Development of Digital Teaching Materials for Indonesian Phonetics with Sound Association Design for Basic Level BIPA Arabic Learners

Salis Hilda Yoviyani*, Yeti Mulyati, Andoyo Sastromiharjo, Halimah
Faculty of Language and Literature Education, Universitas Pendidikan Indonesia
*Corresponding Author. Email: salishilda@upi.edu

Abstract: This research aims to develop digital teaching materials for Indonesian phonetics designed with sound association to support basic-level BIPA learners. This research method used research and development with the 4-D model, which consists of Define, Design, Develop, and Disseminate stages. The research instruments included pronunciation ability tests, learner needs questionnaires, BIPA teacher interview instruments, and validation sheets from experts and practitioners. The data analysis techniques used were qualitative and quantitative methods and Gregory's validity test with validity assessment criteria using the Likert Scale 1-4. The validation results indicated that the materials were "feasible" with some necessary revisions. After making the suggested revisions, the revised materials were piloted with basic-level BIPA learners. Feedback from these learners rated the materials as "very feasible", indicating a positive reception. The final product is a digital flipbook equipped with audio pronunciation guides and illustrations that can be accessed online. This format provides a flexible and engaging alternative for improving Indonesian pronunciation for Arabic-speaking BIPA learners, making it a valuable addition to the available teaching resources.

Introduction

BIPA (Indonesian for Foreign Speakers) learning aims to enable foreign speakers to speak Indonesian like native speakers. According to Kusmiatun (2016), BIPA learning helps foreigners master Indonesian effectively, although their knowledge of the correct and appropriate use of the language may initially be limited and developing. Similarly, Ulumuddin and Wismanto (2014) likened foreign speakers to newborn babies who require a language maturation process. However, in practice, BIPA teaching often emphasizes certain themes in teaching materials while giving less attention to pronunciation, despite its critical role in developing effective communication skills. Pronunciation is essential for students to distinguish between different words and plays a fundamental role in mastering a second language. Budiawan and Rukayati (2018) highlighted that speaking skills are crucial for fluent communication. Pronunciation errors can alter the meaning of speech and lead to miscommunication.

This view is in line with Mulyati (2014), who stated that pronunciation errors can cause misunderstandings of the meaning and message that the speaker wants to convey. Mulyati explained that incorrect pronunciation can cause confusion in communication and interfere with language comprehension. Hismanoglu (2006) also emphasized the importance of pronunciation to achieve optimal language competence. Stanculea (2015) argued that someone with good pronunciation is easier to understand than someone who has good

grammar but poor pronunciation. This perspective suggests that pronunciation can affect overall language skills because poor pronunciation can change the intended meaning.

Pronunciation often presents significant challenges in BIPA learning, especially for beginners from the Middle East whose first language is Arabic. Initial observations reveal frequent pronunciation errors due to substantial phonological differences between Indonesian and Arabic. These errors include difficulties in pronouncing certain consonants and vowels that are not present in Arabic, underscoring the need for a phonological contrastive analysis between the two languages. Arabic has a distinct sound system and pronunciation, including consonants such as ض [dha], ظ [dza], and ع [ain], which do not exist in Indonesian. Conversely, Indonesian includes vowel sounds like [e] and [o] that are not found in Arabic. Therefore, equipping BIPA learners who are Arabic speakers with the skills to recognize and produce these vowel sounds highlights the necessity of contrastive phonological analysis between the languages. By understanding these phonological differences, teaching can be tailored to address the pronunciation challenges faced by learners, as noted by Yoviyani and Mulyati (2023).

Based on initial observations of basic Arabic BIPA learners at the Balai Bahasa UPI several significant pronunciation errors were found. These errors include consonants, vowels, diphthongs, and consonant clusters that are not pronounced according to the phonetic standards of Indonesian. For example, the consonant /t/ is often pronounced as [adats] instead of [adat] with the addition of the sound /s/ at the end, and the vowel /e/ in the words [enak] and [bedug] is pronounced as [inak] and [biduk'] with the change of the vowel /e/ to the vowel /i/, and the diphthong /ai/ in the word [malaikat] is pronounced as [malekats]. Other errors include the pronunciation of the diphthong /au/ in the word [aula] which is pronounced as [ula], and consonant combinations such as /ng/ in [uŋu] become [unu]. The pronunciation of consonants /j/, /v/, and /s/ also change, such as in the word [jus] which is pronounced as [njUs] and [visa] as [wiza]. This study shows that there are difficulties for learners in adjusting to Indonesian sounds that are not found in Arabic, so it is important to develop teaching materials that can help overcome these phonetic challenges.

