Phonological problems in pronouncing English loanwords faced by the first semester students of PBI UAD

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ABSTRACT

The pronunciation ability is much supported by the knowledge of phonology. In addition, English familiar words do not guarantee that they are easy to learn to pronounce. Therefore, the phonological problems require further identification to get solutions. This study is intended to explore the phonological problems, the phonological changes, and the linguistic and nonlinguistic influencing factors in pronouncing English loanwords. This study used a descriptive qualitative method. 30 first semester students of PBI UAD were recruited as research participants. In collecting the data, 60 loanwords were tested to be pronounced, then video recorded and observed. Articulator y identity method was used in analyzing the data. The research findings revealed that in pronouncing English loanwords contextually, the first semester students of PBI UAD deviated 11 out of 12 English vowels, 14 out of 24 English consonants, and all English diphthongs. Then, two types of sound changes occurred, namely deletion and vowel reduction. Meanwhile, linguistically, the influencing factors were the different elements in sound system between the Indonesian and English language, and the similar sounds in the two languages which had different variants or allophones. Non-linguistically, the factor was the bad habit in pronouncing the Indonesian loaned English words. This study only recruited 30 English Education Department students of UAD and used 60 loanwords. It is recommended that the future researchers recruited more samples of the students and used more loanwords in order that more real problems can be reflected. Additionally, the students have to change the habit in their daily life when pronouncing Indonesian words loaned from English and the teachers should often train the students' pronunciation of English loanwords more carefully.

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1. Introduction

One of the most important aspects of English learning is pronunciation. People should convey their communication with accurate English pronunciation in order to be understood by others, as this might lead to misunderstandings. Loanword adaptations, or the changes of foreign words into forms that better fit to the phonotactics of the borrowing language, have long piqued the curiosity of phonologists (Sharon & E, 2001). In this study, loanwords refer to English words that are borrowed

by Indonesians and subsequently utilized by Indonesians in their daily lives to communicate with others, for examples *energy, double, relative, biology*, and *radio*. The loanwords were discovered in both spoken and written language. Loanwords are used in a variety of broadcast media, including radio, television, and advertising. Furthermore, due of broadcast media and cultural interaction between people from different language origins, the phenomenon of borrowing and re-borrowing words is extremely possible. (Chaa et al., 2021).

Goodwin as cited in Celce-Murcia (2006) states that the easiest linguistic trait to identify speakers as nonnative is their pronunciation. Lanteigne (2006) confirmed that learning English is challenging since some English sounds do not exist in the learner's native tongue. For example, English sounds like [v], [θ], [ð]], [ʒ], [dʒ], and [tʃ] are not found in the Indonesian language (Moeliono & Dardjowidjojo, 2003). Some PBI UAD students also had difficulty in pronouncing loanwords. The natural process of speakers adopting terms from a source language into their local tongue is known as loanwords (Jackson, 2003). The students have already studied English since high schools, but they have very limited time in learning that language, so the problems in pronouncing the English words are unavoidable. Furthermore, many Indonesian terms have been borrowed from English and are now utilized by Indonesians in their daily lives. The majority of people, however, are unsure how to pronounce English terms that have been accepted in Indonesian. They frequently strike a balance between native English terms and Indonesian loanwords derived from English.

Pronunciation is the application of phonology; thus, it is a part of applied linguistics. Applied linguistics is a branch of linguistics that studies how linguistics might aid in the understanding of real-world issues in fields including psychology, sociology, and education. The goal of applied linguistics is to help individuals solve language-related difficulties in the actual world (Grabe, 2002; Davies & Elder, 2004). According to Trask (1996), a phoneme is the smallest unit that may change the meaning of a word. Phonology, according to Roach (2009), is the study of how sound in language may be unique. Two types of phonology can be mentioned, namely segmental phonology and suprasegmental phonology. Segmental phonology is defined as the segmentation of language into various distinctive speech sounds presented by phonetics (Skandera& Burleigh, 2006). Suprasegmental phonology refers to unsegmented phonological qualities such as tone, stress, rhythm, and intonation which are referred to as suprasegmental or prosody (Skandera & Burleigh, 2006). The way a language is spoken is referred to as pronunciation (Hornby, 2005). According to Brown (2014) in language instruction, pronunciation refers to the process of teaching students how to create the sounds of a language.

