receptive and productive practice. Moreover, (Bremer et al., 2013) argued that strategies of pronunciation learning can help EFL learners in solving intelligibility problems. The important role of intelligibility was revealed by Bøhn and Hansen (2017), most participants in their study admitted when interviewed that intelligibility must be understood by the EFL learners for better pronunciation proficiency.

In addition, all pronunciation performance indicated that PLS had a significant correlation with both pronunciation accuracy and intelligibility, as well as with overall sub-indicators of pronunciation performance. The findings are aligned with Szyszka (2015), strategies of pronunciation learning contribute to proficiency, as they can help learners improve their pronunciation. Sardegna (2011) examined the effect of pronunciation learning strategies on the pronunciation improvement of international graduate students at an American university. The study revealed that there was an improvement of students' pronunciation proficiency after four months using PLS. Moreover, Anderson (2005) highlighted that better pronunciation proficiency is influenced by the implementation of the qualified

learning strategies. Rokoszewska (2012) pointed out that motivated EFL students tend to use both direct and indirect PLS strategies to achieve better pronunciation. In other words, strategies strongly impact students' success in pronunciation learning (Szyszka, 2015).

5. Conclusion

This study examines the correlation between PLS and the pronunciation performances of EFL undergraduate students in Indonesia. The study findings showed that the students were at the medium level in using memory, compensation, metacognitive, affective, and social, but the highest mean score was cognitive strategies. Participants' pronunciation performance was also positive. However, accuracy was higher than intelligibility. The findings further indicated significant correlation between using PLS and pronunciation performance. This study contributes to the literature on pronunciation learning strategies and pronunciation performance among EFL learners and strengthens previous research on the relationship between PLS and pronunciation performance.

Furthermore, this study has several limitations. First, descriptive analysis and Pearson product-moment correlation were employed to answer the research questions. The descriptive analysis was run to explore the type of PLS frequently used by the research participants, and the Pearson product-moment correlation to examine the relationship between PLS and pronunciation performance. Second, only one higher education institution students in Jambi, Indonesia was participated in this study. In addition, only English department students who have taken pronunciation class from three different years of study. Thus, the

results of this study may not be generalized to all English department students in Indonesia. Therefore, further research with a large participant is suggested. The findings of this study have pedagogical implications in pronunciation teaching and learning. It is evident that pronunciation learning strategies may benefit lecturers and students in pronunciation courses. The learning strategies can lead lecturers to encourage students to use their pronunciation strategies to engage in learning activities. Using the strategy, students can learn to improve their pronunciation performances.

References

- Aisyiyah, I., Abdul Baqi, F., & Rohmiyati, Y. (2025). The effectiveness of quizlet in teaching vocabulary to EFL students to eleventh-grade students at SMA negeri 1 Cikande Serang. *Jurnal Basis*, 12(2), 399–410. <https://doi.org/10.33884/basisupb.v12i2.10676>
- Alkhateeb, M. M. A. (2016). My mother tongue pulls my leg Arabic language interference in the acquisition of English language: An attempt to know how. *Journal of Education and Practice*, 7(23), 96–102.
- Anderson, N. J. (2005). L2 learning strategies. In *Handbook of Research in Second Language Teaching and Learning* (pp. 757–771). <https://doi.org/10.4324/9781410612700-56>
- Bøhn, H., & Hansen, T. (2017). Assessing pronunciation in an EFL context: Teachers' orientations towards nativeness and intelligibility. *Language Assessment Quarterly*, 14(1), 54–68. <https://doi.org/10.1080/15434303.2017.1371111>