There is a critical need to develop teaching materials that can improve the pronunciation skills of BIPA learners. The development of digital teaching materials for Indonesian phonetics using the Sound Association approach is an effective solution to help Arabic BIPA learners learn the phonetic aspects of Indonesian. Puspitasari, Heni, and Samino (2013) and Fatia Wijayanti (2011) conducted research that emphasized the use of the Sound Association approach in improving students' pronunciation skills. Puspitasari et al. focused on improving the English pronunciation of fifth-grade students through this learning approach, while Wijayanti successfully applied it to students by associating sounds with Indonesian and Javanese. Both studies show that the Sound Association approach and the development of digital teaching materials play an important role in improving students' pronunciation skills. While existing studies have shown the success of the Sound Association method in improving pronunciation, there is a lack of research on its application in BIPA learning.

The Sound Association approach to language learning, which associates certain sounds with words or phrases in the target language to aid in memory and pronunciation, has been recognized as an effective method for improving language retention and comprehension (Celce-Murcia, Brinton, & Goodwin, 2010; Nation, 2008). Celce-Murcia, Brinton, and Goodwin (2010) emphasized that phonological awareness and the use of sound-meaning relationships are essential in developing effective pronunciation skills. The Sound Association approach is closely related to mnemonic techniques that have the principle of

association. Nation (2008) also explained that mnemonic techniques, such as sound-word association, are one effective method for improving vocabulary mastery. Underhill (2013) added that good pronunciation is essential in language learning, and strategies that associate sound with meaning can help in achieving optimal language competence.

Recent research by Hayakawa and Marian (2024) shows that people can infer the meaning of foreign words based on their sounds, which challenges the traditional view that sound-meaning relationships are arbitrary. Nuckolls (1999) also supports this idea in "The Case for Sound Symbolism" showing that the phonetic form of a word can provide clues about its meaning, helping in the process of vocabulary acquisition and language learning. This study strengthens the evidence that sound symbolism can play a significant role in language learning. Moreover, language learning strategies, including sound association, have been widely discussed in the academic literature on vocabulary acquisition and language learning methods (Nation, 2013).

In addition to the use of sound association as a design material for digital teaching materials, some additional training techniques are needed to support this. Techniques like repetition drills from the Audiolingual Method are necessary to support pronunciation practice, as they have been shown to enhance pronunciation skills. Developing digital phonetic teaching materials using the Sound Association approach offers a novel solution for BIPA learners, particularly those from Arabic-speaking backgrounds. Despite the importance of pronunciation in second language learning, it often does not receive equal attention as other language aspects in BIPA teaching. This leads to frequent pronunciation errors among BIPA learners, especially those from Arabic-speaking backgrounds. There is a need to develop specialized digital phonetic teaching materials that can help learners understand and produce Indonesian sounds more accurately.

This research aims to develop digital teaching materials for Indonesian phonetics designed with sound association to support basic-level BIPA learners. The goal is to provide a comprehensive understanding of how these materials can improve pronunciation skills, enhance communication abilities, and address the specific phonological challenges these learners face. By integrating Sound Association into digital teaching materials, this review seeks to highlight the potential benefits and effectiveness of this method in BIPA learning.

Research Method

The method applied was Research and Development (R&D), chosen for its suitability in creating and testing the effectiveness of specific products. This research focuses on designing new products and procedures that must be tested, evaluated, and refined to meet predetermined standards of effectiveness and quality, as described by Borg and Gall (2003). The R&D method was selected due to its capacity to produce learning products that not only adhere to quality standards but also effectively achieve learning objectives. In product development, the Four-D model developed by Sivasailam Thiagarajan and Semmel (1974) was used, which includes four main stages: define, design, develop, and disseminate. This model was chosen for its systematic structure and its ability to ensure every aspect of product development is carefully considered. The Four-D model allowed for continuous evaluation and refinement of the product based on feedback from field trials, so that the resulting product truly meets user needs and is effective in its context of use.

The research data sources included basic-level Arabic-speaking BIPA learners, BIPA teachers, and expert validators of materials, media, and BIPA practitioners. Data collection techniques included tests, interviews, questionnaires, and validation sheets, which were designed to obtain comprehensive information about pronunciation skills, teachers' opinions,

and the validity of teaching materials. The research instruments included pronunciation ability tests, learner needs questionnaires, BIPA teacher interview instruments, and validation sheets from experts and practitioners.