The phonological problems can be caused by some related factors. They are different elements in the sound system between the native and the foreign language; sounds that have the same phonetic features in both languages but differ in their distribution; and similar sounds in the two languages, which have different variants or allophones. These problems result in sound changes. Sound changes, according to Smith (2007), occur when the system in which the sounds exist changes. When a second person imitates a variant form, the imitation process results in a phonological systemic change in the person who imitated.

There are some types of sound changes. They are (1) assimilation, that is, the process of sound alterations that happens when one segment impacts another (Schane, 1973); (2) dissimilation, as the opposite of assimilation (Crystal, 2008); (3) deletion, that is, the process of eliminating a sound or syllable of a word (Birjandi (2005); (4) epenthesis, that is, the adding of sounds to the center of a word (Lass (1991); (5) metathesis, that is, the process of sound alterations in which two or more segments of a word are interchangeable (Schane, 1973); and (6) vowel reduction which means all unstressed vowels in English that have a lower pitch are shorter in duration, are less loud in intensity, and have a poorer vocal quality (Fry, 1955. Vowels in unstressed syllables of lexical terms would generally drop, according to Ladefoged (1996), because the vowels are less stressful.

Concerning linguistic factors, there are (1) different elements in the sound system between the native and the foreign language, (2) sounds that have the same phonetic features in both languages but differ in their distribution, and (3) similar sounds in the two languages which have different variants or allophones. *Peel, take, cool, upper, better,* and *beckon* are some examples. Meanwhile. according to Mustikawati (2013) non-linguistic factors come from the external causes such as educational background, economic background, students' motivation and environment. In short, they are related to the students' background and the language habit. Richard & Amato (2003)

explain that the negative opinions about learners can undermine learning, have a detrimental effect on self-esteem, and result in unfavorable views toward the target language and culture. Non-linguistic factors that cause errors, according to Hidayat & Setiawan (2015), are linked to language habits and attitudes. Norish in Hasyim (2006) argues that acquiring a language is a question of developing habits. For example, instead of /næʃənl/ (UK) and /næʃənəl/ (US), the term *National* is produced as /nasional. In other words, the concept of loanword in this study refers to English words that are borrowed by Indonesian and subsequently utilized by Indonesians in their daily lives to interact with others.

There have been a number of prior studies on similar topics. Pallawa (2013) from Tadulako University in Palu compared the English and Indonesian phonological systems to look into pronunciation issues faced by Indonesian learners. Habibi (2016) investigated English pronunciation problems focusing on segmental pronunciation issues faced by advanced students at Maulana Malik Ibrahim State Islamic University. Hassan (2014) investigated pronunciation problems of the students at Sudan University of Science and Technology in order to identify troublesome sounds and the variables that contribute to these problems. Then, Kosasih (2017) investigated native language interference in learning English pronunciation in the frame of a case study at a private university in West Java, Indonesia in order to identify problems faced by Indonesian students taking Pronunciation Class due to the interference of native language (Indonesian language) in learning pronunciation of English as the second language. Those, studies have revealed students' pronunciation problems while pronouncing English words. However, they only focused on the pronunciation problems addressing to segmental aspects in general. Meanwhile, this present study investigated the pronunciation problems on segmental sounds contained in loanwords specifically used by Indonesians in the daily life. In addition, this study also analyzed the phonological changes and the linguistic and non-linguistic factors influencing the problems faced by the first semester students of PBI UAD. Therefore, this study was aimed at investigating the phonological problems that the first semester students of PBI UAD face while pronouncing English words loaned by Indonesian and used in daily lives, the sound adjustments, and the influencing factors.