- 016.1256407
- Bremer, K., Roberts, C Vasseur, M., Margaret Simonot, M., & and, & Broeder, P. (2013). *Achieving understanding: Discourse in intercultural encounters*. Routledge
- Chau, T., Huensch, A., Hoang, Y. K., & Chau, H. T. (2022). The effects of L2 pronunciation instruction on EFL learners' intelligibility and fluency in spontaneous speech. *Test-Ej*, 25(4), 1–28. <https://doi.org/10.55593/ej.25100a7>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed)*. Pearson
- Derwing, T. M., & Munro, M. J. (2015). *Pronunciation fundamentals: Language learning & language teaching (LL & LT)*. John Benjamin Publishing Company.
- Eckstein, G. T. (2007). *A correlation of pronunciation learning strategies with spontaneous English pronunciation of adult ESL learners (Master Thesis)*. Brigham Young University.
- Erbay, S., Kayaoglu, M. N., & Önay, E. (2016). Understanding pronunciation learning strategy use: A vignette analysis. *Participatory Educational Research*, 1, 48–56. <https://doi.org/0.17275/per.16.spi.1.6>
- Franklin, A. D., & Stoel-Gammonb, C. (2014). Using multiple measures to document change in English vowels produced by Japanese, Korean, and Spanish speakers: The case for goodness and intelligibility. *American Journal of Speech-Language Pathology*, 23, 625–640. https://doi.org/10.1044/2014_AJSLP-13-0144
- Harlika, M. S. U., Saifuddin, M., & Fauziah, N. (2018). Promoting students' accuracy in pronouncing consonant sounds by using English pronunciation software. *Journal of Research in Foreign Language Teaching*, 1(2), 14–24.
- Indrayadi, T., Daflizar, Irawan, Y., & Helty. (2021). Indonesian EFL students' difficulties in recognizing english letters. *Qualitative Report*, 26(11), 3476–3491. <https://doi.org/10.46743/2160-3715/2021.4846>
- Irawan, L. A. (2023). Learning habits and speech intelligibility of EFL learners. *Edulangue*, 6(1), 73–88. <https://doi.org/10.20414/edulangue.v6i1.7407>
- Kaharuddin, A., & Ahmad, D. (2018). English hphonetics for Indonesian learners of English (An essential guide to natural English pronunciation). *TrustMedia*.
- Li, G., & Qi, T. (2023). English pronunciation learning strategies among English major students. *Lecture Notes on Language and Literature*, 6(10). <https://doi.org/10.23977/langl.2023.061004>
- Mahmood, R. Q. (2023). Enhancing EFL speaking and pronunciation skills: Using explicit formal instruction in a Kurdish university. *Issues in Educational Research*, 33(4), 1421–1440.
- Malle, I. R., Fatsah, H., & Mahmud, M. (2026). Students ' beliefs and strategies in learning pronunciation: A Narrative Research. *Journal of Language Education*, 4(1), 1–6.
- Muhammad, H. A., & Othman, D. Y. (2018). Assessing the Impact of pronunciation learning strategy on Kurdish EFL learners' pronunciation accuracy. *Koya University Journal of Humanities and Social Sciences*, 1(1), 46–56. <https://doi.org/10.14500/kujhss.v1n1y2018.pp46-56>