Validity testing was conducted by material experts, media, and BIPA practitioners. The questionnaires that had been assessed by the experts were then analyzed using Gregory's calculations. The assessment results from the two experts were entered into a 2 x 2 cross table consisting of columns A, B, C, and D. Column A shows the disagreement of the two experts. Columns B and C reflect the differences in views between the first and second experts, while column D shows the level of agreement between the two experts. The formula used in Gregory's validity test is (column D divided by A+B+C+D) (Gregory, 2000).

Results and Discussion
Define

The initial stage involved analyzing the profile of the teaching materials and the beginner Arabic-speaking BIPA learners. This analysis is crucial to understanding the needs and characteristics of the learners as well as the existing teaching materials. Interviews with five BIPA teachers revealed that most teachers use materials that have been in use for a long time at Balai Bahasa UPI. Additionally, some teachers create their handouts and use media like YouTube to support the pronunciation learning process. The analysis indicated that the existing teaching materials do not adequately emphasize the detailed pronunciation of Indonesian phonetic sounds, especially in terms of sound associations between Indonesian and Arabic. Beginner Arabic-speaking BIPA learners also felt the need for engaging digital teaching materials specifically designed to enhance their pronunciation skills. Learners responded positively to the development of digital teaching materials in Indonesian pronunciation learning.

The next analysis stage involved examining the learning problems of beginner Arabic-speaking BIPA learners, specifically related to pronunciation skills. Initial research findings revealed that beginner Arabic-speaking BIPA learners still face difficulties pronouncing Indonesian letters, particularly sounds not present in Arabic. The findings show that the pronunciation of vowel sounds /a/, /i/, and /u/ is clear, while /e/ and /o/ undergo changes. For consonants, clear pronunciations include /b/, /f/, /l/, /m/, /n/, /r/, /s/, /v/, /w/, /y/, and /z/, while /c/, /h/, /j/, /k/, /q/, /t/, /x/, /d/, and /g/ are less clear. The pronunciation of /p/ also changes. For diphthongs, the combinations /ai/ and /au/ are clear, while /oi/ and /ei/ experience changes. For clusters, /kh/ and /sy/ are clear, whereas /ny/ and /ng/ undergo changes. The pronunciation of clusters like /ny/ and /ng/ also shows changes. This aligns with previous research by Rika Rafkahanun (2021), which indicates that Arabic-speaking BIPA learners struggle with pronouncing the bilabial plosive consonant [p], the palatal nasal consonant [ň], semivowel [w], and the velar nasal consonant [ŋ]. However, this study slightly differs from previous research, which stated that Arabic-speaking BIPA learners struggle with the semivowel [w]. The researcher found that Arabic-speaking BIPA learners could clearly pronounce the semivowel [w]. Therefore, the researcher categorized the consonant sounds [w] and [wa] in the same category, as both are bilabial and semivocalic sounds. This also aligns with research by Marlina (2019), which states that both sounds fall into the same category for the development of teaching materials with sound associations between Indonesian and Arabic.

The researcher continued the analysis stage by examining the sounds of Indonesian and Arabic letters in terms of similarities, resemblances, and differences using contrastive analysis. Soedibyo (2004) states that contrastive analysis compares elements found in L1 and

L2. Understanding these similarities and differences is crucial for developing effective teaching materials. Findings from this contrastive analysis revealed that there are several Indonesian sounds not present in Arabic, presenting unique challenges for Arabic-speaking BIPA learners. Vowels such as [e], [ɛ], and [ə], for example, are not present in standard Arabic, which only has basic vowels [a], [i], and [u]. Vowels [o] and [ɔ] are also absent in standard Arabic. In Arabic, there are only long vowels (mad) marked by و for /u/, ا for /a/, and ي for /i/, while short vowels (qasar) are the opposite of mad (Abduttawwab, 1997). Consonants like /c/ in "cari," /p/ in "pintu," and /x/ in "xilofon" also have no counterparts in Arabic. These similarities and differences highlight the importance of phonetic understanding in teaching BIPA to Arabic-speaking learners. Understanding unique Indonesian sounds can help learners master pronunciation better and overcome phonetic challenges they might face. This contrastive analysis served as the basis for developing digital phonetic teaching materials with sound association design for beginner Arabic-speaking BIPA learners.