English loanwords are crucial to examine because the English words borrowed by Indonesian are subsequently utilized by the Indonesian people to communicate with others in their daily lives. However, most individuals are confused about how to pronounce English words in Indonesian. They frequently strike a balance between English original words and Indonesian loanwords derived from English. This implies that the investigation of the English loanwords pronounced by the first semester students is importantly conducted. In general, the learners have already acquired English as high school students, but they have very limited time to study that language, thus pronunciation problems are unavoidable. Based on the explanations elaborated above, several research questions are proposed as follows: (1) What are the phonological problems and factors in pronouncing English loanwords faced by the first semester students of PBI UAD? (2) What are the phonological changes in pronouncing English loanwords? and (3) What are the factors influencing the problems? Then, contributions taken as a result of this research include (1) changing the bad habits that usually occur in learning sounds in loanword, (2) improving the students' speaking accuracy, and (3) making improvements in learning pronunciation.

2. Method

This study used the descriptive qualitative method as its research design. The data in this study were in the form of words, particularly loanwords with phonetic transcription. Even though not all were listed, those loanwords are commonly used in daily life by Indonesians and are indicative of the alphabet. The phonological problems were the research object in this study. The research subjects in this study were PBI UAD first-semester students. The samples in this study were 30 PBI UAD students that were chosen randomly representing the small classes. The instrument in this research was a list of 60 loanwords. Observation method, recording technique, taking notes technique, and testing were employed to collect data in this study. The data were analyzed using the articulatory identity approach (Sudaryanto, 2015). The analysis technique was only applied to the data which showed incorrect pronunciations based on either United Kingdom (UK) version or United States (US) version. The researcher compared the students' real pronunciation of English loanwords with the UK and the US versions of phonetic transcriptions to determine the correctness or incorrectness of their pronunciation.

3. Findings and Discussion

3.1. Phonological problem and phonological factor of English loanwords faced by the first-semester students of PBI UAD

The first research issue concerns the phonological factor and phonological problem of English loanwords encountered by PBI UAD first-semester students. Linguists have made a variety of assumptions about phonological terminology. According to Roach (2009), phonology is the study of how sound in language can be distinct. Distinct elements in the sound system between the native and foreign language, sounds with the same phonetic properties in both languages but various distributions, and identical sounds in the two languages with different variants or allophones are all examples of phonological problems. According to Ramelan (1985), there are three types of linguistic factors. Only two characteristics were discovered in this study: differences in the sound systems of the native and foreign languages, and similar sounds in the two languages with various versions or allophones.

Concerning different elements in the sound system between the native and the foreign language, it can be stated that different sound system elements indicate a distinctive phoneme sound that only exists in the original language (English) but not in a foreign language (Indonesian). As a result, foreigners tend to have difficulty in pronouncing the terms.

Table 1. Different elements in sound system between the native and the foreign language related to consonant, vowel and diphthong

| No. | Loan-Words | Correct Pronunciation | | Students Pronunciation | Phonological Problem | Freq | Percentage |
		British (UK)	American (US)				
1.	Athlete	/ ˈæθliːt /	/ ˈæˌθlit /	/ ˈatliːt /	/θ /->/t/	10	33.3 %
2.	Business	/ ˈbɪznɪs /	/ ˈbɪznəs /	/ ˈbɪsnɪs /	/z/->/s/	9	30 %
3.	Volley	/ ˈvɒli /	/ ˈvɑli /	/ ˈpɒli /	/v/->/p/	1	3.3 %
4	Arena	/əˈriːnə/	/əˈrinə/	/arɛna/	/ə/ -> /a/	27	90 %
5.	Double	/ ˈdʌbl /	/ ˈdʌbəl /	/ ˈdobəl /	/ʌ / -> /o/	4	13.3 %
6.	Illegal	/ɪˈliːgəl/	/ ɪˈligəl /	/ ɪˈlɛgal /	/i / -> /ɛ/	12	40 %
7	Nuclear	/ ˈnjuːklɪə /	/ ˈnukliər /	/ ˈnuklir /	/ɪə/->/i/	16	53.3 %
				/ ˈnuslir /		1	3.3 %
8	Radio	/ ˈreɪdɪəʊ /	/ ˈreɪdiˌoʊ /	/ ˈradio /	/eɪ/->/a/	9	30 %
9	Tourist	/ˈtʊərɪst/	/ˈtʊrəst/	/ˈturɪs/	/ʊə/ ->/u/	17	56.6%