- Pawlak, M., & Szyszka, M. (2018). Researching pronunciation learning strategies: An overview and a critical look. *Studies in Second Language Learning and Teaching*, 8(2 Special Issue), 293–323. <https://doi.org/10.14746/ssllt.2018.8.2.6>
- Peñuela, D. C. (2018). Using metacognitive strategies to raise awareness of stress and intonation. *Colombian Applied Linguistics Journal*, 20(1), 91–104. <https://doi.org/10.14483/22487085.12383>
- Permatasari, S. E. (2019). The EFL learner's direct strategies used in pronunciation class. *Retain*, 7(1), 90–97. <https://ejournal.unesa.ac.id/index.php/retain/article/view/27899>
- Peterson, S. S. (2000). *Pronunciation learning strategies: A First Look*. Eric
- Rojas, J. J. G. (2022). *Pronunctaion learning strategies to strengthen oral intelligibility in 7th grade English students in the Le Monsenor Ramon Arcila a public school in Cali (Master Thesis)*, Universidad Icesi
- Rokoszewska, K. (2012). The influence of pronunciation learning strategies on mastering English vowels. *Studies in Second Language Learning and Teaching*, 2(3), 391. <https://doi.org/10.14746/ssllt.2012.2.3.7>
- Rouabah, N. (2018). *Exploring the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level (Master Thesis)*. University of Mohammed Seddik Ben Yahia.
- Royani, I. (2023). Pronunciation learning strategies used by EFL learners in university context. *Proceeding of Conference on English Language Teaching*, 3, 421–432. <https://proceedings.uinsaizu.ac.id/index.php/celti/article/view/521>
- Sardegna, V. G. (2011). Learner differences in strategy use, self-efficacy beliefs, and pronunciation improvement. *Proceedings of the 3rd Pronunciation in Second Language Learning and Teaching Conference*, 39–53). Iowa State University
- Sardegna, V. G., Lee, J., & Kusey, C. (2018). Self-efficacy, attitudes, and choice of strategies for English pronunciation learning. *Language Learning*, 68(1), 83–114. <https://doi.org/10.1111/lang.12263>
- Sbaihat, A., Al Duweiri, H., Hashem, T., & Kalaldehy, R. (2018). Learners' attitudes toward using the Arabic mother tongue in Hispanic literature classrooms. *Jordan Journal of Modern Languages and Literatures*, 10(2), 145–160.
- Schober, P., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia and Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Sihombing, J. E., Sihaloho, L. S., Sianipar, S. U. U., & Sinurat, B. (2025). Phonological awareness on students' pronunciation accuracy in English. *Young Journal of Social Sciences and Humanities*, 1(3), 131–143.
- Smith, L. E., & Nelson, C. L. (1985). International intelligibility of English: directions and resources. *World Englishes*, 4(3), 333–342. <https://doi.org/10.1111/j.1467-971X.1985.tb00423.x>
- Szyszka, M. (2015). Good English pronunciation users and their pronunciation learning strategies. *Research in Language*, 13(1), 93–

106. <https://doi.org/10.1515/rela-2015-0017>
- Taladngoen, U., Pinsak, J., & Chuenchomnakjad, S. (2020). Pronunciation learning strategies used among Thai EFL tertiary students with different self-evaluated pronunciation abilities. *Suranaree Journal of Social Science*, 14(2), 99–117. <https://doi.org/10.55766/HBQD9035>
- Thomson, R. I., & Derwing, T. M. (2015). The effectiveness of L2 pronunciation instruction: A narrative review. *Applied Linguistics*, 36(3), 326–344. <https://doi.org/10.1093/applin/amu076>
- Tseng, W. T., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27(1), 78–102. <https://doi.org/10.1093/applin/ami046>
- Vaghei, S., Esfahani, F. R., & Shafiee, S. (2020). The relationship between language mindsets and feedback preferences in L2 writings of EFL learners. *Journal of Language and Education*, 6(4), 183–203. <https://doi.org/10.17323/jle.2020.10792>
- Vakilifard, A., & Ateshgaran, M. (2023). A comparative study on the use of pronunciation learning strategies. *Journal of English Language Teaching and Learning*, 15(31), 215–231. <https://doi.org/10.22034/elt.2023.55893.2528>
- Véliz-Campos, M. (2018). Pronunciation learning strategies, aptitude, and their relationship with pronunciation performance in pre-service English language teachers in Chile. *Iranian Journal of Language Teaching Research*, 6(2), 57–76 .
- Yenkimaleki, M., & Van Heuven, V. J. (2011). *Training benefits of segmental vs. suprasegmental in EFL learners' speech intelligibility and comprehensibility: An experimental study.*
- Zielinski, B. W. (2008). The listener: No longer the silent partner in reduced intelligibility. *System*, 36(1), 69–84. <https://doi.org/10.1016/j.system.2007.11.004>