Design

After completing the analysis stage, the researcher moved on to the design stage. The initial design of the digital phonetic teaching material was created using media such as Canva for designing and laying out the digital teaching materials and Heyzine Flipbook as a medium to display the teaching material in digital format. This teaching material was designed to engage learners interactively with audio features and attractive illustrations with a sound association design. The main components of this digital teaching material include an introduction section, a content section covering goals and learning activities, and a supplementary section including evaluations and exercises. It aligns with the main components of digital teaching materials according to Kosasih (2021), which include objectives, content, activities or exercises, evaluation devices, and feedback/reflection. This design is expected to help Arabic-speaking BIPA learners improve their pronunciation of Indonesian phonemes more effectively and attractively.

The presentation structure of digital learning materials for basic Arabic BIPA learners begins with a pre-activity that introduces the basic sounds of the Indonesian language. The pre-activity stage in the digital learning materials begins with an introduction to the basic sounds of the Indonesian language, including the sounds of the alphabet, vowels, consonants, diphthongs, and clusters, as well as their sound associations in Arabic. This approach is based on the theory of articulatory phonetics which emphasizes the importance of understanding the location and manner of articulation of sounds. The IPA (International Phonetic Alphabet) phonetic transcript is used to provide a consistent and accurate visual representation of each sound, helping learners recognize and reproduce the sounds more accurately.

In the first unit, the focus on vowel sounds [a, i, u, e, o] is important because vowels are the core of the syllable structure in Indonesian. Grouping all vowel sounds in one unit allows learners to focus on vowel variations and recognize the differences between each sound. The second and third units introduce plosive consonants such as [b, p, c, j, d, t, k, g], as well as fricatives, nasals, laterals, and rhotics such as [f, v, m, n, l, r, s, z]. These groups are based on the articulatory and phonological properties of the consonant sounds. Plosive consonants, for example, involve a complete stoppage of the airstream at a specific point of articulation before being released, which is important for understanding subtle differences in sound production. The fourth through seventh units cover more complex consonant sounds, diphthongs, and clusters. Teaching these sounds together helps learners understand differences in points of articulation and more varied modes of production, such as glottal [h], velar [q], semi-vowels [w, y], and complex [x]. Teaching diphthongs and clusters is important for building fluency in pronouncing words containing different sound

combinations, which is essential in Indonesian. The final evaluation of the digital learning materials is designed to assess the extent to which basic Arabic BIPA learners have mastered the pronunciation of the alphabet and its application in real contexts. The alphabet pronunciation test in simple sentences and texts ensures that learners not only recognize individual sounds but can also combine them appropriately in more complex and meaningful structures. The following is the initial design of the cover page of the digital teaching material.

Figure 1. Teaching Material Design

Develop

After the definition and design stage of digital teaching materials is completed, the next step is the development stage. The purpose of this stage is to produce revised digital teaching materials based on input from experts. Comments and suggestions from several experts will be improved by researchers before being tested with learners. The instrument used to collect data was a validation sheet with a Likert scale that had a value range of 1-4. The expert validation data were analyzed descriptively quantitatively by determining the content validity coefficient or Gregory index using the Gregory formula. Before determining the Gregory index, the relevance of the assessments from the two validators was analyzed using the following contingency table.

Table 1. Contingencies for Calculating the Gregory Index

Matrix 2x2		Validator I	
		Weak (1-2)	Strong (3-4)
Validator II	Weak Score (1-2)	A	B
	Strong Score (3-4)	C	D

Source: Gregory in Retnawati (2017)

The contingency table classifies the assessment into four categories as follows: 1) If both validators give the same score, in the range of 1-2, for the same item, then the relevance category is weak-weak, symbolized by A; 2) if validator 1 gives a score in the range of 3-4 on the same item, while validator 2 gives a score in the range of 1-2, then the relevance category is strong-weak, symbolized by B; 3) if validator 1 gives a score in the range of 1-2 on the same item, while validator 2 gives a score in the range of 3-4, then the relevance category is weak-strong, symbolized by C; 4) if both validators give the same score in the range of 3-4 for the same item, then the relevance category is strong-strong, symbolized by D.

The next step is to calculate the value of the content validity coefficient using the contingency matrix table and Gregory's formula. The results of the content validity

coefficient are then interpreted into various categories according to the validity criteria set in the Gregory test. The following are the validation results from media experts, material experts and BIPA practitioners based on the Gregory Validity Test.