Consonant /θ/ does not exist in Indonesian. Thus, the sound is entirely new to Indonesian people. The problem was in the medial position. 33.3% students pronounced *Athlete* /ˈæθliːt/ (UK) /ˈæˌθlit/ (US) with /ˈatliːt/. The replacement of consonant sound /θ/ with consonant sound /t/ occurs because the consonant sound /θ/ is an unfamiliar sound in Indonesian phonetic system, and thus replacement occurred. The next phonological problem faced by the first-semester students of PBI UAD was the alteration of sound /z/ with /s/. Consonant /z/ does not exist in Indonesia. So, the sound is entirely new to Indonesian people. The problem was in the medial position. 30 % of students pronounced *Business* / ˈbɪznɪs / (UK) /ˈbɪznəs / (US) with/ ˈbɪsnɪs /. The problem occurs at the initial position, that is, 3.3% students pronounced *volley* /ˈvɒli/ (UK) /ˈvɑli/ (US) with /ˈpɒli because the consonant /v/ does not belong to Indonesian originally.

The phonological problem related to vowels faced by the first-semester students is the replacement of vowel /ə/ with the vowel /a/. The problem happened in the initial position of the word as in *Arena* /əˈriːnə/ which was pronounced the the students as /arɛna/. The next phonological problem happened in vowel sound /ʌ/ which was replaced with vowel sound /o/. The problem happened in the medial position of the word as in the word *Double* /ˈdʌbəl/. 13.3% students mispronounced the word *Double* / ˈdʌbəl / with / ˈdobəl /. The replacement of vowel sound / ʌ / with

vowel sound /o/ occurred because the vowel sound / ʌ / does not correspond to the letters "ou". The first-semester students of PBI UAD also faced a problem in articulating the sound /i/ which then replaced it with the sound /ɛ/. The problem happened in the medial position of the word as in the word *Illegal* / ɪˈligəl /. 40% of students mispronounced the word *Illegal* / ɪˈligəl */ with /ɪˈlɛgal /.

From what has been observed and explained above, the first-semester students failed to articulate the vowel sounds /ə/, /æ/, /i/, /u/, /ʌ/, /iː/, /ɛ/, /uː/, /ɔː/ and /ɑː/ correctly because those vowel sounds are partly unfamiliar in Indonesian and partly based on the letters used in the words. The people were having difficulty in adjusting their first language's phonetic system to the target language (Nugraha,2020). So, Indonesian people could not articulate them correctly.

The phonological problem related to diphthong is the sound /ɪə/ which was replaced by the sound /i/. 53.3% students mispronounced the word *Nuclear* /ˈnjuːklɪə/ (UK) /ˈnuklɪər/ (US) with /ˈnuklir/ and 3.3% of students mispronounced that word with /ˈnuslir/. The replacement of diphthong sound /eɪ/ with /a/ happened to 30% students on the word *Radio* /ˈreɪdɪəʊ/ (UK) or /ˈreɪdiˌoʊ/ (US) which becomes /ˈradio/, Then, the phonological problem also occurred in the diphthong sound /ʊə/ which was replaced by the sound /u/. Meanwhile, 56.6% students mispronounced the word *Tourist* /ˈtʊərɪst/ (UK) /ˈtʊrəst/ (US) with /ˈturɪs/. The replacement of diphthong sound /ʊə/ by vowel sound /u/ is caused by the fact that the diphthong sound /ʊə/ does not exist in Indonesia.