Table 2. Results of Validation of Digital Teaching Materials

No	Validator	Validity Coefficient Score	Category
1	Media Expert	0,69	High Validity
2	Subject Matter Expert	0,67	High Validity
3	BIPA Practitioner	0,90	Very High Validity

Assessment results from validators Based on Gregory R.J.'s interpretation (2002), if the value is in the range of 0.80 - 1.00, then the validity is very high; a range of 0.60 - 0.79 indicates high validity; a range of 0.40 - 0.59 indicates moderate validity; a range of 0.20 - 0.39 indicates low validity; and a range of 0.00 - 0.19 indicates very low validity.

The validators provided suggestions for improvements that were then implemented by the researchers. For example, the image on the cover page was replaced with an image of a woman wearing a hijab to reflect the target audience, and the consistency of the images between real and cartoon on each page was improved. In addition, some audio was updated to display more authentic pronunciation. The margins on some parts of the page were also adjusted so as not to take up space from end to end of the page. Material experts provided input to pay attention to word standardization, replace the term "Chapter" with "Unit," and simplify the content of the material on each page. The translation of the teaching material content was improved to be more complete, and the title of the digital teaching material was changed to "*Mudah Bicara Bahasa Indonesia: Panduan Pelafalan untuk BIPA Arab*" or "Easy to Speak Indonesian: Pronunciation Guide for Arabic BIPA" to make it more attractive. BIPA practitioners also provided suggestions such as improving word standardization and ensuring that the included YouTube link was accessible. After various revisions were implemented, the second draft of the digital teaching material was prepared to be tested on basic Arabic BIPA learners to get better user responses.

Figure 2. Teaching Material After Revision

Overall, the teaching material met the essential elements, including novelty, practicality/ease of use, accessibility, communicativeness, and appeal, which can motivate learners in the learning process (Yuliana, F., 2021).

After conducting the expert validation stage and revising the product, the next step is to conduct a product trial for 3 Arabic BIPA Learners in Balai Bahasa UPI. The product trial begins by introducing teaching materials in the form of digital teaching materials, explaining the purpose of the trial activity, and providing opening questions related to pronunciation

material. Furthermore, the researcher distributed digital pronunciation teaching materials to be read and studied. After the learners finished, the researcher provided an assessment response questionnaire consisting of 2 assessment aspects, namely the material aspect and the media aspect. Each aspect has several sub-aspects. The response questionnaire uses a Likert scale with a value range of 1-4. The results of the trial of digital pronunciation teaching materials in small groups are presented in the following table.

Table 3. Results of Basic Level Arabic BIPA Learner Responses

No	Assessment Aspects	Learner Response			Average	Eligibility Criteria
		1	2	3		
1	Content suitability	75%	91,67%	91,67%	86,11%	Very feasible
2	Material presentation	100%	100%	100%	100%	Very feasible
3	Appearance and content	100%	100%	95,83%	98,61%	Very feasible
4	Use and appeal	100%	100%	100%	100%	Very feasible
	Average	93,75%	97,92%	96,87%	96,18%	

The eligibility criteria are based on (Arikunto, 2013) that if the percentage obtained is 81-100% it indicates that the digital teaching material is "Very feasible" to be used in learning, a percentage of 61-80% indicates that the digital teaching material is "Eligible" to be used, a percentage of 41-60% indicates that the digital teaching material is "Less Feasible", a percentage of 21-40% indicates that the digital teaching material is "Not Feasible" and a percentage of less than 20% indicates that the digital teaching material developed is "Very Not Feasible".

In addition to the questionnaire data, the researcher also asked for learner responses in the form of comments and suggestions. The following are comments given by basic Arabic-speaking BIPA learners.

Table 4. Comments from Basic Arabic BIPA Learners on Digital Learning Materials

No	Learner	Level	Origin	Comments
1	GF	BIPA 1	Yemen	"Good"
2	SA	BIPA 2	Sudan	"Cool and very nice."
3	MT	BIPA 2	Egypt	"It is very good and provides all aspects of the language, considering the consonants and vowels of the letters and the differences between them in Arabic. considering the differences in pronunciation of letters such as Kh in Arabic and Indonesian. The pronunciation is clear, the pictures are good, the translation is easy to understand."

User responses to the developed digital phonetic teaching material indicate that it is well-received by beginner Arabic-speaking BIPA learners. Most users feel that the audio features and illustrations significantly help in understanding correct pronunciation. The digital teaching material represents an innovation in the learning process, creating a more unique and engaging information medium (Ratiyani et al, 2014). Additionally, the Sound Association-designed digital teaching material was also deemed effective in helping learners associate Indonesian sounds with similar sounds in Arabic. It is consistent with research by Fatia Wijayanti (2011), which also focused on the application of sound association to improve

student's pronunciation skills. This positive feedback indicates that the developed digital phonetic teaching material has met the needs and expectations of users.

Disseminate

Digital teaching materials that have gone through various stages of development and are declared to meet the eligibility requirements are then distributed on a limited basis at the Balai Bahasa UPI. This distribution aims to validate the effectiveness and functionality of the teaching materials in the context of real use, as well as to collect useful feedback for further improvement. Overall, this discussion shows that the development of digital phonetic teaching materials using the 4-D model by Thiagarajan, Semmel, and Semmel (1974) has yielded satisfactory results. Despite some challenges in the development process, the final outcome demonstrates that the material is suitable for improving pronunciation skills among beginner Arabic-speaking BIPA learners.

This study provides several important implications for BIPA practitioners in teaching pronunciation to basic Arabic-speaking BIPA learners through the developed teaching materials. The use of Sound Association as the main approach in this digital teaching material helps basic Arabic BIPA learners to more easily recognize and understand the differences in sounds in Indonesian. In addition, this flipbook-based digital teaching material that can be accessed online functions as an additional learning resource that supports independent learning in various situations. This study also serves as a valuable reference for the development of future research in this field.

Conclusion

Based on the result, the basic Arabic BIPA learners struggle with pronouncing Indonesian phonemes that do not exist in Arabic. These include vowels [e], [ɛ], [ə], [o], and [ɔ], as well as consonants [c], [p], and [x]. Therefore, learners require more effective teaching materials to improve their pronunciation skills. The initial design of digital phonetic teaching materials was created using tools such as Canva and Heyzine Flipbook, incorporating audio and illustration features to engage learners interactively. The main components of these materials include an introduction, content, and supplementary elements such as evaluations and exercises, with sound associations to link Indonesian sounds with similar sounds in Arabic.

These teaching materials have undergone several stages of expert validation and revision, demonstrating very positive results with high validity scores from media experts, material experts, and BIPA practitioners. User feedback was also highly positive, with high average scores for aspects such as content suitability, material presentation, appearance, and overall attractiveness. It indicates that the teaching materials meet users' needs and expectations and offer innovation in learning Indonesian pronunciation.

Recommendation

Based on the conclusions and implications obtained, there are several recommendations addressed to teaching material developers and BIPA practitioners. First, to increase the interest and motivation of basic Arabic-speaking BIPA learners, it is recommended to add various types of animations or audio-visual media that are relevant to pronunciation. Second, this research can be a reference for creating similar teaching materials with the sound association approach for other languages according to the needs of BIPA learners. Third, it is recommended to conduct further research on the challenges faced by Indonesian students in learning Arabic, in order to identify specific obstacles and develop more effective teaching

materials. Last, this research still has shortcomings, so a more in-depth study is needed in further research to develop more comprehensive digital teaching materials.

References

Abduttawwab, Ramadan. (1997). *AlMadkhal ilâ Ilmil-Lughati*. Kairo: Maktabah al-Khanji.

Arikunto, Suharsimi dkk. (2013). Prosedur Penelitian. Jakarta: Bumi Aksara.

Budiawan, R. Y. S., & Rukayati, R. (2018). Kesalahan Bahasa dalam Praktik Berbicara Pembelajaran Bahasa Indonesia bagi Penutur Asing (BIPA) di Universitas PGRI Semarang Tahun 2018. *KREDO: Jurnal Ilmiah Bahasa dan Sastra*, 2(1), 88-97.

Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). *Teaching pronunciation: A course book and reference guide* (2nd ed.). Cambridge University Press.

Gall, M.D., Gall, J.P. and Borg, W.R. (2003). *Educational research: An introduction*. Boston: Pearson Education Inc.

Gregory, Robert J. 2000. Psylogycal Testing history, Principles and Application. Bostor: Allyan and Bacon.