Related to similar sounds in the two languages, which have different variants or allophones, it can be explained that different variants or allophones refer to the various sorts of allophones that exist between the native and foreign languages, as well as how to pronounce each allophone. Similar sounds in the two languages have various forms or allophones, according to Ramelan (1985). A variant circumstance of a persuasive group of sounds obtained in a fixed and predictable situation, according to Ramelan (1985). Voiceless stop consonants /p, t, k/ are allophones in English. The allophone variety in Indonesian voiceless stop consonants is not found. Voiceless stop consonants in English, on the other hand, have several allophones. English allophones will aspirate or enunciate stressed syllables with a tiny puff of air. Because Indonesian voiceless stops consonants have no such variants in similar situations, an Indonesian learner will have difficulty in pronouncing the English aspirated voiceless stops in a stressed position.

Table 2. Similar sounds in the two languages, which have different variants or allophones related to consonant, vowel and diphthong

| No. | Loan-Words | Correct Pronunciation | | Students Pronunciation | Phonological Problem | Freq | Percentage |
		British (UK)	American (US)				
1.	Microphone	/ ˈmaɪkrəfəʊn /	/ ˈmaɪkrəˌfoʊn /	/ ˈmɪkroˌpon /	/f/->/p/	13	43%
				/ ˈmɪkrəˌpon /		3	10 %
				/ ˈmaɪkroˌpon /		1	3.3%
2.	Telephone	/ ˈtɛlɪfəʊn /	/ ˈtɛləˌfoʊn /	/ ˈtɛləpon /	/f/->/p/	4	13.3%
				/ ˈtɛlɛpon /		10	33.3%
				/ ˈtɛlpon /		4	13.3%
3.	Microphone	/ ˈmaɪkrəfəʊn /	/ ˈmaɪkrəˌfoʊn /	/ ˈmɪkroˌpon /	/ə/->/o/	13	43.3%
				/ ˈmɪkroˌfon /		1	3.3%
4.	Telephone	/ ˈtɛlɪfəʊn /	/ ˈtɛləˌfoʊn /	/ ˈtɛlɛfon /	/ə/->/ɛ/	2	6.6 %
				/ ˈtɛlɛpon /	/ə/->/ɛ/	10	33.3%
				/ ˈtələpon /	/ɛ/->/ə/	2	6.6 %
5.	Microphone	/ ˈmaɪkrəfəʊn /	/ ˈmaɪkrəˌfoʊn /	/ ˈmɪkroˌfon /	/aɪ/->/ɪ/	1	3.3%
				/ ˈmɪkrəˌpon /	/aɪ/->/ɪ/	3	10 %
				/ ˈmɪkrəˌfon /	/oʊ/->/o/	1	3.3%
6.	Telephone	/ ˈtɛlɪfəʊn /	/ ˈtɛləˌfoʊn /	/ ˈtɛlɛfon	/oʊ/->/o/	2	6.6 %
				/ ˈtɛlpon /		4	13.3%

The phonological problem happened in consonant sound /f/ where it got replaced by consonant sound /p/. The problems happened in the medial position of the word as in *Microphone* /ˈmaɪkrəfəʊn / (UK) /ˈmaɪkrəˌfoʊn /(US). 43.3% students mispronounced that word with /ˈmɪkroˌpon /. Then,

6.6% students mispronounced the word *Telephone* /ˈtɛlɪfəʊn/ (UK) /ˈtɛləˌfoʊn/ (US) with /ˈtɛlɛfon/. The /p/ sound is voiceless stop consonant. There is a difference in how to pronounce English voiceless stop consonants and Indonesian voiceless stops consonants. The English voiceless stops consonants are pronounced with aspiration while Indonesian voiceless stops consonants are pronounced without aspiration. So, Indonesia students face problems in pronouncing the English aspirated voiceless stops in a stressed position either in initial positions or others. In addition, the change of /f/ into /p/ is also caused by the origin of the students with their local language showing the corresponding sound.

3.2. Types of sound changes made by the first-semester students of PBI UAD in pronouncing English loanwords

Sound alterations, according to Smith (2007), occur when the system in which the sounds exist changes. When a second person imitates a variant form, the imitation process causes the mimicked person's phonological systematic change. There are six types of sound modifications, according to Katamba (2002), but this study only found two, namely deletion and vowel reduction. In reality, the students had no problems concerning assimilation that is related to bordering sound to be more similar to itself, dissimilation that makes pronunciation simpler and clearer, epenthesis that is associated with legal and lay language, and metathesis that is associated with slang phrases, The materials or words associated to bordering sound, pronouncing easier and clearer, legal and lay language, and slang phrases are already studied and taught in various subjects throughout the first semester students' learning process. As a result, there are no problems with assimilation, dissimilation, epenthesis, or metathesis pronunciation.