Hayakawa, S., & Marian, V. (2024). *Sound-meaning associations allow listeners to infer the meaning of foreign language words*. Nature Communications Psychology. Oklahoma State University. Retrieved from Oklahoma State University News.

Hismanoglu, M. (2006). Current Perspectives on Pronunciation Learning and Teaching. *Jurnal of Language and Linguistic Studies*, 2(1), 87-100.

Kosasih, E. (2021). *Pengembangan Bahan Ajar*. Jakarta: PT. Bumi Aksara.

Kusmiatun, Ari. (2016). *Mengenal BIPA dan Pembelajarannya*. Yogyakarta: K Media

Marlina, Lina. (2019). *Pengantar Ilmu Ashwat*. Bandung: Fajar Media.

Mulyati, Y. (2014). *Bahasa Indonesia*. Jakarta: Universitas Terbuka.

Nation, I. S. P. (2008). *Teaching vocabulary: Strategies and techniques*. Heinle Cengage Learning.

Nation, I. S. P. (2013). *Vocabulary-learning strategies. In Learning Vocabulary in Another Language* (pp. 326-347). Cambridge University Press. doi:10.1017/CBO9781139858656.009. Retrieved from Cambridge University.

Puspitasari, Heni, Samino. (2013) Peningkatan Kemampuan Pronunciation (Pengucapan/Pelafalan) Pada Mata Pelajaran Bahasa Inggris Melalui Penerapan Strategi Pembelajaran Sound Association Pada Siswa Kelas V SD Negeri Sambirembe I Tahun 2013. Skripsi thesis, Universitas Muhammadiyah Surakarta

Rafkahanun, R. (2021). Analisis Kesalahan Fonologis dalam Keterampilan Berbicara Pembelajar BIPA di Pusat Studi Indonesia Ismailia Mesir. *Madah: Jurnal Bahasa Dan Sastra*, *12*(1), 78–87. https://doi.org/10.31503/madah.v12i1.380

Ratiyani, I., Subchan, W., & Hariyadi, S. (2014). Pengembangan Bahan Ajar Digital dan Aplikasinya dalam Model Siklus Pembelajaran 5E (Learning Cycle 5e) Terhadap Aktivitas Dan Hasil Belajar (Siswa Kelas Vii Di Smp Negeri 10 Probolinggo Tahun Pelajaran 2012/2013). *Pancaran Pendidikan, 3*(1), 79-88. Retrieved from https://jurnal.unej.ac.id/index.php/pancaran/article/view/725

Retnawati, H. (2016). *Analisis kuantitatif instrumen penelitian*. Parama Publishing.

Soedibyo, Mooryati. (2004). *Analisis kontrastif kajian penerjemahan frasa nomina*. Surakarta: Pustaka Cakra.

Stanculea, A.N., & Bran, C.N. (2015). Teaching Pronunciation Through Songs. *Journal Plus Education, 13*, 172-179.

Thiagarajan, Semmel dan Semmel. (1974). *Instructional Development for. Training Teachers of Exceptional Children A Source Book*. Indiana: ERIC.

Ulumuddin, Arisul, Agus Wismanto. (2014). Bahan Ajar Bahasa Indonesia Ranah Sosial Budaya bagi Penutur Asing (BIPA). *Jurnal Sasindo Pendidikan Bahasa dan Sastra Indonesia*, 2 (1), pp. 15-35.

Underhill, A. (2013). *Sound foundations: Learning and teaching pronunciation* (2nd ed.). Macmillan Education.

Wijayanti, Fatia. (2011). *The Application of Sound Association in Increasing Pronunciation Skill to the First Year Students of SMP N 6 Sukoharjo*. Research Paper. Surakarta: Muhammadiyah University of Surakarta.

Yoviyani, Salis Hilda & Mulyati, Yeti. (2023). Menyibak Sistem Fonetik Bahasa Indonesia dan Bahasa Arab serta Implikasinya dalam Pembelajaran BIPA. *Jurnal Onoma: Pendidikan, Bahasa, Dan Sastra*, 9(2), 1012-1022. https://doi.org/10.30605/onoma.v9i2.2838

Yuliana, F. H., Fatimah, S., & Barlian, I. (2021). Pengembangan bahan ajar digital interaktif dengan pendekatan kontekstual pada mata kuliah teori ekonomi mikro. *Jurnal PROFIT Kajian Pendidikan Ekonomi Dan Ilmu Ekonomi*, 8(1), 36–46. DOI: 10.36706/jp.v8i1.13875