3.2.1 Deletion

According to Birjandi (2005), deletion is the process of removing a sound or syllable from a word in order to fix and eliminate speech problems.

Table 3. Deletion related to consonant and vowel

No.	Loan-Words	Correct Pronunciation		Students Pronunciation	Phonological Problem	Freq	Percentage
		British (UK)	American (US)				
1.	Passport	/ˈpɑːspɔːt/	/ˈpæˌspɔrt/	/ˈpaspor/	Deletion of sound /t/	1	3.3 %
2.	Facsimile	/fækˈsɪmɪli/	/fækˈsɪməli/	/fækˈsɪmɪl/	Deletion of sound /i/	2	6.6%

The first deletion happened in the word *Passport*. 3.3% students delete consonant /t/ in the word *Passport* /ˈpæˌspɔrt/ which then becomes /ˈpaspor/. The deletion process happened because students used to pronounce those words in Bahasa Indonesia context and influenced by the sound system of their mother tongue. The deletion process made students pronounce those words as how it is spelled. The next deletion happened in the word *Facsimile*. 6.6% students pronounced the word *Facsimile* with /fækˈsɪmɪl/ instead of /fækˈsɪmɪli/. They delete the vowel /i/ in the final position of the word *Facsimile* /fækˈsɪmɪli/ which becomes /fækˈsɪmɪl/. The deletion process caused students to pronounce those words as they are spelled. Many English terms are spoken differently than they are spelled, causing many Indonesian language learners to be unable to speak the English words correctly (Fitriani & Zulkarnain, 2019).

3.2.2 Vowel Reduction.

The process of decreasing unstressed vowels into schwa is known as vowel reduction. According to Fry (1955), all unstressed vowels in English have a lower pitch, are shorter in duration, are less loud in intensity, and have a poorer vocal quality. Vowels in unstressed syllables of lexical terms will generally be reduced (Ladefoged, 1996), because vowels are less stressful. The following table shows the data.

Table 4. Vowel reduction students' pronunciation

No.	Loan-Words	Correct Pronunciation		Students' Pronunciation	Phonological Problem	Freq	Percentage
		British (UK)	American (US)				
1.	Glamour	/ˈglæmə/	/ˈglæmər/	/ˈgləmor/	/æ/->/ə/	2	6.6 %

The vowel reduction happened in the word *glamour*. 6.6% students pronounced the word *glamour* with /ˈgləmor/ instead of /ˈglæmər/. There is a process of reduction from unstressed vowel /æ/ into vowel /ə/. The epenthesis process causes unstressed vowels in English considered to be reduced in the lower pitch, shorter in duration, less loud in intensity, and more reduced in vocal quality.

3.3. The Linguistic and Non-Linguistic Factors

Linguistic and non-linguistic factors have both contributed to phonological issues. According to Ramelan (1985), phonological problems are caused by three factors. However, in this study, there were only two linguistic factors which were found, namely different elements in the sound system between the native and foreign languages and similar sounds in the two languages that have different variants or allophones, while sounds that have the same phonetic features in both languages but differ in their distribution were not found because they are unrelated to loanwords. In this study, non-linguistic factors causing the problems were caused by the students' language patterns.

There are three types of linguistic factors. Only two characteristics were discovered in this study, namely differences in the sound systems of the native and foreign languages, and similar sounds in the two languages with various versions or allophones. Different sound system elements indicate a distinctive phoneme sound that only exists in the original language (English) but not in a foreign language (Indonesian). As a result, foreigners will have difficulty in pronouncing the terminology.

Table 5. Linguistic Factors caused by Different elements in sound system between the native and the foreign language related to consonant, vowel and diphthong

No.	Loan-Words	Correct Pronunciation		Students Pronunciation	Phonological Problem	Freq	Percentage
		British (UK)	American (US)				
1.	Athlete	/ ˈæθliːt /	/ ˈæˌθlit /	/ ˈatliːt /	/θ /->/t/	10	33.3 %
2.	Volley	/ ˈvɒli /	/ ˈvɑli /	/ ˈpɒli /	/v/->/p/	1	3.3 %
3	Arena	/əˈriːnə/	/əˈrinə/	/arɛna/	/ə/ -> /a/	27	90 %
4	Double	/ ˈdʌbl /	/ ˈdʌbəl /	/ ˈdobəl /	/ʌ / -> /o/	4	13.3 %
5	Tourist	/ˈtʊərɪst/	/ˈtʊrəst/	/ˈturɪs/	/ʊə/ ->/u/	17	56.6%

33.3% students pronounced *Athlete* /ˈæθliːt/ (UK) /ˈæθlit/ (US) with /ˈatliːt/. The replacement of consonant sound /θ/ with consonant sound /t/ occurred because consonant sound /θ/ is an unfamiliar sound in Indonesian phonetic system. The next phonological problem faced by the first-semester students of PBI UAD was the change of sound /v/ with /p/. Consonant /v/ could not be found in Indonesian especially phonetically. Therefore, the sound is entirely new for the Indonesian. The problem occurs at the initial position. 3.3% students pronounced *volley* / ˈvɒli / (UK) /ˈvɑli / (US) with /ˈpɒli /. The next phonological problem related to vowels done by the first-semester students was the replacement of sound /ə/ with the sound /a/. The problem happened in the initial position of the word as in *Arena* /əˈrinə/. 90% students mispronounced the word *Arena* /əˈrinə/ with /arɛna/ due to their habits in Indonesian. The next phonological problem happened in vowel sound /ʌ/ which was replaced with vowel sound /o/. The problem happened in the medial position of the word as in the word *Double* /ˈdʌbəl/. 13.3% students mispronounced the word *Double* /ˈdʌbəl/ with /ˈdobəl/. The replacement of vowel sound /ʌ/ with vowel sound /o/ occurred because vowel sound /ʌ/ does not significantly correspond to Indonesian vowel and the spelling system indicates similarity. Another case happened that 56.6% tudents pronounced the word *tourist* with /ˈturɪs/ instead of /tʊərɪst/ due to their habit in Indonesian daily life loaning the term.

Different variants or allophones refer to the various sorts of allophones that exist between the native and foreign languages, as well as how to pronounce each allophone. Similar sounds in the two languages have various forms or allophones (Ramelan, 1985). A variant circumstance of a persuasive group of sounds is obtained in a fixed and predictable situation (Ramelan, 1985). Voiceless stop consonants /p, t, k/ are allophones in English. Allophone variety in Indonesian only hardly found phonetically. Voiceless stop consonants in English, on the other hand, have several allophones. English allophones will aspirate or enunciate stressed syllables with a tiny puff of air. Because Indonesian voiceless stops consonants have no such variants in similar situations, an Indonesian learner has difficulty in pronouncing the English aspirated voiceless stops in a stressed position. Based on table 2 above, the linguistic factors on similar sounds in the two languages, which have different variants or allophones occurred on vowels /ə/ and /ɛ/, on consonants /f/, and on diphthongs /aɪ/ and /oʊ/.

The non-linguistic factors such as students' educational background, motivation, surroundings, and attitude toward learning a language, in addition to the linguistic component outlined above, all contribute to the cause of phonological errors (Mustikawati, 2013). Phonological problems were caused by students' linguistic patterns in this study. The second factor has to do with the pupils' language habits and attitudes toward language acquisition (Hidayat & Setiawan, 2015). In everyday life, Indonesian students use Bahasa Indonesia or their regional language as their first language. Learning a language, according to Norish in Hasyim (2006) is a process of habit building. When someone tries to develop new habits, the old ones will get in the way. The first linguistic interference is the cause of the problem. The focus of this research is on English loanwords. English loanwords are borrowed words that have been adapted to the phonetic system of Bahasa Indonesia. Many loanwords exist in Bahasa Indonesia, and these loanwords are frequently used in daily conversation. When the first-semester students found the loanwords in an English context, they were likewise affected by this fact. Because they frequently encountered the word in Bahasa Indonesia, they had difficulty in pronouncing it. The table below shows the problem of loanwords caused by PBI UAD first-semester students' linguistic habits.

Table 6. Nonlinguistic Factors caused by language habit.

No.	Loan-Words	Correct Pronunciation		Students Pronunciation	Freq	Percentage
		British (UK)	American (US)			
1.	National	/ ˈnæʃənl /	/ ˈnæʃənəl /	/ ˈnasional /	5	16.6%
2.	Double	/ ˈdʌbl /	/ ˈdʌbəl /	/ ˈdobəl /	4	13.3 %

As can be seen in table 6.16.6% students pronounced the word *National* with /ˈnasional / instead of /ˈnæʃənl /(UK) and /ˈnæʃənəl / (US) due to the first-semester students' attitude and habit in pronouncing those loanwords in Bahasa Indonesia, and 13.3% students pronounced the word *Double* with /ˈdobəl /instead of /ˈdʌbl /(UK) and/ˈdʌbəl /(US) due to the first-semester students' attitude and habit in pronouncing those loanwords in Bahasa Indonesia. According to Donal (2016) language learners' variances in linguistic background, socioculture, personality, and first language sound system influence their sound output when learning a second or target language.

After analyzing the results of the preceding research, the research findings were discussed, and the analyses were carried out by comparing the findings of previous studies to the findings of this study. Three of the relevant studies did not look at the percentage of students who had phonological problems and where they came from. According to Pallawa (2013), teaching English sounds to Indonesian students causes a number of problems, one of which is the constant interference of the students' native language systems with that of the target language. According to Habibi (2016), the research subject had pronunciation problems with some consonants, vowels, and diphthongs during the presentation of their thesis proposal. Hassan (2014) explained that the main difficulties in teaching and learning English pronunciation stem from differences in the sound systems of English and the native language. Furthermore, Kosasih (2017) explained that significant differences between the pronunciation system of the two languages are the cause of the interference occurred. They are

found in phonemes, phonetic features, word stress, sentence stress, and intonation. As a result, this study expands to include new findings about the percentage of students who created phonological problems and where they came from. In addition, the previous studies did not talk about the linguistic and non-linguistic factors which became the new point in this study.

4. Conclusion

This study discussed the phonological problems and factors in pronouncing English loanwords faced by the first semester students of PBI UAD. The kinds of phonological problems of English loanwords in their pronunciation faced by the first semester students of PBI UAD were related to vowels, consonants, and diphthongs. The phonological problems occurred on vowels / i/, /ɛ/, /ʌ/, /ɒ/, /ɔ:/, /ə/, / æ/, /u/, / u:/, /ɜ/, and /ɑ:/, occurred on consonants /v/, /θ/, /tʃ/, /ʃ/, /z/, /f/, /g/, /dʒ/, /k/, /t/, /d/, /j/, /s/, and /l/, and occurred on diphthong /aɪ/, /aʊ/, /eɪ/, /ɪə/, /əʊ/, /oʊ/, /ʊə/ and /ea/. The phonological factors come both from linguistic and non-linguistic factors. Meanwhile, linguistically, the influencing factors were the different elements in sound system between the Indonesian and English language, and the similar sounds in the two languages which had different variants or allophones. Non-linguistically, the factor was the bad habit in pronouncing the Indonesian loaned English words. The types of sound changes of English loanwords pronounced by the first-semester students of PBI UAD were deletion and vowel reduction. Further researchers are required to provide a much more significant development by increasing the research subjects to potray more real facts. Then, the teachers are recommended to drill and improve the students' pronunciation appropriately; meanwhile, the students are suggested to change their habits in pronouncing English words loaned by Indonesian which is used in daily life.

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